

# Foreword (by the editors)

Creativity and innovation are crucial to success in an industry, particularly in the new era of highly connected businesses and network economy (e.g. global supply chains and cable/wireless ICT systems).

As the importance of the primary and secondary sectors declines, the success of so-called Product-Service System (PSS) strategies can be observed as part of an overall trend towards a service-based society that is increasingly knowledge and information based. The development of a Product-Service System (PSS) can be defined as the result of an innovation strategy focused on designing and selling a system of products and services which are jointly capable of fulfilling specific client demands.

Today, market pressures are huge and often coming from unexpected new competitors. Only the 'adaptive enterprises' will survive over the long run. PSS thinking can act as a change agent and create access to superior strategies, often value propositions that directly fulfil the needs of clients (in terms of place and time). The successful companies of the future will be able to operate dynamically and in close symbioses with their clients. This way they can create a strong client base, a good brand, and rapidly grow their business. The key success factor for PSS is a direct satisfaction of clients' needs. Logistics should be client-driven. The logistic chain can even be completely inverted as has been shown by Dell computers.

Product-service systems offer a promising strategy to unlink value creation and resource consumption. They can open out-of-the-box thinking in terms of alternative organisation models, often resulting in less material-intensive solutions that satisfy customer demands directly. Surprising new business perspectives can be derived by shifting the commercial focus from selling products to providing solutions for a given problem.

Although it should be emphasised that PSS is a *commercially driven* business concept, literature on PSS often identifies a relationship between PSS and sustainable development. The reason that PSS may be described as a potential eco-efficient innovation strategy is the holistic attitude that is stimulated. PSSs aim at a

cultural change from 'product oriented' to 'service oriented' consumer patterns. The need underlying consumer demand is taken as a focus point. The planning and design of PSS facilitates the reorganisation of the consumption process and provides potential opportunities for improved eco-efficiency. Often, consumption and production are much more integrated than in traditional product-based business models. Consequently, PSS strategies can result in clean, clever and competitive business opportunities.

Although PSS strategies and sustainable development paths often coincide, there is no universal rule. PSSs need to be well-planned and developed to fully release their sustainable development potential and to avoid negative side effects. Indeed, PSS can also result in negative environmental impacts. For example, they can create extra transportation or packaging for the individualised delivery of goods/services, or induce 'rebound effects' such as the creation of increased consumption volumes.

PSS strategies invite industries to rethink and redesign their role in the value chain. The factors that determine success are strongly dependent on the category of the PSS and the sector (i.e. business to business, business to consumer). Companies have to analyse the roles, competences and motivating factors for all actors involved in the value chain, the size, geographical character and maturity of the market, and the strengths of competitors.

A profound understanding of the market system in question is an important requirement and often a starting point in PSS innovation planning. Identification and selection of the relevant variables in the system, and the stakeholders involved in the development and implementation process are essential for a targeted design of the PSS proposition.

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# Context

This handbook has been realised by a European research consortium in the context of research project MEPSS, supported by the European Commission under the 5<sup>th</sup> Framework Programme for RTD<sup>4</sup>.

## Overview of the MEPSS project

The MEPSS ('Methodology for Product-Service Systems') project aims to provide companies with a methodology and toolkit to guide them in the process of developing and implementing a successful and sustainable product-service system.

In principle, the methodology developed in MEPSS is usable for all companies with an active interest in the development of product-service systems, regardless of size, current level of involvement and the sector in which they operate.

MEPSS has developed and brought together methodologies in various fields of expertise that are needed to develop, implement and monitor product-service systems. This handbook is the main publication of the MEPSS project. In addition a MEPSS web tool has been realised that can be utilised free through the internet: [www.mepss.nl](http://www.mepss.nl).

Dominant fields of expertise covered in the MEPSS project are:

- Design and implementation related aspects of PSS;
- Assessment of the impacts of PSS innovations on the dimensions of People, Planet, and Profit;
- Success and failure factors in the development and implementation of PSS (including consumer acceptance, and stakeholder and reputation management), taking into account the functional offer of PSS, the cultural, political and ethical setting, and various stakeholder perspectives.

<sup>4</sup> MEPSS – product-service systems methodology development of a toolkit for industry (FP5 contract n°. g1rd-ct-2001-00585; project n°. grd2-2000-30220). The project was carried out in the period November 2001 – October 2004.

