

## Abgeschlossene Innovations- und Forschungsprojekte

### Projekte aus 2020

Projekte aus 2020	Beschreibung	Gefördert durch	Zeitraum	DMT – Ansprechpartner
<b>AGEnT</b>	Tonstudie / Ausbautechnik für Endlager	BMW i	01.10.2018 – 30.09.2020	Jürgen te Kook
<b>EC-Geo-Sustain</b>	European MSc in Geomatics for Sustainable Mineral Resource Management	EIT Raw Materials	01.04.2018 – 31.12.2020	Karsten Zimmermann
<b>ESTIVAL</b>	ESTimation of coal VALue-in-use in terms of CSR under different carbonization conditions	RFCS	01.07.2017 – 30.06.2020	Drazan Gajic
<b>FIREM II</b>	IT communication hub for mining community to optimize machine, systems and process performances	EIT Raw Materials	01.01.2019 – 31.12.2020	Norbert Gomolla
<b>Gateway 2</b>	Gateway to developing economies	EIT Raw Materials	01.04.2017 – 31.03.2020	Philip Mittelstädt
<b>Geosmart</b>	Collaborative project Geosmart: Integrated risk analysis on the basis of coupled simulations for the use of the deep geological underground structures	BMBF	01.07.2017 – 30.06.2020	Michael Eckart

<b>INDIRES</b>	INDIRES: Information Driven Incident Response	RFCS	01.07.2017 – 31.12.2020	Klaus Siever
<b>MaMMa</b>	Maintained Mine & Machine	EIT Raw Materials	01.01.2018 – 31.12.2020	Norbert Gomolla
<b>MULSEDRO</b>	Multi Sensor Drones for geological Mapping	EIT Raw Materials	01.04.2017 – 31.03.2020	Sönke Rapp
<b>OREVAL</b>	OREVal a European Network for Advanced Mineral Characterization and Ore Valuation	EIT Raw materials	01.01.2016 – 31.12.2020	Carlos Pina Garcia
<b>REEBAUX</b>	Prospects of REE recovery from bauxite and bauxite residue in the ESEE region	EIT Raw Materials	01.01.2018 – 31.12.2020	Bernd Teigler / Florian Lowicki
<b>ROCD</b>	Reducing risks from Occupational exposure to Coal Dust	RFCS	01.07.2017 - 30.09.2020	Rainer Rellecke
<b>SIT4ME</b>	Seismic Imaging Techniques for Mineral Exploration	EIT Raw Materials	01.01.2018 – 31.12.2020	Boris Dombrowski / Dirk Orłowski
<b>SO4Control</b>	Scale-up of Solution for Mining Water Sulfate Control with Side-product Recovery	EIT Raw Materials	01.01.2018 – 31.08.2020	Christoph Klinger
<b>STINGS</b>	Monitoring of Tailings via on- site and remote Technologies	EIT Raw Materials	01.04.2017 – 31.12.2020	Karsten zimmermann
<b>VISUAL 3D</b>	3D / 4D Geological Modelling	EIT Raw Materials	01.04.2017 – 31.03.2020	Florian Lowicki

## Projekte aus 2019

Projekte aus 2019	Beschreibung	Gefördert durch	Zeitraum	DMT – Ansprechpartner
<b>GW RUHR II (Mine Water Ruhr)</b>	Development of innovative and efficient Concepts for climate-friendly Energy Supply in the Ruhr area through the use of Heat from Mine Water; surveying and modelling Subproject as part of the technical Analysis.	BMBF	01.03.2016 – 28.02.2019	Tobias Friedrich
<b>HUBGREECE</b>	EIT RawMaterials Hub Greece. A Hub for the Greek Raw Material Sector	EIT Raw Materials	01.01.2018 – 31.12.2019	Norbert Bececke
<b>MERIDA</b>	Management of Environmental Risks During and After Mine Closure	RFCS	15.12.2015 – 14.12.2019	Karsten Zimmermann
<b>Mine Service</b>	Public Mineral Intelligence System to support Authorities (on national, regional or local level) in the decision-making Process and to facilitate Industry to enter into new Markets	EIT Raw materials	01.04.2016 – 31.03.2019	Bernd Teigler
<b>raPHOSafe</b>	Classification and Sorting of	EIT Raw material	01.01.2018 – 31.03.2019	Marie Charlotte Bornhöft

	Radium-rich Phosphogypsum Tailings			
<b>RE-ACTIVATE</b>	Developing superior technical Infrastructure throughout EIT RawMaterials Community to foster Technologies and Methodologies for Re-activation of former Mine Sites	EIT Raw Materials	01.04.2017 – 31.12.2019	Richard Berse
<b>RMProSchool</b>	EIT Raw Materials High Level Professional School	EIT Raw Materials	01.01.2016 – 31.12.2019	Knut Hirsch
<b>RockVader</b>	Smart Hard Rock Mining System	EIT Raw Materials	01.04.2017 – 31.12.2019	Norbert Gomolla

