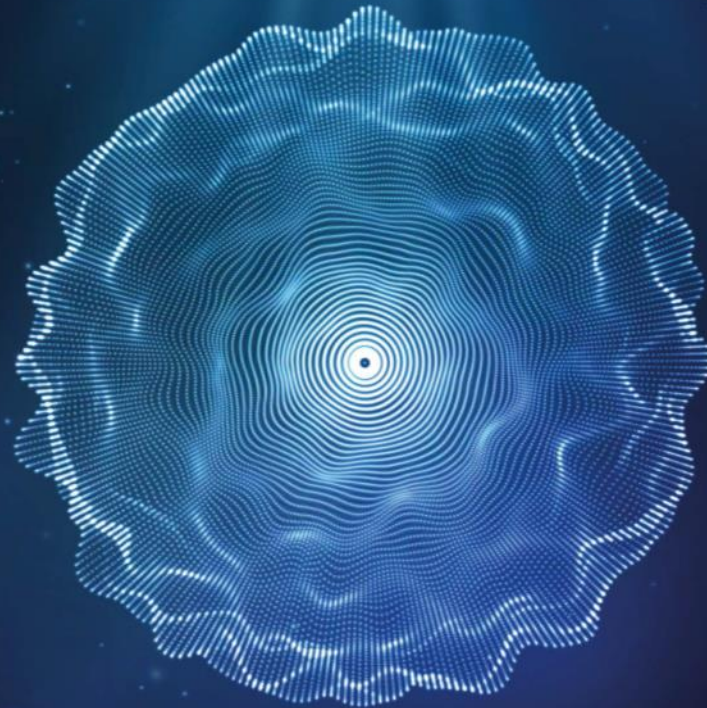

FRAUNHOFER HYDROGEN ACTIVITIES FOCUSING ON LUSATIA

Dominik Härle, online

23.03.2021



The Fraunhofer-Gesellschaft at a Glance

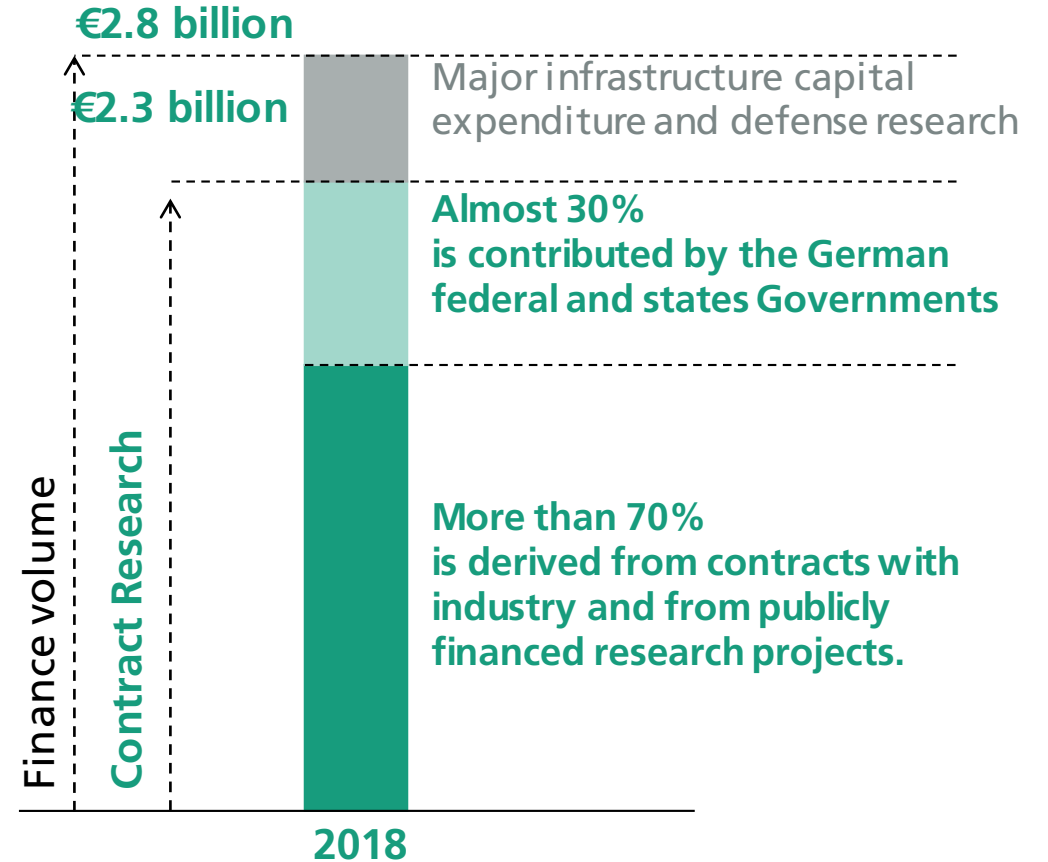
The Fraunhofer-Gesellschaft undertakes applied research of direct utility to private and public enterprise and of wide benefit to society.



