



# **CLUSTER DECARBONISATION IN INDUSTRIES**

**THE NETWORK FOR A GREENHOUSE GAS NEUTRAL INDUSTRIAL FUTURE**

[www.cluster-dekarbonisierung.de/en](http://www.cluster-dekarbonisierung.de/en)



## Dear readers,

*Germany has pledged to become greenhouse gas neutral by 2045 to contribute to the limitation of global warming to 1.5 degrees Celsius. With an emission figure of around 181 million tonnes of CO2 equivalents in 2021, industry is the second largest initiator of greenhouse gas emissions. This makes one thing clear: that the transformation to a climate-neutral industry cannot succeed by adaptation alone, but requires extensive technological and process-oriented modifications, including the opening up of new and above all sustainable green markets.*

*The formation of the Cluster Decarbonisation in Industries (CDI) in November 2021 in the structural development region Lusatia marks the beginning of a supra-regional and interdisciplinary cooperation of players to actively support the industrial transformation. As a growing network, we bring together the manifold skills and know-how of our partners. This enables us to learn from each other and develop innovative, competitive approaches to the decarbonisation of industry. Technological, economic, regulatory and social aspects are discussed and particularly the practice-oriented exchange of experience is encouraged.*



*Our aim is to create a cross-industrial and cross-sectoral understanding of the challenges involved in the decarbonisation of industry with and for our nationwide German partner network from industry, research, politics and administration, and to develop a long-term nationwide and international reach for this important topic from Lusatia.*

*Let's pave the way towards a climate-neutral industry together!*

Andreas Findeisen  
Head of the CDI Coordination Office

## Hand-in-hand for a climate-friendly industry

The Cluster Decarbonisation in Industries was founded in 2021 on the initiative of four Cottbus institutions to actively pave the way towards a climate-neutral industry. The initiators – the Brandenburg University of Technology (BTU) Cottbus-Senftenberg, the Institute of Low-Carbon Industrial Processes of the German Aerospace Center (DLR), the Fraunhofer Research Institution for Energy Infrastructures and Geothermal Systems (IEG) and the Competence Centre on Climate Change Mitigation in Energy-Intensive Industries (KEI) - demonstrate the variety of topics required for this and contribute their expertise to the work of the cluster.

Due to its interdisciplinary orientation, technical, economic and social aspects of decarbonisation are examined and interlinked in the cluster. This enables the challenges and opportunities of industrial transformation to be identified in their entirety, and the development of innovative solution strategies is promoted and accelerated.

The initiators act as a steering committee in the CDI, developing the network into a central contact point for all players in the decarbonisation process. In doing so, they are bundling extensive expertise for a climate-friendly industry at the joint location in Lusatia, while at the same time making an active contribution to the structural development of the region.

### Fraunhofer Research Institution for Energy Infrastructures and Geothermal Systems (IEG)

*Fraunhofer IEG conducts research on integrated energy infrastructures as well as transport and storage systems for carbon dioxide and hydrogen for a successful energy transition. With our systemic view and technological innovations in sector coupling, we promote the transformation of the energy systems. Together with the cluster and its partners, we bring integrated technologies and innovative business models to application and support Lusatia in transforming into a climate-neutral model region.*

**Prof. Dr. Mario Ragwitz, Institute Director**





### **Competence Centre on Climate Change Mitigation in Energy-Intensive Industries (KEI)**

*The KEI advises and promotes energy-intensive industries such as steel, chemicals, cement and lime or non-ferrous metals on the topic of the mitigation of greenhouse gas emissions and supervises the funding programme 'Decarbonisation of Industry'. The KEI organises the operative cooperation of the partners and coordinates the activities of the CDI in the cluster. Together with the regional partners, we seek to significantly promote the exchange of knowledge and experience regarding the complex transformation process of industry - not only nationwide but also beyond the German borders.*

**Dr. Mario Hüttenhofer, Director**



### **Brandenburg University of Technology Cottbus-Senftenberg (BTU)**

*The BTU combines basic and application-oriented research. Our area of expertise, the 'Decarbonization and Transformation of Industry' is unique in the German academic landscape and makes a contribution to securing skilled workers in the area of climate action. Furthermore, the cluster also enables us to bundle our expertise and make a success of the complex transformation not only in research but also in the implementation and transformation of the economy and region for Lusatia, and create a model that is highly respected beyond the region and internationally.*

