

FFE Forschungsstelle für
Energiewirtschaft e.V.

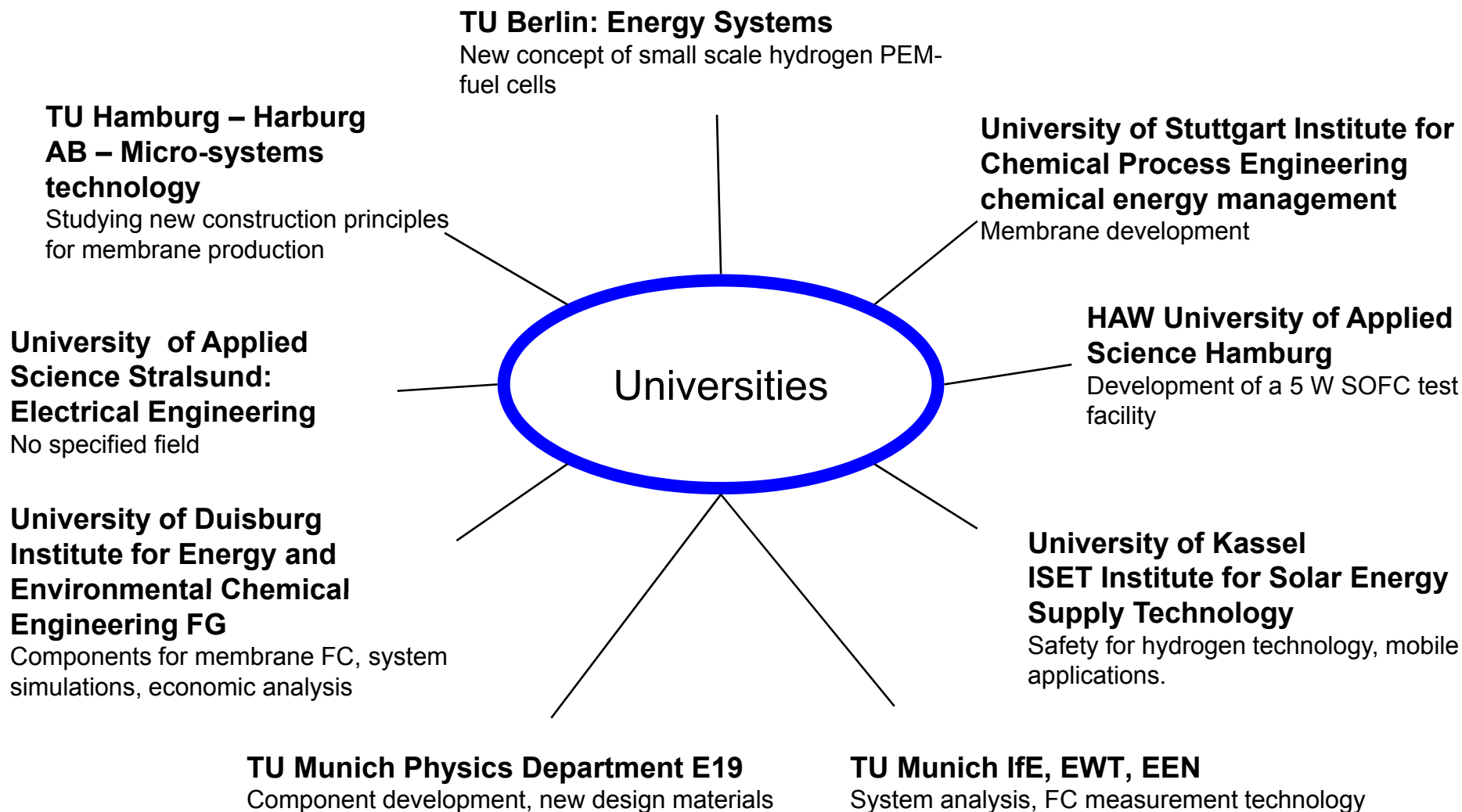
wiba
Koordinationsstelle
der Wasserstoff-Initiative Bayern