28,800 staff



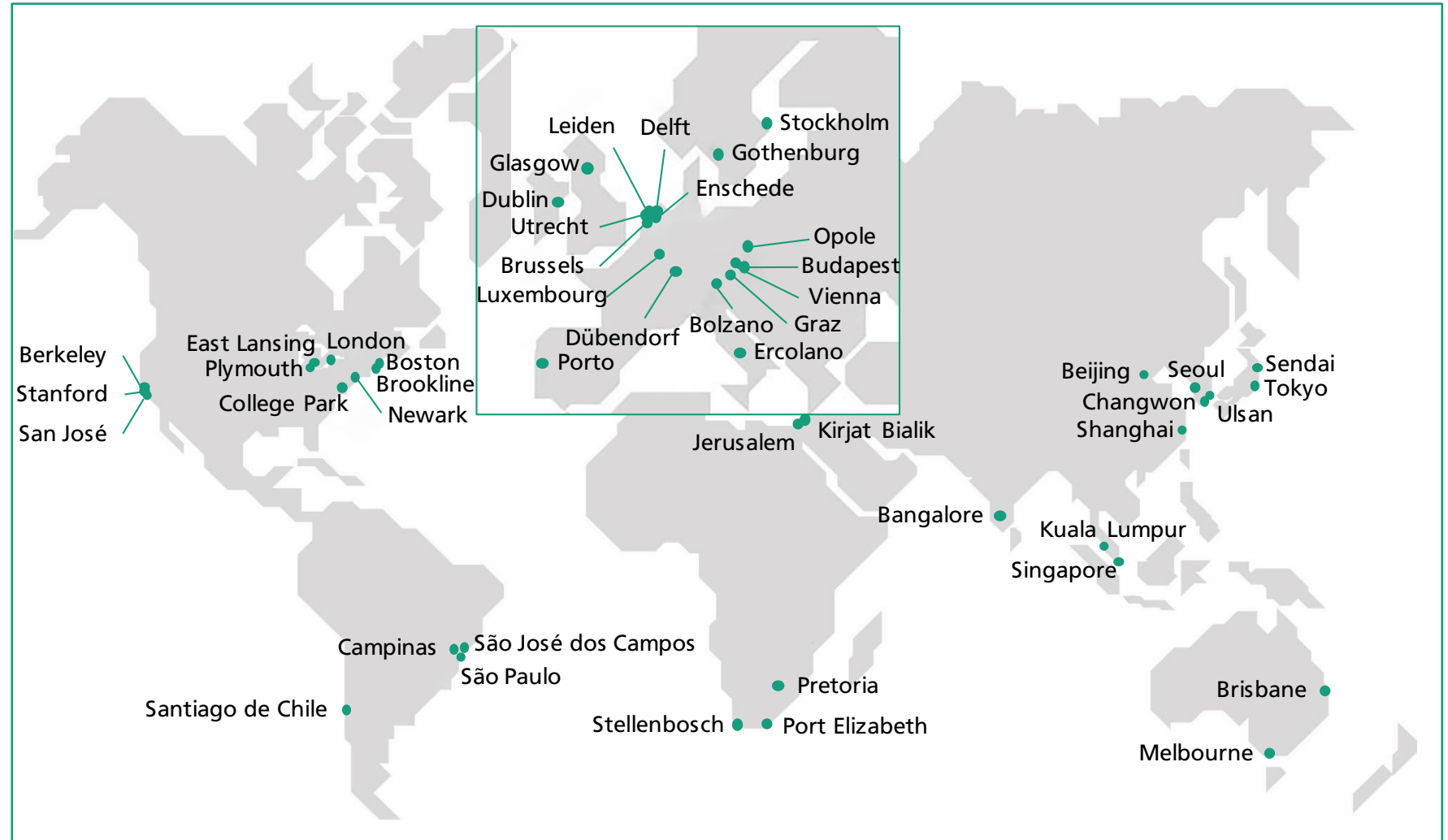
74 institutes and research units



International Network

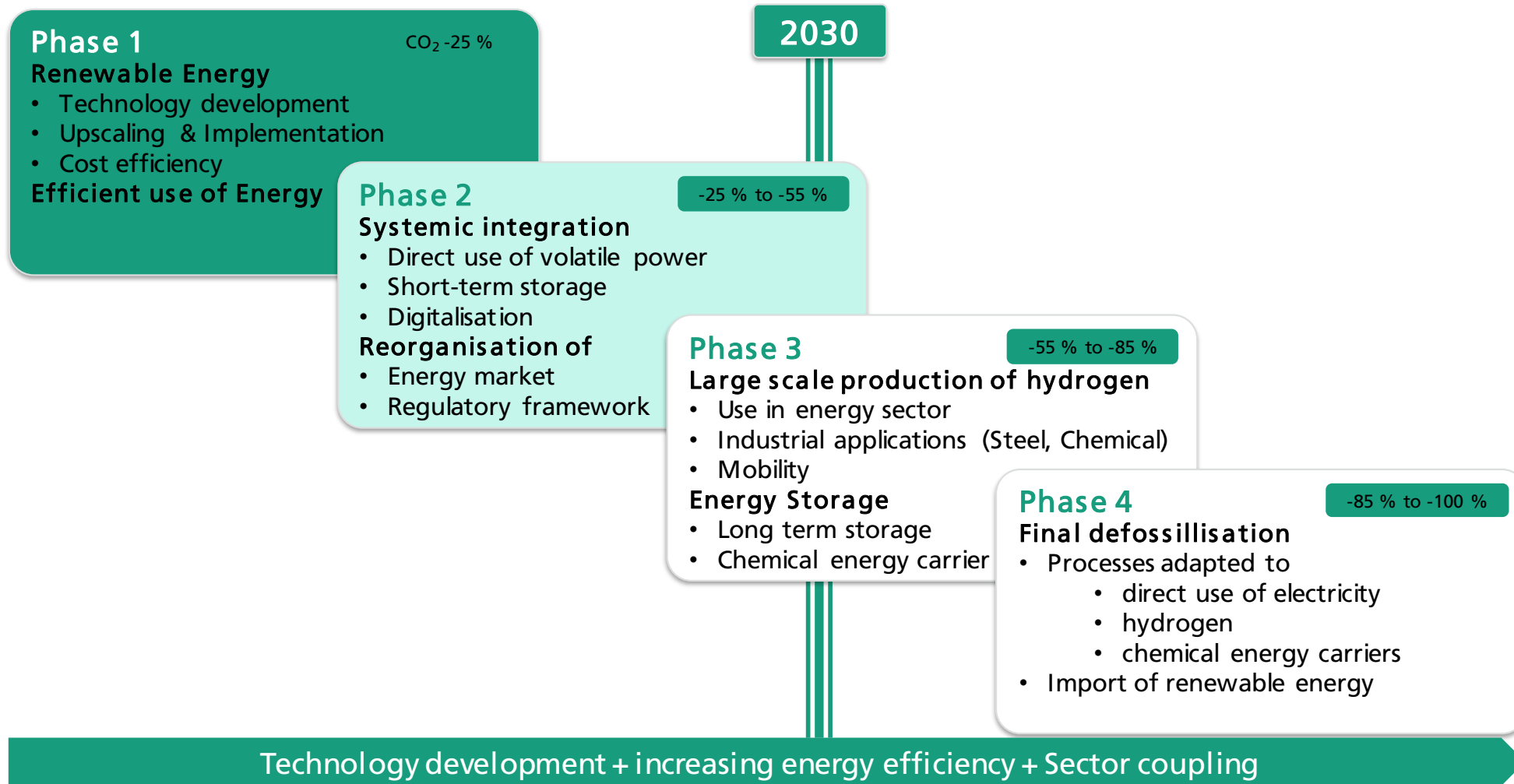


- 8 independent Fraunhofer affiliates
- Active with partners in approximately 80 countries
- Representative Offices and Senior Advisors worldwide leverage networks abroad



