



Competence Mapping of German Resource Research Institute (GERRI)

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In 2015 five leading German research institutions from the raw materials sector founded "GERRI", a virtual institute with the aim of strengthening German's raw material research within international competition. The GERRI founding partners - TU Bergakademie Freiberg, RWTH Aachen University, Clausthal University of Technology, Fraunhofer project group for recycling and resource management IWKS at the Fraunhofer ISC and the Helmholtz-Institute Freiberg for Resource Technology (HIF) at the HZDR - have a unique broad spectrum of knowledge and experience in both, basic and applied fields.

Currently GERRI, the "German Resource Research Institute", has met an important milestone by defining its main goals and interface competences focussed on high-tech metals and other economically important raw materials, which are indispensable for technological development. A competence mapping, based on a data management system, demonstrates GERRI's expertise in the fields of exploration & mining, processing, hydrometallurgy, pyrometallurgy, materials, waste management, machinery, modeling and special analytics. The knowledge and experience of the network partners are summarized in so-called "competence sheets". The access to existed competences is carried out by internal database for partners and by publicly available website.

The GERRI network provides access to a diverse technical infrastructure (measuring equipment, laboratory equipment) at various levels of research. On the website www.gerri-germany.org GERRI is presenting its services along the entire value chain of mineral and metal-containing raw materials. The bundled (expert) knowledge within competence fields has been linked to methods / processes, material flows and chemical elements. Easy understandable searching tools offer transparency about the infrastructure of the network partners. Herewith the stakeholders of raw materials from industry and science will be able to accost the German universities and research institutes with actual problems more targeted, much faster and more detailed. With the integration of new partners, the network itself as well as the existing fields of competence will be deepened and expanded in the near future.

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GERRI

Joint solutions for resources.

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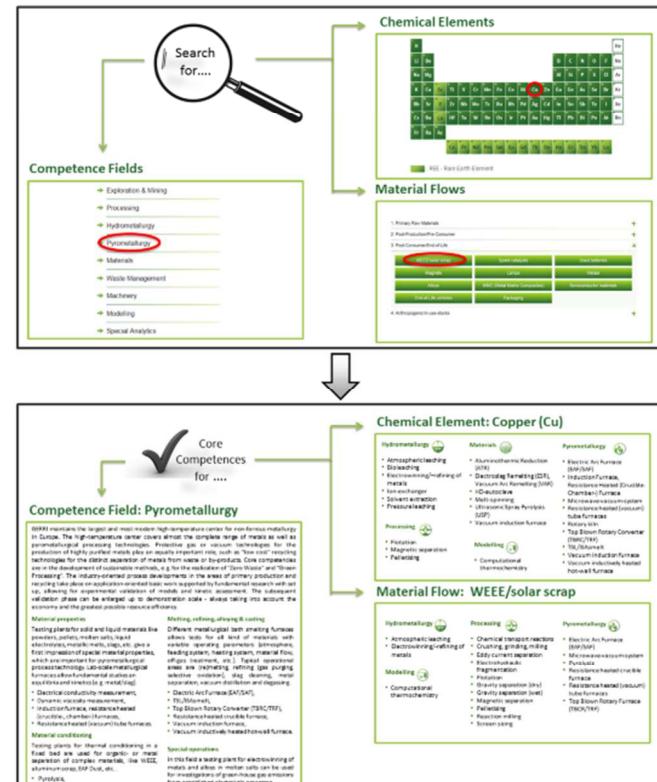
Database Management System demonstrates GERRI's Expertise and Infrastructure

GERRI partners have a unique broad spectrum of knowledge and experience in both, basic and applied fields of raw material research. Detailed information on this are summarized in "Competence Sheets".

Searching tools via two approaches (www.gerri-germany.org):

- Methods/Processes: technological **Competence Fields**
- Materials: investigated **Material Flows**
investigated **Chemical Elements**

The double-sided "Competence Sheets" are catalogued in an internal database exclusively available for GERRI network partners. Hence the entire network's infrastructure and expertise can be used by the GERRI community. Currently a total of 64 methods/processes are documented, linked with 33 different material flows and 73 chemical elements.



see also: E. Rombach & E. Schmid: World of Metallurgy – ERZMETALL 70 (2017) 1, pp. 55 - 58

Cross-sections show GERRI's Interface Competences

Sustainable Mining Practice

Anthropogenic Stocks

Substitution of Critical Materials

Interconnected Systems

Advanced Circular Economy

Resource Efficiency



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