

Innoveren met materialen: economisch potentieel, ecologische noodzaak  
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## Summary

### **Paying more attention to materials, a challenge for everyone**

We owe our prosperity to materials. We use them to build houses and roads, aeroplanes, cars, high-tech products and a whole host of other consumer goods. But there are many reasons why we should be concerned about the supply of raw materials and our consumption of them. The pressure on scarce raw materials is making itself felt with a vengeance. In the period 2002-2010 the cost of materials rose on average by a factor of 2.5. These costs represent an ever greater share of a company's operating costs and so increasingly affect the cost price of products. There is also a social cost in the form of the impact the use and consumption of so many materials has on the environment.

In the short term these findings demand that we make the transition to more sustainable materials management. We have to radically rethink the way we deal with raw and other materials in our economy. The wasteful and polluting use of materials has to make way for a careful and environment-friendly approach, as much out of economic considerations as ecological ones. Though there are many different ways and methods to achieve this, it is not always easy for a production company to define exactly what sustainable materials management means when it comes to its own products and activities. This book endeavours to put them on the right course.

### **Identifying opportunities for sustainable materials management**

Company managers need to have an understanding of exactly how they can improve their sustainable materials management in a practicable way in the short, medium and long term. It was to this end that the authors developed the 3P scan, very much with Flanders' manufacturing industry in mind. The scan aims to assess the concept and design of products and production processes by means of a set of indicators. This structured approach enables the company to form a clear picture of the current situation and suggests a number of paths which will lead to sustainable products and production.

Twenty-two indicators suggest ways a company can gain an advantage in this area. These 22 indicators are divided into **12 process indicators** and **10 product indicators**. The product-related indicators direct attention to the product's usage and end-of-life phases, while the process-related indicators help the company analyze the different steps in its production process, from the raw materials used up to and including the finished product. In both groups a distinction is drawn between indicators linked to the **people**, **planet** and **profit** aspects (the 3Ps) of sustainability. These refer to the social, environmental and economic dimensions of sustainability respectively. The specific focus on materials is what gives the 3P opportunities scan the edge over other scans.

	<i>People</i>	<i>Planet</i>	<i>Profit</i>
<b>Product</b>	1. Opportunities and risks relating to environmental aspects 2. Safety and user-friendliness	3. Packaging 4. Product use 5. Life span and maintenance 6. Product disposal	7. Supply chain management 8. Product-service systems 9. Total cost of ownership 10. Total value 11. Modularity 12. External communication and green marketing
<b>Process</b>	13. Green purchasing 14. Quality and safety in the workplace	15. Process energy 16. Process water 17. Material substitution 18. Waste prevention and reprocessing 19. Local cooperation	20. Process optimization 21. Savings vis-à-vis materials and energy 22. Innovation and R&D

### **Mix of good practice, testimonies and directive solutions**

This book sets out to inspire, stimulate and support companies in their efforts to make their products and processes more sustainable by putting in place innovative material technologies. It provides a novel mix of good practice, testimonies and directive solutions. In recent years the authors of the OpenRaam project have worked with numerous companies in a range of sectors, testing, refining and applying the 3P scan. These were not just large companies but also SMEs. Some had a long tradition of sustainability, others were taking their first steps on the transitional path to sustainability. This book draws on their experiences.

The book also urges action. What different steps does implementing the scan entail? Who do you involve in this process? How do you create the ideal conditions so as to use the 3P scan to its best advantage? How do you arrive at a realistic list of possible material innovations and related opportunities? And above all, how do you put them into practice? To help companies on their way, we have provided an overview of relevant subsidy channels, potential partners and sources of information which might prove useful when implementing the opportunities.

### **Ensuring your company's resilience**

The book is essentially about preserving your company, not only with a view to achieving environmental objectives, but also and above all with a view to guaranteeing its continuity in the medium term. It is about the importance of innovation. It is about realizing economic profit by investing in the more efficient use of materials. Putting sustainability into practice is not a threat, nor even a

burden: essentially it is all about making your company resilient enough to hold its own in a rapidly changing global context in which raw materials are becoming ever scarcer and more expensive. OpenRaam wishes you every success on this journey!

**More information?** [www.openraam.eu](http://www.openraam.eu)