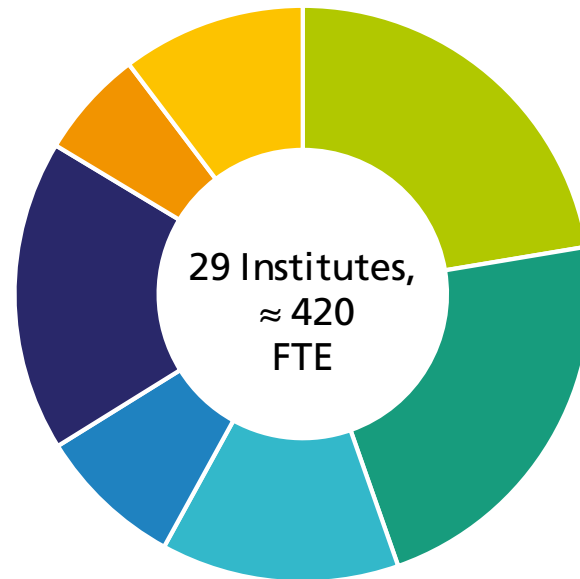
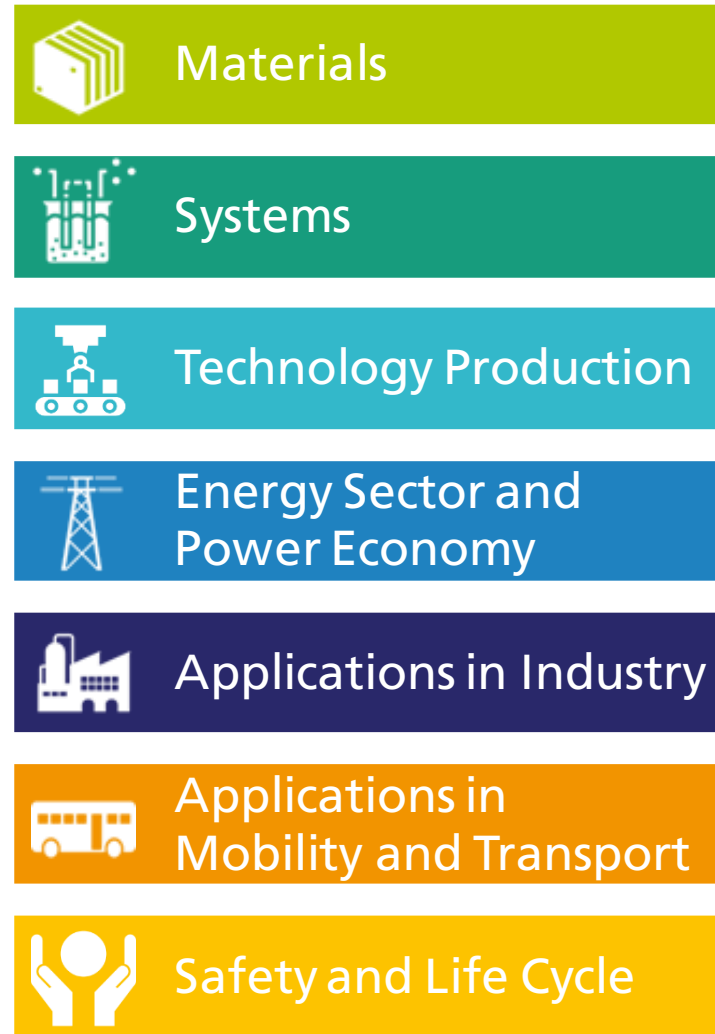
Fraunhofer Hydrogen Activities