**Prof. Dr. Gesine Grande, President**

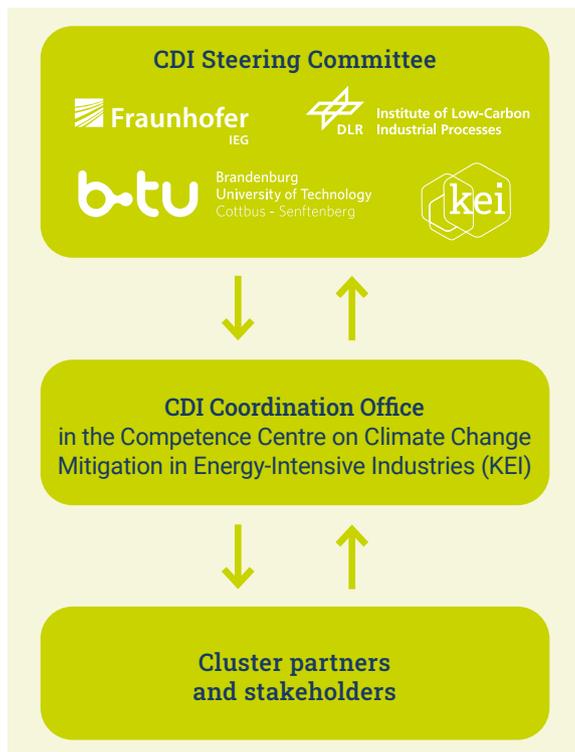


### **Institute of Low-Carbon Industrial Processes of the German Aerospace Center (DLR)**

*The DLR is currently working on solutions for an economically viable transformation of industrial and power station processes into low-carbon technologies. For this purpose, the institute is conducting research on sustainably generated process heat and alternatives for fossil fuels. By means of the formation of the cluster and especially the cooperation with the cluster partners, the future is developed through research, innovation and technology transfer.*

**Prof. Dr. Uwe Riedel, Institute Director**

# STEERING TRANSFORMATION MODELLING CHANGE



## Network management for a successful industrial future

The Cluster Decarbonisation in Industries acts as a platform and multiplier for all decarbonisation players. It not only addresses industrial companies, but also research facilities, universities, technical and non-technical service providers as well as other players from politics and administration.

The CDI partners are brought together by means of an active network management to enable them to exchange and deepen their existing expert knowledge and experience in the field of the decarbonisation of industry. At the same time, the cluster promotes creative discussion processes on complex matters in the area of decarbonisation, with the objective of initiating solution approaches and specific ideas for best practices and joint projects. The cluster thus offers its partners the opportunity to introduce innovative ideas and to actively model the transformation process of the industry.



## How to contact the CDI Coordination Office

The first point of contact for all cluster partners and stakeholders from the national and international field is the CDI Coordination Office, which operates in close coordination with the cluster's steering committee. It is the task of the Coordination Office to develop and organise the versatile cluster activities and to secure results. Amongst other things, this includes the planning and implementation of professional events and network meetings as well as the further processing of cluster topics by means of assigning studies and proposing and actively supporting joint projects of the partners.

The results of the work of the cluster are communicated to the public to further strengthen the visibility and awareness for the decarbonisation of industry and to gain broad acceptance.



