

Sustainability management and Life Cycle Engineering

Sustainability throughout the product life-cycle

What are the focal points of the department?

In the area of sustainability management, we advise companies on the alignment of their strategy, products and processes with the key sustainability goals (Sustainable Development Goals of the UN) relevant to the company and integrating these into business processes and decisions. The ecological, social and economic opportunities and risks of an organization are thereby identified, and measures are developed to manage them. In the area of Life Cycle Engineering (LCE), we develop methods with which sustainability can be measured and, consequently, managed. LCE is an approach aimed at designing products and processes, thereby taking the entire life cycle into account. It provides companies with a tool with which to improve their products through the minimization of environmental impacts, the maximization of resource efficiency and the development of sustainable solutions."

What are the plans for the future?

We will expand projects that focus on sustainable products and processes in industry, and will also consolidate far-reaching collaborations and partnerships. The current focus lies on the mobility sector. In the future, we will also expand our expertise to the chemicals sector and in the area of metal and raw-material extraction. One focus will thereby lie on the circular economy, with which closed material cycles and a resilient value chain can be achieved. The work will not only boost growth, but also promote innovation in order to address industry-specific challenges. The aim is to establish the department as a center of excellence for research and development in the field of sustainability management through the consistent implementation of sustainability practices and standards in companies and the application of novel Life Cycle Engineering approaches."

What were the highlights in the reporting year?

The department is involved in large-scale European research projects and various industrial projects that cover all facets of Life Cycle Engineering and sustainability topics. Our projects include, for example, "TranSensus LCA", which aims to define and harmonize a standardized and applied Life Cycle Assessment approach for zero-emission vehicles (ZEV). Furthermore, within the framework of the "HiQ-LCA" project, we are working on the provision of high-quality LCA data for lithium battery production. In order to ensure significant steps towards sustainability, the department also advises industrial partners such as the Friedhelm Loh Group (which we are supporting in the development of a sustainability strategy), Volkswagen and many other companies."

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- Advice on corporate sustainability strategy
- Support in the implementation of the Sustainable Development Goals (SDGs) in your company and derivation of measurable targets
- Early identification of potential in order to increase sustainability
- Detailed analysis of specific sustainability trends
- Support of business processes from the early phase (production planning, product development and procurement) through to the finished product and identification of optimization potentials
- Decision support for the reduction of negative environmental impacts
- Development of tools for the quantification of the product carbon footprint (PCF) and the corporate carbon footprint (CCF)
- Customized learning modules in the area of sustainability and LCE

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