Phases of the energy transition



Fraunhofer Hydrogen Activities

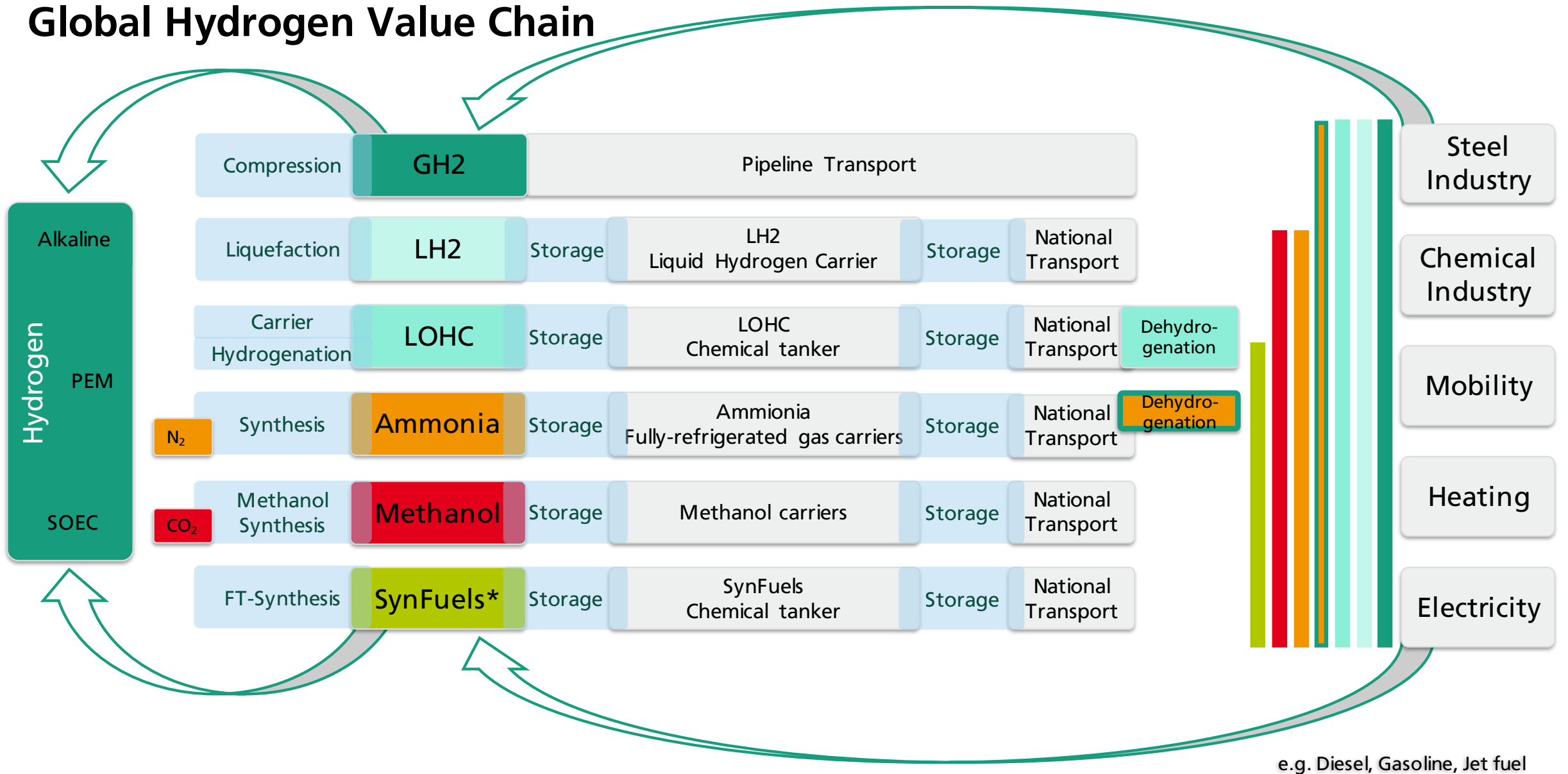
The Fraunhofer Hydrogen Network



- **Profile sharpening** within the H₂ value chain
- **Exchange** and cooperation platform
- **Management:** Prof. C. Hebling (ISE), Prof. M. Ragwitz (IEG)
- **Management Committee** as an agile operational decision-making level



