
Technology intelligence in SMEs: a global perspective

Seppo Hänninen

Department of Industrial Engineering and Management,
Helsinki University of Technology, 02015 TKK, Finland
E-mail: seppo.j.hanninen@tkk.fi

Biographical notes: Seppo Hänninen is a researcher at the Helsinki University of Technology Lahti Centre. He has a Doctor of Science (Technology) degree and an MBA degree from the Helsinki University of Technology and a Master of Science (Economics) degree from Helsinki School of Economics. His research interests are in product innovation, the marketing of technology-intensive products, commercialising processes of technological innovations, and technology-based companies. He has published in *International Journal of Innovation and Learning*, *International Journal of Knowledge and Learning*, *International Journal of Management Practise*, *International Journal of Technological Intelligence and Planning* and *International Journal of Technology Management*.

1 Introduction

Technology intelligence is based on the absorptive capacity (Cohen and Levinthal, 1990; Kerr et al, 2006). Technology intelligence optimises technology knowledge to achieve a sustainable competitive advantage without reducing the value of end-user knowledge and business-logic knowledge. This special issue of *International Journal of Technology Intelligence and Planning* discusses technology intelligence in small and medium-sized enterprises (SMEs). The special issue mainly contains the contributions of the ICSB World Conference 2007 which was organised and hosted by the Turku School of Economics on 13–15 June 2007 in Turku, Finland.

The limitations of technology intelligence are related to the phenomenon called over-engineering, market rigidity (Leonard-Barton, 1997) and the 'perfect technology syndrome' (Hänninen, 2007). In this case, the technology knowledge base also dominates business operations. SMEs have different resource levels from multinational companies. Technology intelligence of SMEs is based on the limitation of resources, limitation of scope and limitation of vertical integration. This means that filtering, evaluating and implicating technology intelligence is a critical resource for SMEs (Kerr et al., 2006). In successful SMEs, technology intelligence is the leading perspective which absorbs also marketing and business-logic knowledge.

The present special issue contains global perspectives. Authors have studied technology intelligence in Africa, Asia, Australia, Europe and North America. The objective of the special issue is to deepen understanding of technology intelligence in SMEs around the world.

2 Local perspectives from around the world

The present special issue offers several technology intelligence perspectives in SMEs. The themes in the present special issue are as follows.

First, start-up enterprises need an incubator to start developing technology intelligence with business intelligence. Organisational learning and mentoring add more value to technology intelligence.

Peter W. Moroz, Kevin Hindle and Robert Anderson discuss the knowledge transfer performance of public research universities with respect to the dissemination of new technology.

Cecilia Hegarty and Jonathan Styles show how mentoring can be a powerful tool in developing technological intelligence by facilitating the entry of graduates into (self-) employment in the SMEs sector whilst simultaneously increasing the competitiveness of SMEs.

Second, product development measures technology intelligence. In new products, SMEs show their ability to use technology intelligence.

Rainer Harms and Thomas Meierkord create a better understanding of the barriers to the creation of radical innovations in new technology based ventures.

David Phaho studies how small, medium and micro enterprises management in South Africa can prioritise the strengthening of their in-house ability to identify, absorb and exploit technologies from higher educational institutions when they become available.

Joanna Piotrowska examines the use of five strategies for securing rents from incremental product innovations, namely patents, secrecy, lead time, providing competitive service, and financial strength, in forty two European firms operating in four industries.

Dietmar Roessl, Matthias Fink, Sascha Kraus, Seppo Hänninen and Antti Ainamo identify key types of new-technology products, types of contracting and exchange suited to these types, factors behind uncertainty surrounding the marketing effort and relationships of all these factors.

Third, SMEs need alliances and networks to succeed.

Henri Janhonen deepens our understanding of total acquisition costs related to alternative sources of supply in the value chain.

Anjum Fayyaz, Jamshed H. Khan and Sarfraz A. Mian explore the impact of formal networks established through a structured approach with organised network administration on SMEs manufacturing units in the garment, cutlery and industrial fan sectors in Pakistan.

The special contribution of Professor Ulrich Lichtenthaler to this special issue is very warmly acknowledged. To ensure their high quality, all the papers included in this special journal edition have been reviewed by international reviewers. The effort and time of all the reviewers is acknowledged, and sincere gratitude expressed to all the authors for their contributions.

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