### CDI Coordination Office

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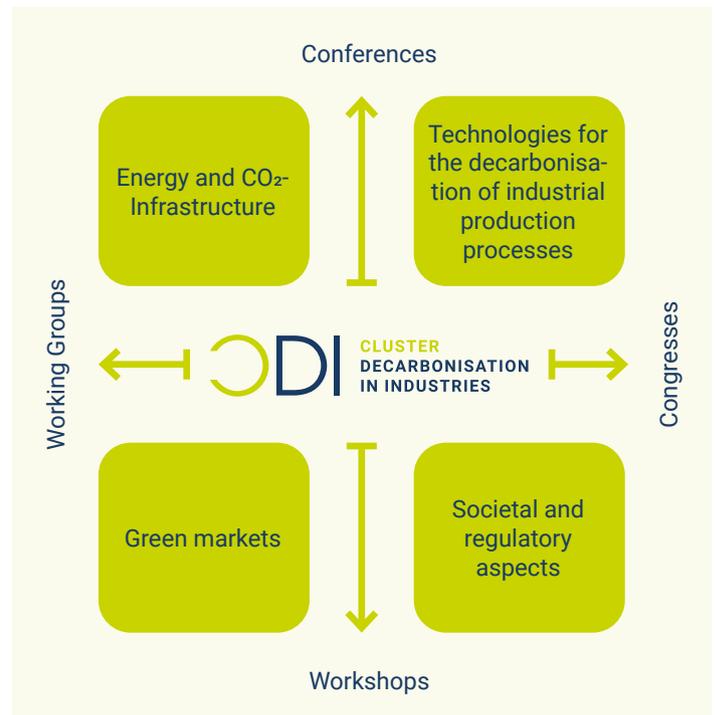
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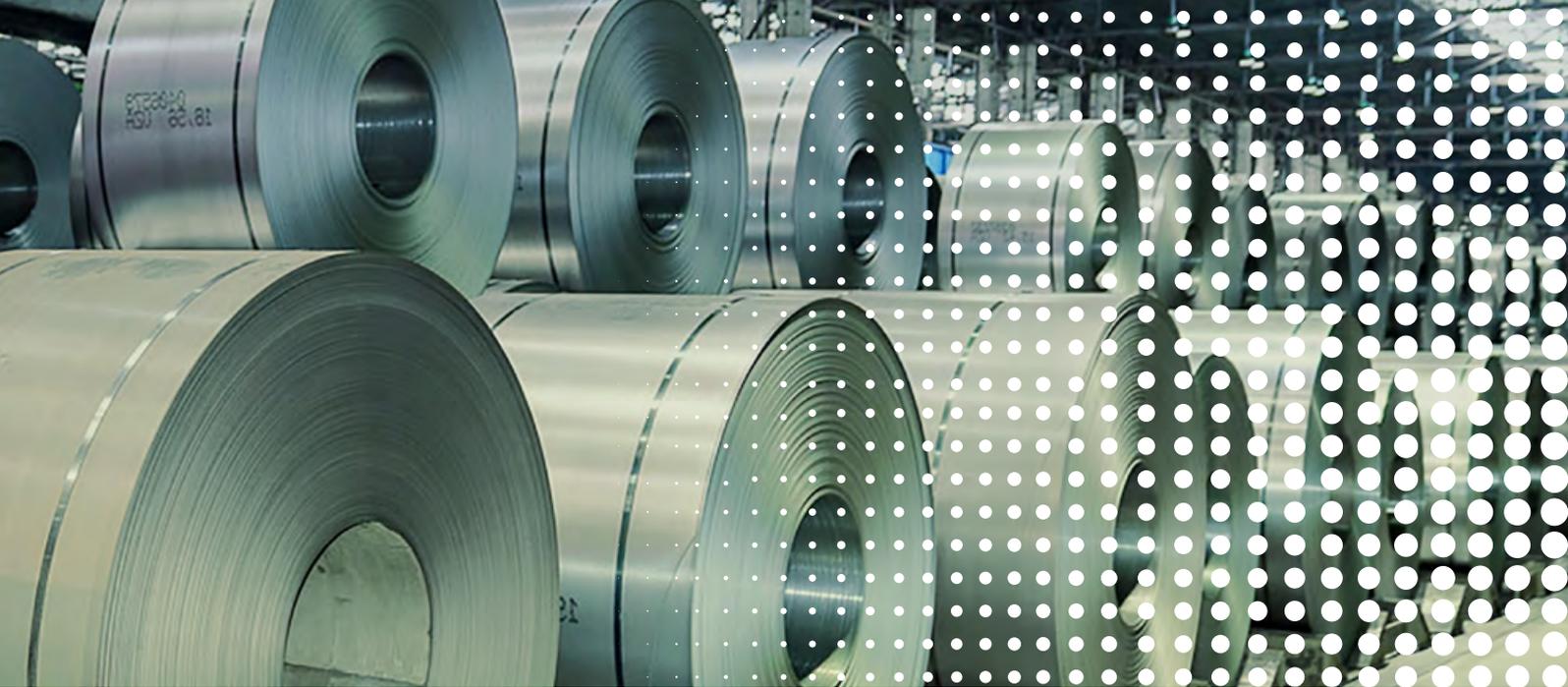
# BUNDLING COMPETENCES PROMOTING EXCHANGE

## The CDI as a central hub for the transfer of technology and knowledge

The CDI examines the entire process leading towards industrial decarbonisation. Technological requirements on industrial production processes will be discussed as well as the inclusion and utilisation of renewable energies and the creation and establishment of so-called “green markets” for industry. But also social aspects such as the availability of qualified workers, for example, and the acceptance of the population of the necessity for industrial transformation, are taken into consideration and have an impact on the future orientation of the industry.

The cluster’s event portfolio aims to network participants with one other and to establish an intensive expert exchange. The cluster partners can contribute their versatile skills and experience to the discussion. The formats therefore form the creative core of the cluster and provide ideas for the successful transformation of industry.





## **An overview of our events:**

### **Lusatia Expert Conference**

Annual conference for specialists from industry, business and science on current challenges and issues relating to a climate-neutral industry. The series of events particular focuses on the primary industries such as steel, chemicals, cement and other energy-intensive industries.

### **Innovation Groups**

CDI partners discuss the needs and requirements of industry in topic-specific work groups and identify precise measures for actions, such as studies, theses and discussion papers. Each group is supported by relevant experts.

### **Summer Summit**

Practice-oriented exchange of experience to encourage a sustainable dialogue in terms of technological, legal, economic and social aspects from research and economy. The event is specifically intended for executives from the CDI partner group, who will prepare joint solution approaches.

### **CDI Input**

One-hour online format for communicating knowledge from the field of law, finance and insurance. Experts are invited to share information and knowledge on current topics and to answer questions from the audience. The event is intended exclusively for CDI partners.

For an overview of all dates, please refer to [www.cluster-dekarbonisierung.de](http://www.cluster-dekarbonisierung.de)



## CDI's international activities include:

- ✔ Strengthening the international visibility of the topic area of decarbonisation
- ✔ Establishing relationships with international clusters, businesses and research partners
- ✔ Exploring and facilitating access to new markets and global value chains
- ✔ Identifying global trends in decarbonisation solutions and policies
- ✔ Exchange of knowledge, technologies and experience in a national and international context



**Get in touch**



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