Global Hydrogen Value Chain



Fraunhofer Hydrogen Activities

Fraunhofer Hydrogen Network – Publications: Roadmap and Portfolio



Definition of options for political action to support the development of the **National Hydrogen Strategy**



Fraunhofer brochure »Competence for the hydrogen age«

Key messages:

- Call for **technological openness**
- **Need** for
 - **Model regions** in Germany
 - **Research Factory** Fuel Cells
 - **IPCEI** at EU-level
- **Fraunhofer** can design and support **technology transfer** to industry across **all subject areas**
- **English** version of the executive summary available

- **Content:**
 - Status quo of **Fraunhofer competencies** in the field of hydrogen
 - **Competence map** with contact persons
 - Longer term validity
- **Target group:** politics and industry

Fraunhofer IEG

Locations

North Rhine-Westphalia

„Geoessources, Energy Storage and Systems Transformation“ in Bochum, Aachen and Weisweiler; in close cooperation with RUB, HBO and RWTH.

„Open District Hub“ in Jülich; in close cooperation with FZ Jülich and RWTH.



Brandenburg

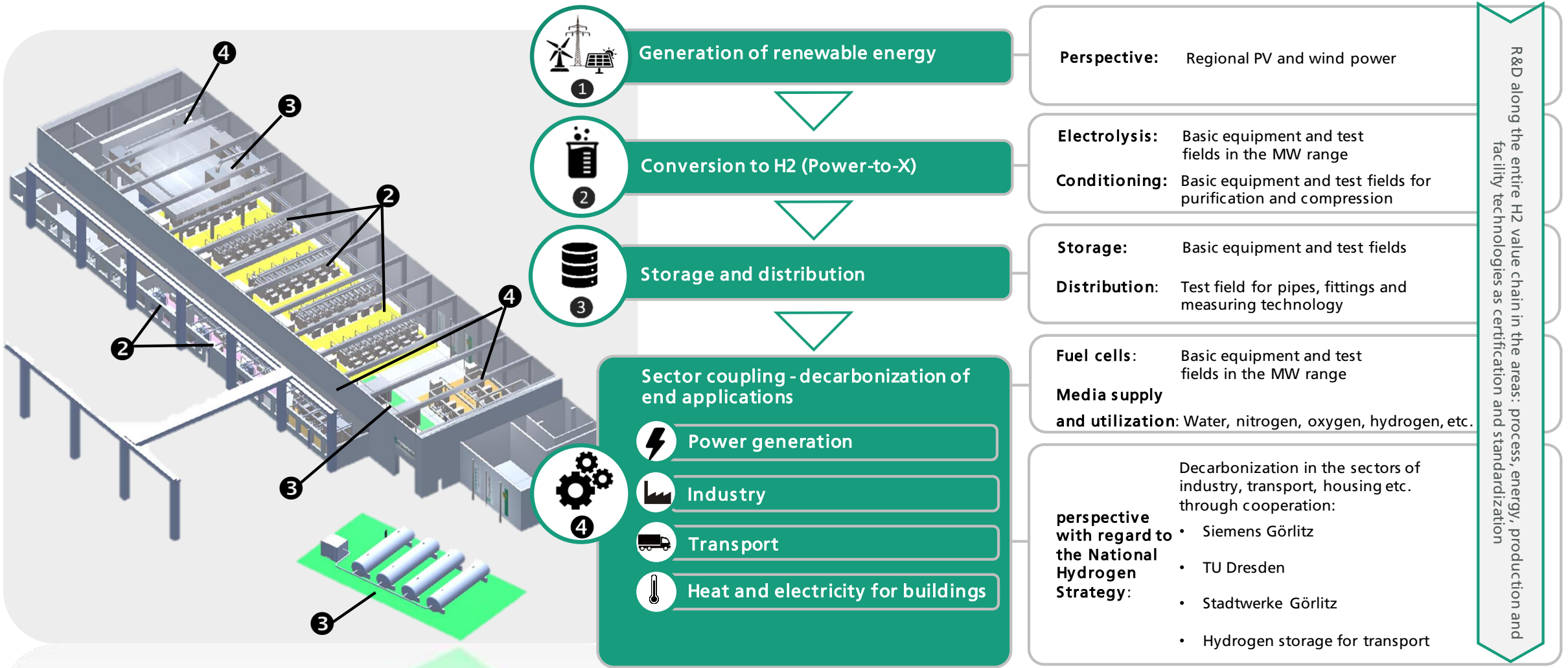
„Energy Infrastructures“ in Cottbus; in close cooperation with BTU Cottbus-Senftenberg