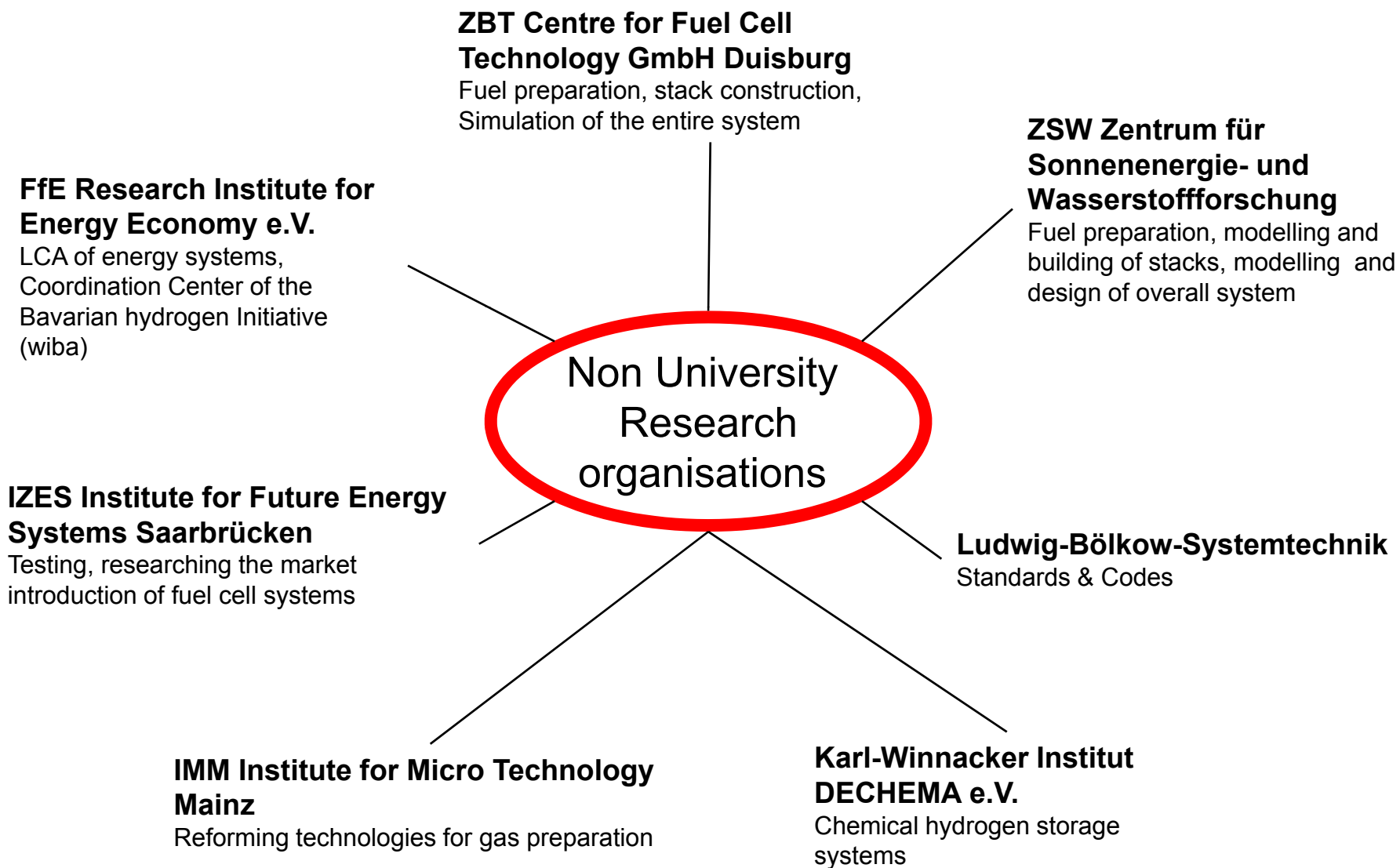
TUM
TECHNISCHE
UNIVERSITÄT
MÜNCHEN

Fuel-cells and hydrogen research in Germany

R&D Activities of Institutes and Universities

Prof. Dr.-Ing. Ulrich Wagner, Technische Universität München
Coordination Centre for the Bavarian Hydrogen Initiative
c/o Research Institute for Energy Economy e. V.





