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**Product Service Engineering
Limitations & Future Needs for SMES**

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Summary of the book „Product Service Engineering Limitations & Future Needs for SMEs“

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The present book embraces the results from the first empirical research undertaking on the state-of-the-art of innovation development with special regard to integrated product service systems in technology oriented companies. The study was conducted by the Innovation Studio and Exemplary Developments for Product Service Engineering (INNOPSE) project. INNOPSE is a European Union funded project that addresses Product-Service systems from the perspective of innovation management. The consortium embraces partners from a wide spectrum, including a research group from four universities and research institutions and five industrial partners from Germany, the UK, Poland, Hungary, Greece, Italy and Denmark with the University Division Soest as the co-ordinator. The principal focus of the project is put on the engineering of services for technology-intensive companies, especially with regard to small and medium sized enterprises (SMEs).

The INNOPSE project started out with case studies on innovation management. The goal was to derive general concepts for service engineering. The work performed for these case studies commenced in May 2002 and ran for seven months. It resulted in a report termed "Product Service Engineering limitations and future needs for SME". More than 2000 European companies were contacted, whereas the responses of nearly 200 companies have been considered for the evaluation and analysis. The description and major results of this full fledged survey and the resulting feasibility studies build the content and framework of this book.

The purpose of the study is to analyse and show how products and services in technology-intensive companies are developed by using innovation management, to analyse the used methods, tools and structures for general innovation developments (especially, but not only services), and to check the feasibility for SME service innovations. Additionally, as a result from the case studies deficits and future needs for SMEs are to be identified in order to deploy innovation management successfully. To come up to these broad analytical objectives, the survey addresses issues like the structure of innovation management, customer relations, human resources and used methods and tools, and it derives future deficits and needs for an effective operation in the field of innovation management.

The major findings are statistics in these issues and it concludes that SMEs have an intrinsic understanding of the need for innovation management but lack a structured and institutionalised approach to it, which is brought about by external and internal deficits. The major constraints are found in restricted access to capital, limitations in human resources, organisation and information exchange. The analysis further reveals the fact that innovation management is often a result from the daily challenges of the business itself. Hence, it is not a crucial part of the organisational structure, as opposed to larger companies, and its introduction was merely fostered by external adaptive requirements and not by strategic intentions.

These results are the base for further research in INNOPSE focusing on best practise research for service inventions.