Saxony

Local branch for „Next Generation Heating Infrastructures“ in Zittau; in close cooperation with HSZG.

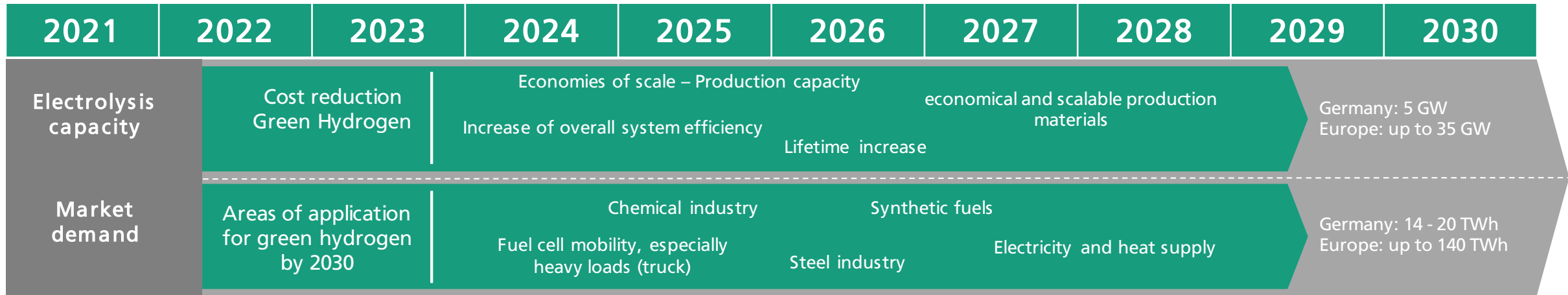
Hydrogen Lab Görlitz - HLG

Fraunhofer IWU & IMWS

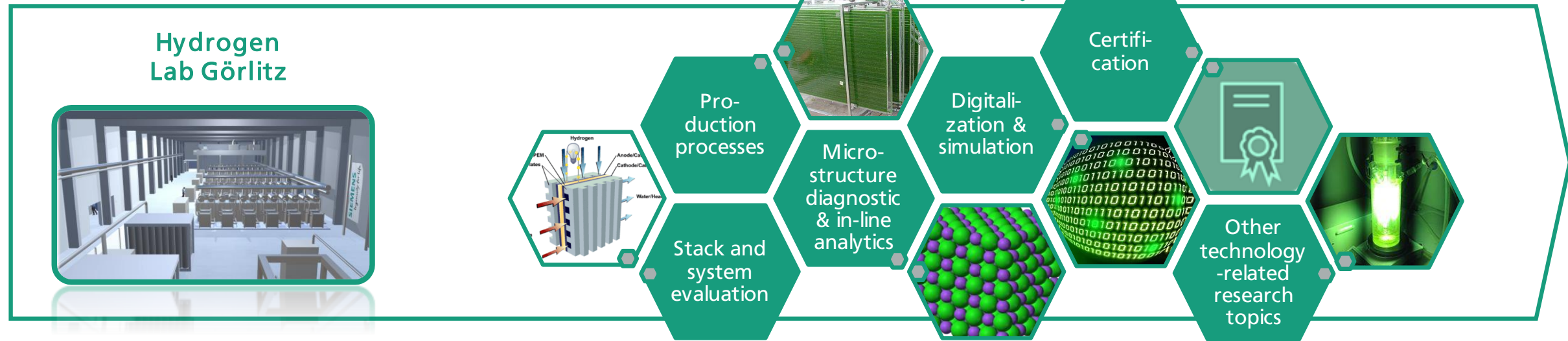


Hydrogen Lab Görlitz - HLG

Research roadmap and strategy



Application and market-relevant research contributions



DURCH
ATMEN H_2

UNTERSTÜTZUNG DES STRUKTUR-
WANDELS UND AUFBAU EINER LAUSITZER
WASSERSTOFFWIRTSCHAFT

„VERANTWORTUNG KANN
NICHT GETEILT ABER GEMEINSAM
GETRAGEN WERDEN“
- WALTER JAKOBY

H_2 HYDROGEN
ENERGY
STORAGE

H_2

Fraunhofer IKTS

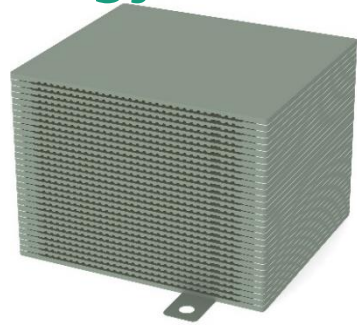
Energy Server of the Future - Turbo-Fuel-Cell 1.0

Gefördert durch:



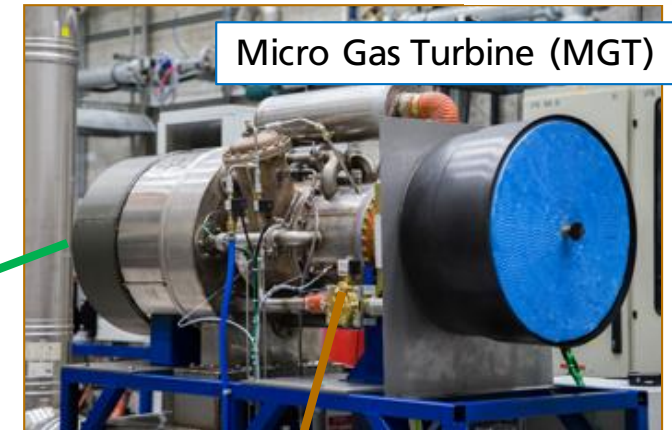
Bundesministerium