MEPSS partners:

- PricewaterhouseCoopers – The Netherlands, *Project coordinator*
- DIS/SDI, INDACO dept., Politecnico di Milano – Italy
- Econcept – Germany
- Dalt / Solutioning – France
- PRé Consultants – The Netherlands
- CMER INSEAD – France
- Ecobilan – France
- GrAT – Austria
- Zuid-Hollandse Milieu Federatie (ZMF) – The Netherlands
- Institut für Ökologische Wirtschaftsforschung – Germany
- Centre for Sustainable Consumption, Sheffield Hallam University (SHU) – United Kingdom.

# Acknowledgements

## *MEPSS Project management*

The MEPSS project was coordinated by PricewaterhouseCoopers (PwC). Project leaders were Cees van Halen and Hendrik Wiegand, supported by Peter Karsch and Marten Slagter.<sup>5</sup>

The first two years of the MEPSS project, the project was split into three worklines, sub-coordinated by work line leaders:

- The 'Design' work line was co-ordinated by Carlo Vezzoli – DIS, Politecnico di Milano (Polimi).
- The 'Assessment' work line was co-ordinated by Mark Goedkoop – PRÉ Consultants.
- The 'Success and Failure' work line was co-ordinated by Robert Wimmer – GrAT.

## *The editorial board of the Handbook*

For the realisation of the Handbook, an editorial board was installed that consisted of Cees van Halen (PwC/ Pfl), Robert Wimmer(GrAT) and Carlo Vezzoli (Polimi). A native speaker check of the Handbook was executed by Tim Cooper (SHU).

## *Content of the Handbook*

The content of the introductory chapters was written by Cees van Halen and reviewed by Robert Wimmer.

The content of the design line was co-ordinated by Carlo Vezzoli. Operative responsible have been Dalia Sciama and Annamaria Formentini. For what concern specific parts:

- Francois Jegou wrote: "Performing Scenario Workshop"; "Elaborate Scenario's Format", "worksheet 19 – Worksheet - Scenario Building"; "21 – Worksheet - System Map"

<sup>5</sup> In the last phase of the MEPSS project Cees van Halen and Peter Karsch left PwC to start a new company 'Partners for Innovation' (Pfl).

- Daniela Sangiorgi wrote: “PSS design”; “worksheet 17 - Interaction Table”
- Daniela Sangiorgi and Elena Pacenti wrote: “PSS Idea design”; “worksheet 16 – Offering Diagram”
- Dalia Sciama wrote: “20 – Worksheet – Sustainability Design-Orienting (SDO)”
- Ursula Tishner wrote: “Socio-Ethical Sustainability” in SDO Toolkit; “Economic Sustainability” in SDO Toolkit.
- Carlo Vezzoli wrote: “Environmental Sustainability” in SDO Toolkit.
- Carlo Vezzoli wrote and Ursula Tishner and Dalia Sciama revised: “Prioritise sustainability guidelines (level 1: scenario)”; “Visualise Sustainability Aspects of PSS Scenario”; “Prioritise Sustainability Guidelines (level 2- PSS Idea)”; “Visualise Sustainability Aspects of PSS Idea”; “Visualise Sustainability aspects of developed PSS”.

The content of the Assessment work line was coordinated, and to a large extent developed by Mark Goedkoop and Carmen Alvarado from PRÉ consultants. Capucine Vayn and Jochen Krimphoff from Ecobilan-PricewaterhouseCoopers Paris contributed much to the tool descriptions and the decision tree, as well as the outline of the whole methodology. Ecobilan-PricewaterhouseCoopers Paris also tested the methodology through case studies with EDF, the French electricity company and Parkersell a UK based provider of lighting solutions. Kai Hockert developed the property rights analysis and contributed to the rebound analysis.

The content of the workline Success and Failure Factors was carried out under co-ordination and operative responsibility of Robert Wimmer. Together with Lothar Rehse he wrote the parts for System Analysis including the worksheets and the industrial case study AURO. Together with Filomena Grimaldi (Polimi) he wrote the Stakeholder Involvement chapters, Marten Haage and Cees van Halen (both PwC) were contributing to this contents. Wilma Aarts (ZHM) and Gerd Scholl (SHU) provided the contents for the chapters on consumer acceptance and the associated worksheets. Tim Cooper contributed with consumer typology and regulatory issues.