Members of the Helmholtz Association

Research Centre Jülich GmbH

Focus on SOFC, stationary und portable systems, fuel preparation

Research Centre Karlsruhe

Hydrogen safety, mobile applications

GKSS Research Centre Geesthacht GmbH

Membrane development

(DLR) German Aerospace Centre Stuttgart

Development of portable systems fuelled by hydrogen and methane



Research centres

Fraunhofer Institutes

ISE Institute for Solar Energy Systems

Hydrogen production and storage, fuel cell systems

IZM Institute for Assembly and Packaging of Micro Systems

Fuel cell applications as alternative for batteries, micro fuel cell technology

ICT Institute for Chemical Technology

Development and analysis of hydrogen storage systems, polymer components in PEM – fuel cells

IPT Institute for Production Technology

Production of tools required for fuel cell component manufacture

IKTS Dresden

Production of high temperature stacks for the SOFC

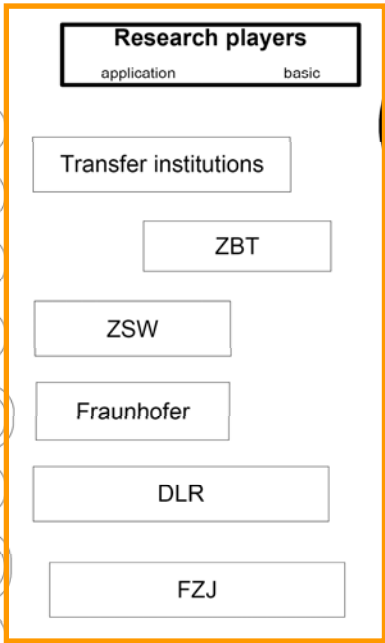
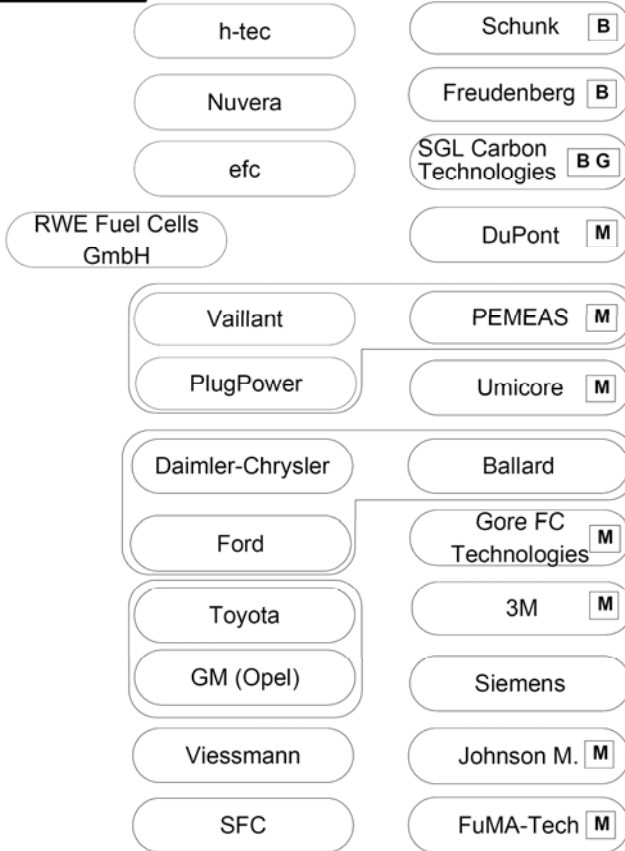
End-users
 * energy utility companies
 * public demand
 * trade

Industry
 integrators
 systems
 component manufacturers

Research players
 application basic

Political players
 global; EU;
 Germany: ministries (BMWA, BMBF, BMU, BMVWB, BMVEL+ federal ministries + project operating agencies); foundations

Others
 * NGOs
 * trade unions
 * churches



B = BBP
M = membrane/MEA/cat
G = GDL