für Wirtschaft
und Energie

PTJ
Projekträger Jülich
Forschungszentrum Jülich

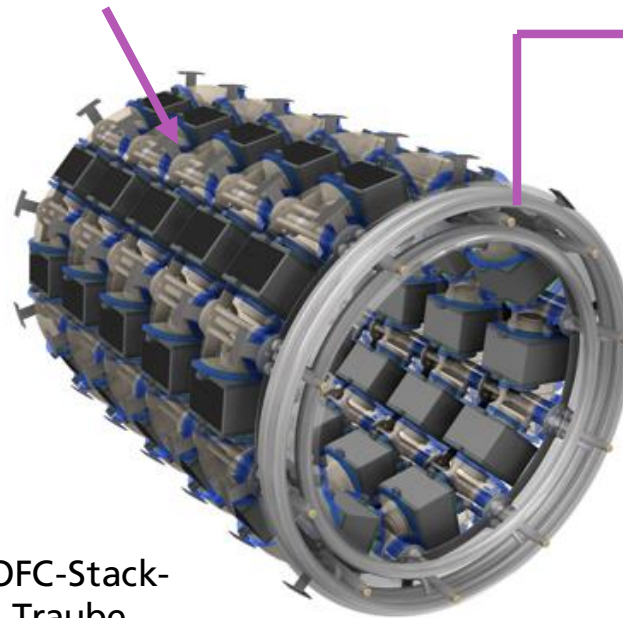


Solid Oxide Fuel Cell
(SOFC)-Stack

Turbo-Fuel-Cell 1.0
(MGT-SOFC-System)



Micro Gas Turbine (MGT)



SOFC-Stack-
Traube



Rekuperator

Power-Head

Research Outlook

- We need research along the whole value chain & being open for all technologies
- Large scale projects need to be implemented
- Electrolyzer factories need to be build
- Large scale testing infrastructure need to be implemented
- Hydrogen hubs across Europe need to be connected
- Hydrogen import and technology export needs to be prepared

Contact

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Cross Innovation Hydrogen Technologies

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