### *Webtool*

Cees van Halen coordinated the realisation of the MEPSS Webtool. Technical realisation of this tool was supported by Nathan Waelkens (Imigo), Marten Slagter (PwC) and Ronald Vijfhuizen and Mathieu Mathieu van der Wal (aHa!Web)

### *MEPSS partners, subcontractors and peers*

At progress meetings and during the execution of the research active contribution was received from all partners:

- PricewaterhouseCoopers (PwC)– The Netherlands
- DIS/SDI, INDACO dept., Politecnico di Milano (Polimi)– Italy

- Econcept – Germany
- Dalt / Solutioning – France
- PRé Consultants – The Netherlands
- CMER INSEAD – France
- Ecobilan – France
- GrAT – Austria
- Zuid-Hollandse Milieu Federatie – The Netherlands

Subcontractors:

- Institut für Ökologische Wirtschaftsforschung – Germany
- Centre for Sustainable Consumption, Sheffield Hallam University – U.K.

During the lifetime of the project, a large number of MEPSS partners meetings were organised. At these meetings, project progress was discussed and methodological issues were solved.

Members of the Peer Group have given their input for the directions to be taken in MEPSS at three meetings. A Peer Group member was provided by: 2.-0 LCA Consultants (DK), IVAM UvA (NL), SERI (A), MOTOROLA (D), UNILEVER (NL), TNO (NL), Integral (NL), KIEM (NL), Technical University Denmark (DK) and SONY (D).

### *Networks*

MEPSS actively contributed to the activities of networking projects *Pi-NET*<sup>6</sup> and *SusproNet*<sup>7</sup>, clustering initiatives that were supported by the EC to act as clusters for the individual PSS projects funded under the Growth programme (Fifth Framework Programme). These clustering projects catalysed the exchange of expertise on product-service systems for sustainable competitive growth.

<sup>6</sup> Pi-NET: Product Service Systems Information Network (contract n°: g1rt-ct-2001-5047; project n° : grd2-2000-30220b), coordinated by PricewaterhouseCoopers (Netherlands)

<sup>7</sup> SusproNet (<http://www.suspronet.org>) was coordinated by TNO-STB (Netherlands).

# 1 INTRODUCTION

## 1.1 Guidance to the reader

### *This Handbook*

Subject of this handbook is innovation based upon a systematic model for ‘product-service systems’ (PSS) strategies. The basic idea of PSS innovation is the development of powerful, new business concepts consisting of a mutually reinforcing combination of products and services.

The handbook provides guidance and practical assistance to companies that plan to start a PSS innovation project and helps to steer the process in a sustainable direction.

### *Target audience*

The handbook has primarily been written for:

- Industry managers, marketers, designers and researchers involved in strategic decision making, market development and innovation. The targeted industry audience includes all company sizes – from small start-up companies to large multinational companies.
- Project managers for practical use of the methodology during the PSS development process.
- Consultants and other intermediaries that offer services to industries, for instance in business restructuring, change management, scenario building, and strategy development.

In addition, the book provides a source of knowledge for students (design academies, business schools, innovation, environmental and social management), policy makers and academics.

### *Why should you read this book?*

This book offers guidance throughout the process of developing and implementing a new, sustainable and profitable business offer, one that includes both product and service aspects and will result in a durable relationship with your customers.

This book can help you to understand the importance of system based innovation models that include the production and the consumption perspectives. It offers you latest models, methods and tools in a practical and action oriented step by step approach.

The book sketches new horizons and offers practical assistance in design, development and implementation of new business models that can create sustainable value for individual companies and society as a whole. It invites to enter new cooperation and partnering models.

## 1.2 Summary

The world has become a village as result of modern communication technology. As result, the low-cost regions in Asia are rapidly developing their knowledge workers economy. In the decades to come, many of the European and U.S. jobs will be shifted to these low-cost regions – even the jobs that are well-paid today and that we consider high up the career/social ladder.

This clearly brings the urgency for the ‘old-economy regions’ Europe and the U.S. to rebuild their competitive system and re-invent their strengths. A new ‘Conceptual Age’ is rising, that will bring a shift - from an economy built on the logical and technical abilities of the Information Age to an economy built on creativity, invention and system design.

Future leading industries will be capable to understand, (re)design and control complex systems in society. The creation and control of communities of clients will be decisive in this competitive play. The fight for the customers will reach new unprecedented levels of competition. Clients will be more-demanding than ever before.

