Current Research Projects

Here you will find an overview of our current publicly funded research projects, grouped alphabetically. In addition, the AMT implements projects on a private contract basis together with industrial companies, which, however, cannot be listed here for reasons of confidentiality of the research subject.

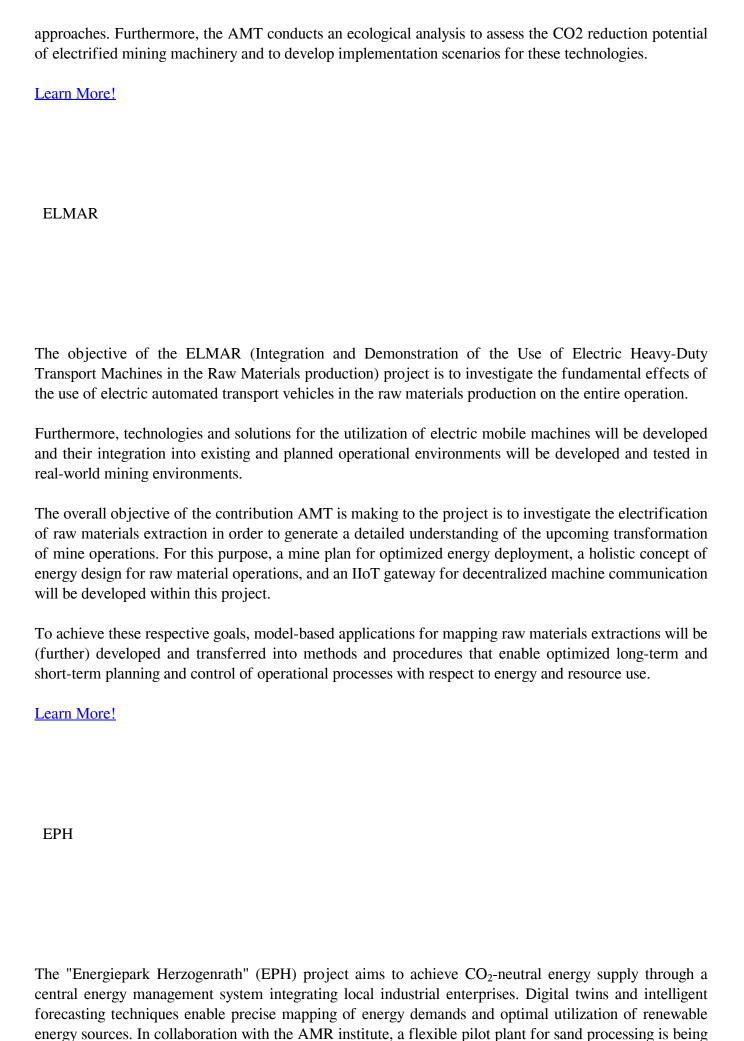
AKUSTAHL

The aim of the AKUSTAHL project is to develop a monitoring system using acoustic emission analysis (AE analysis) for the micro and initial crack prediction of steel structures subject to fatigue loading, such as bridges, cranes, offshore or industrial structures. Existing systems for acoustic emission analysis are thus to be expanded to include the measurement and detection of microcracks for the earliest possible detection of damage events.

Learn More!

AREA.AI

The AREA.AI project explores opportunities to enhance the safety and sustainability of resource extraction through the development of a robust, low-emission, and autonomous transport system. The AMT focuses on ensuring safety in both autonomous operations and mixed traffic scenarios by investigating regulatory and operational requirements. It researches and develops necessary collision avoidance systems and Human-Machine Interfaces to ensure operational safety. Additionally, it evaluates communication technologies in mining, including optimizing wireless networks and developing simulation



developed, continuously collecting energy and process data while dynamically adapting to the local energy

grid. By integrating into Demand Site Management (DSM), the plant actively contributes to grid stability, while a comprehensive energy measurement system supports the optimization of energy consumption. The project serves as a model for innovative energy transition approaches and is funded by the BMWK.

Learn More!