



**Fraunhofer Center for  
International Management and  
Knowledge Economy IMW**

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## APPROACHES TO SHAPING STRUCTURAL CHANGE TOWARDS A SUSTAINABLE INDUSTRIAL SOCIETY

### Motivation

The energy-intensive industries in Germany, like the regions they are located in, are facing enormous pressure to adapt. Only with innovative products, processes and business models can they hold their own in international competition and simultaneously achieve increasingly ambitious climate targets. The exit from coal-fired power generation increases the pressure for transformation, especially for the chemical industry in Central Germany.

findings on regional path development and sustainability transitions and quantitative competencies in the modeling of coupled energy and material networks are transferred to implementation-oriented research. This project will develop a monitoring system for structural change, a techno-economic model for the coupled optimization of energy and material flows, and instruments for the transformation of innovative ecosystems. The chemical industry in Central Germany serves as the first application case.

### Project description

By combining socio-economic and techno-economic expertise at the Fraunhofer IMW, this project develops instruments for the design of structural change processes for regional actors from politics and industry. Therefore, scientific

**Client:**



## Fraunhofer

Fraunhofer-Gesellschaft

**Project duration:**

January 2020 to December 2021

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**Our Services**

The main result of the project will be a „Strategy Box Structural Change“. It represents a bundle of services that includes instruments for advising policy-makers and companies, intermediaries and clusters on how to shape structural change. This strategy box will be used in the following fields of action:

- Recognition of potential for diversification into new technologies, markets or industries
- Evaluation of potential diversification paths
- Analysis and design of regional value chains
- Making energy and material flows efficient and cost-saving
- Development of sustainable innovation and business model potentials