Original and holistic client-based thinking will be a decisive competitive factor. Education and industry have to anticipate on the skills that are required. New language and terminology needs to developed and shared, enclosing terms as functional thinking, interaction design, stakeholder mapping, service interface, strategic design, sustainability radar, value system, and virtue matrix.

We feel that PSS-thinking can be a valuable guide for education and companies to lead them into the Conceptual Age. Design, creativity, stakeholder management and organisation of complexity are essential elements of this Handbook on PSS.

The Handbook focuses on the following questions:

- What determines success/failure of a product-service system (‘PSS’) in terms of customer acceptance and cultural aspects?
- How can we assess and evaluate the lifecycle and macro effects of PSS in terms of environmental, economic, and social sustainability?

- How can a company design and implement a PSS in a systematic and efficient way?

In the MEPSS project, a methodology and toolkit have been produced that can guide a company through the process of developing a powerful PSS business model.

These tools include a modular approach:

1. The analysis of your current business model and client base (phase 1/2 of the MEPSS model: 'strategic analysis' and 'exploring opportunities').
2. The generation of profitable and sustainable PSS ideas (phase 3).
3. Design and assessment support during the development of promising PSS ideas (phase 4).
4. Preparation for the actual launch of the developed PSS proposition (phase 5)

PSS innovation strategies pave the way for new, highly competitive business models that can contribute to a more sustainability society. New ideas are needed to solve emerging changes in our society such as the integration issues in a multicultural society, the need for lifelong learning, and the ageing of our Western communities. Many of the existing economic systems in society are (more or less) outdated. As an example, consider our health care, education, mobility and recreation systems. Perhaps the most striking example of a system that has become totally jammed concerns mobility. The transport system is completely overloaded in almost all urban areas in Europe. People travelling to their offices and factories get stuck in long traffic jams, facing safety risks and causing enormous, negative environmental impacts. They are a key contributor to climate change emissions and bad local air quality (smog) that causes respiratory problems for many citizens. Smarter systems can be created for bringing people to their workplaces or their workplaces to them (e.g. at home).

Industries are in a process of immense transformation:

- The structure and scope of markets are changing rapidly through globalization, liberalisation and regionalization. Production is being transferred to low-cost regions – followed more and more by development and research activities. This represents new challenges for European industry. Companies need to make clear choices regarding their production competences, the role in the production chain, geography of value chain activities, global partners, level of production flexibility and strategy towards clients.
- Competition has become fiercer and markets have become more individualised (e.g. as a result of diminished household size). Clients have become very demanding and take excellent quality for granted. Quality and comfort demands have gradually increased and broadened – including dimensions such as delivery services and extended guarantee, maintenance and upgrading services. Industries are forced to adjust their product and service performances to the specific demands of their customers.

- Demand-driven chains and networks ask for fundamental change in the business strategy and operations of companies. Production and distribution flexibility can only be applied effectively with appropriate information about customers. Many strategies can be chosen – highly individualized as well as mass-market approaches. PSS is a powerful demand-driven strategy.
- Technological progress in the ICT (information and communication technologies) sector is a strong engine of innovation and economic growth. There is a enormous direct contribution from the sector through the introduction of a never-ending range of innovative ‘breakthrough’ products (e.g. flat screen television, MP3 music devices, DVD and Tivo players/recorders, media centres, UMTS phone and networks, digital photo and video cameras, hand-held computers (pda), Bluetooth wireless technology enabled products, and many others). Market introduction of these products is often directly linked to the introduction of many service innovations such as SMS messages and IP-Enabled Services such as Voice over Internet (VOIP).
- In addition to these direct contributions to innovation and growth, the use of ICT solutions spreads to other sectors in the economy and yields significant connectivity and efficiency gains. ICT solutions are a strong driver towards new working methods, consumption patterns and production chains. Internet connectivity is having a profound impact on business and individuals. Broadband technology allows users to access multimedia applications at high speeds, over telephone lines (ADSL), cable and wireless mobile technologies (UMTS or satellites). The widespread introduction of broadband and UMTS technology at affordable prices is rapidly unfolding in European countries, creating many opportunities for new service industries.

