

Abstracts

**Intensifying Use and Prolonging Product Lifetime in German Companies
- Impacts on Manufacturing Strategies and Workforce**

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Abstract

One major strategy for attaining sustainability is to intensify the use of products. This requires extending the product lifetime. Aiming at this sustainability concept does not necessarily mean an increase in cost. The development of new production concepts and products gives new chances of finding new markets. This idea was promoted in Europe by Walter Stahel, who emphasized it as a major way of protecting the environment, while safeguarding high living standards at the same time. In order to achieve this, companies have to redesign and redefine their market strategy, to close materials and energy in cycles and to adjust their manufacturing operations.

Based on a number of case studies in German manufacturing companies and elaborated in more detail in the project ProKreis, Fraunhofer ISI monitored the changes and helped companies to develop this new innovation strategy. Participants in this project were companies such as Siemens and Mercedes-Benz but also small and medium-sized companies.

One of the main focuses of the ProKreis project was the redesigning of the manufacturing operations and strategies. Issues like logistics and re-manufacturing will become crucial in future sustainable corporate strategies. Repair, maintenance, full-area covering services are major issues for a wider diffusion of these concepts. This restructuring of the value-added chain is a major issue for enhancing the greening of German industries.

Another major focus of these research efforts was the increased importance of the workforce. Repair, maintenance, decentralised decisions about quality of recycled components etc. will bring back responsibility, competence and skills to the shop-floor and to the service stations. These concepts offer the possibility to substitute capital investments by labour investments. The main obstacles are general management attitudes and qualifications in order to provide the necessary skills on a wider scale among the company's employees.