In response to these changes, each company will have to adapt her strategies. PSS thinking can provide guidance in this process:

- A smart combination of products and services can create high market value, both in financial terms (revenues and market growth) and in terms of client satisfaction and stronger customer relations: you can earn more by selling less!
- PSS thinking opens a new window of opportunities as it guides you towards function/value creation for your clients and harvests concepts like ‘invest in the quality of the contacts and interface with your client’, ‘be flexible’ and ‘work modular’.
- PSS can offer a ‘triple win’ (people, planet, profit) scenario that combines sustainable concepts with powerful presence in the marketplace. The basic idea is that a company’s commercial value creation goes beyond the spreading of material goods.
- Clients are becoming more and more demanding. ‘Enriched’ or ‘inspiration’ business models are needed to win the favour of clients in the future. Today’s business concepts can be brought to a new level by rethinking and redesigning them – inviting new sales and distribution solutions, a new way of client

communication, new features, or a switch to low-price ranges. In the years to come, fundamental innovations will be needed to ensure competitiveness in almost every individual company.

For some sectors the need to find new business models is more urgent than for others. Examples of sectors where the traditional money spinners are running out include:

- The publishers of newspapers: The business model is squeezed. On the one hand, advertisers have many alternative media to pick (e.g. e-bay and job offering sites at internet, multitude of radio and TV-channels). On the other hand subscribers have alternative access to news and background information (e.g. broadband connections to home and UMTS connections to the handheld). The traditional distribution model of the newspaper companies gradually loses attractiveness.
- The traditional 'fixed line' telephone companies: Mobile phones and VOIP (Voice-over-Internet Protocol) are threatening their traditional business model. The high payments for both connection to infrastructure and duration of calls will both erode fast.

Like in theory of evolution, the dinosaurs will become extinct and the adaptive species will survive as they will learn to adapt to their new environment. Examples of companies that have proved to be adaptive in the recent past (also by linking to PSS based thinking) are:

- **Xerox, Canon** and **Océ** are well-know PSS leaders. They have started their 'pay-per-copy' and lease programmes, their copier toner cartridge collection, their recycling and copy remanufacturing programmes in the nineties and have implemented product take back programmes.
- The **IKEA** concept is founded on a low-price offer in home furnishings, optimised product function, and inspired designs. This concept is combined with smart cash-and-carry formula, attractive stores at easy to reach locations with ample parking space, children playgrounds and family restaurants with Swedish dishes. IKEA has introduced eco-design. Products are of good quality, efficiently stored and packed in units that can easily be transported. Moreover, IKEA is famous for its marketing campaigns and client loyalty program.
- **Ecolab** provides reliable and efficient methods for maximizing food safety and quality. Instead of selling cleaning chemicals complete hygiene solutions are offered. The company overtakes the responsibility for ensuring a hygienic work environment for its customers.
- **Adobe** has been at the forefront of the software and internet revolution. Adobe is a leader in electronic communications, publishing and e-commerce technologies. By leveraging the global acceptance of PDF and XML documents, Adobe's intelligent document platform bridges the digital and paper worlds and gives

companies the ability to capture data, create and integrate high-quality documents, digital imaging and streamline collaborate processes. By offering free PDF-reader software Adobe-Acrobat the company has built a strong operating base for further product and service expansion strategies. Adobe provides downloads, an on-line store, forums, a venture capital partnership, developer and trainer provider program, and a worldwide hub for resellers, and distributors.

- **Dell** has re-invented computer sales by putting internet at the hart of its sales organisation and by inversion of the logistic chain. Dell is active in promoting electronics take-back and recycling, The company has a 'Climate Change Strategy' and is working to reduce its energy consumption in manufacturing and distribution.
- **Ericsson** and **Nokia** are world's leading providers of mobile networks and cellular phones and have made a serious commitment to sustainable development. Eco-design is leading and take-back services are offered in selected markets when operators no longer need a product. Ericsson offers Ecology Management Service, a highly flexible end-to-end service to support operators to migrate to next generation technologies. The impact of the 3G products of Ericsson will be profound. New business models will arise. Ericsson stresses the possibility to transport ideas, not people. This will pave the way to a world more committed to environmental responsibility and simultaneously improve the quality of life.
- **Interface** was one of the first companies in the US to adopt The Natural Step principles. Interface has begun experimenting from selling carpet to leasing flooring services. The Interface reclamation program evaluates and processes used carpet, even that of competitors, to responsibly give it a second life. Through maintenance, reuse, repurposing or recycling, Interface leads the industry in avoiding permanent disposal of carpet.
- **Philips**, **Sony** and **Toshiba** are recognized as leaders in the electronics industry for the application of lifecycle assessments to many of their products, and the implementation of eco-design procedures focusing on energy efficiency, weight minimization, reduction of hazardous materials, packaging minimization, and recycling and disposal. Moreover, Toshiba Medical Systems offers attractive PSS propositions to her clients.
- **General Electric** has implemented profound PSS strategies in many of the business units. For example, GE Equipment Services provides operating leases, loans, and asset management services for commercial and transportation equipment, including computer networks, trucks, intermodal shipping containers, and (temporary) modular space units.
- *Throughout the MEPSS-Handbook – numerous other examples of industries that have connected to PSS strategies will be given.*

## NorLux - LED Light Services

B2B –system integration (Lighting and Manufacturing sector)  
USA

### Introducing NorLux

NorLux Corp. is a company that is highly specialised in the design and manufacture of custom light emitting diode (LED) lighting solutions and applications. NorLux brings unsurpassed knowledge and expertise to the design and manufacture of LED lighting solutions. As lighting system integrators, their capabilities include LED packaging, optical design, electronic controls, power supplies and thermal management.

NorLux' team of designers and engineers work with the customer from the initial idea through design, prototype builds and pilot runs to the full-blown manufacture of finished product.

### Customized solution by combination of innovative LED products and services

The consultative sales approach of NorLux is based on offering customized solutions utilizing established platforms which can be easily modified to meet specific application requirements. Both staff and network of designers and engineers are leaders in areas such as optics, microelectronic assembly, lighting, electronics and system design, which give them the "know how" to solve problems and complete projects quickly, efficiently and elegantly.

*Mission & Philosophy: We are a solutions company, and believe the best solutions come from close collaboration with customers. Innovation and a vision for the future define who we are and what we do. We relentlessly search for better solutions to tomorrow's lighting demands while anticipating future possibilities for solid state lighting (SSL). At NorLux, nothing excites us more than a customer with a good idea who asks for our help. Working with other dedicated professionals to create and deliver a high-quality product is the primary goal of NorLux.*

### Network of Stakeholder Relations

As a solutions company, NorLux partners with original equipment manufacturers (OEM's), distributors, architects, engineers and designers to design and build LED applications. Each relationship with each customer is seen as a partnership because its foundation lies in our combined expertise: Customers know their business inside and out and NorLux is a leader in the LED industry. Together, we can create compelling LED based lighting solutions for specific markets.

New, system based models refocus from the production of resource based products to the provision of knowledge based, far reaching, dematerialised and personalised solutions to specific client needs. The MEPSS methodology is based on the perception that these solutions should be developed in partnerships and open cooperation models with other stakeholders, and explains why and how this should be done. Moreover, it provides insights into the systematic context in which partnerships and stakeholder engagement can work and identifies how new solutions can quickly be developed through modular innovation models.

The new perspective offered by PSS innovation lead to a series of questions such as:

- How to get started?
- How to convince my management (board)?
- How to scope the innovation project and who to invite?
- Which tools and methodologies to use to design and implement the new system in order to offer solutions that will be well-accepted in the marketplace?

This MEPSS handbook will answer these questions by introducing the concept of product-service system innovation and offering practical guidance to companies that want to incorporate this new system based thinking in their R&D and new business development operations.

→ *The MEPSS methodology described in this handbook will support you in the design and shaping of new product-service systems, the analysis of market and society trends and of the performance of new systems compared to today's operations. Starting point of this exciting journey is an in-depth understanding of the value chain and tomorrow's consumer preferences. Producing maps of today's value generating system and alternative systems is one of the recommended exercises. The use of visualisation techniques is another important element of the MEPSS methodology, as they enable effective communication within the development team, in the management board meetings and in stakeholder sessions.*

→ *The MEPSS innovation model is step-wise and modular. This modular approach ensures that the toolkit is tailored to the specific position and role of your company. The model can be entered at different development stages, which enables you to take the current situation of your company as a starting point. The approach ensures that you will be guided to the methodology section and tools that offer the most relevant solutions and support in your specific situation<sup>8</sup>. The model supports an open 'communication' with the business processes and competences in your organisation. PSS visualization tools are offered at various stages of the process to provide insight into the current situation and steps to be taken.*

<sup>8</sup> For SMEs that are still unfamiliar with managing innovation a practical and simple PSS scan has been developed parallel to the MEPSS project – matching many of the MEPSS steps in a very simplified format (e.g. easy to use checklist and tables) Tukker, A. and C. van Halen (eds.), 2003. 'Innovation scan product service combinations'. Manual – English and Dutch versions available.