### Projekte aus 2018

<b>Projekte aus 2018</b>	<b>Beschreibung</b>	<b>Gefördert durch</b>	<b>Zeitraum</b>	<b>DMT - Ansprechpartner</b>
<b>BioMore</b>	New Mining Concept for Extracting Metals from Deep Ore Deposits using Biotechnology	HORIZON 2020	01.02.2015 – 31.07.2018	Knut Hirsch
<b>iDeepMon</b>	Intelligent Deep Mine Shaft Laser Scanning and Monitoring	EIT Raw Materials	01.04.2016 – 31.12.2018	Norbert Benecke
<b>iMine</b>	European Demonstration	EIT Raw Materials	01.01.2016 – 31.12.2018	Norbert Benecke

	and Test Facilities			
<b>iRIS</b>	Intelligent Risk Identification System for safer Mines	EIT Raw Materials	01.04.2016 – 31.12.2018	Ulrich Hoischen
<b>GeoHazCoal</b>	Geohazard Assessment in European and Asian Mining	EUREKA	01.05.2017 – 30.04.2018	Thomas Imgrund
<b>STAMS</b>	Long-term Stability Assessment and Monitoring of flooded Shafts	RFCS	01.07.2015 – 31.12.2018	Klaus Siever
<b>STORM</b>	Industrial Symbiosis for the Sustainable Management of Raw Materials	EIT Raw Materials	01.01.2016 – 31.12.2018	Knut Hirsch
<b>UPSW II</b>	Feasibility of the subsequent Utilisation of Coal Mine Prosper-Haniel in Bottrop as an Underground Pumped-storage Power Plant; Testing of technical Feasibility and Option Assessment	BMBF	01.07.2016 – 31.12.2018	Tobias Friedrich

## Projekte aus 2017

<b>Projekte aus 2017</b>	<b>Beschreibung</b>	<b>Gefördert durch</b>	<b>Zeitraum</b>	<b>DMT - Ansprechpartner</b>
<b>Coal2Gas</b>	Enhanced Coal Exploitation through Underground Coal Gasification (UCG) in European Lignite Mines	RFCS	01.07.2014 – 30.06.2017	Stephan Peters
<b>LayTerm</b>	Layman courses for the Transfer of Expertise on Raw Materials	EIT Raw Materials	01.01.2016 – 31.12.2017	Knut Hirsch

### Projekte aus 2016

<b>Projekte aus 2016</b>	<b>Beschreibung</b>	<b>Gefördert durch</b>	<b>Zeitraum</b>	<b>DMT - Ansprechpartner</b>
<b>AMSSTED</b>	Advancing Mining Support Systems to Enhance the Control of Highly Stressed Ground	RFCS	01.07.2013 – 30.06.2016	Torsten Gorka, Stephan Peters
<b>ArcHUB I</b>	Arctic Network Hub Pilot	EIT	01.01.2016 – 31.12.2016	Norbert Benecke
<b>COGAR</b>	Underground Coal Gasification in Operating Mine and Areas of	RFCS	01.07.2013 – 30.06.2016	Torsten Gorka

	High Vulnerability			
<b>COWEST</b>	Coal Weathering Study to Predict Oxidation, Improve Coke Properties and Protect Coke Oven Operation	RFCS	01.07.2013 – 30.06.2016	Drazen Gajic
<b>HEATFLOW</b>	Development of a Numerical Model based on the finite Volume Method for Modelling Thermo-hydraulic Processes in Fault-related Geothermal Reservoirs – Subproject A: Focus on Practicality of the Procedure and Application in the Field, Project Coordination	BMBF	01.04.2013 – 31.03.2016	Michael Eckart
<b>MANAGER</b>	Management of Mine Water Discharges to Mitigate Environmental Risks for Post-Mining Period	RFCS	01.07.2013 – 30.06.2016	Christoph Klinger

<b>M SmartGrid</b>	Mining Smart Electrical Grids	RFCS	01.07.2013 – 30.06.2016	Rainer Rellecke
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### Projekte aus 2015

<b>Projekte aus 2015</b>	<b>Beschreibung</b>	<b>Gefördert durch</b>	<b>Zeitraum</b>	<b>DMT - Ansprechpartner</b>
<b>AVENTO</b>	Advance tools for ventilation and methane emissions control	RFCS	01.07.2012 – 30.06.2015	Rainer Rellecke
<b>COMEX</b>	Complex mining exploitation: optimizing mine design and reducing the impact on human environment	RFCS	01.07.2012 – 30.06.2015	Stephan Peters
<b>I2Mine</b>	Innovative Technologies and Concepts for the Intelligent Deep Mine of the Future	FP7	01.11.2011 – 31.10.2015	Axel Studeny, Rainer Rellecke, Christian Hartmann, Jörg Niese
<b>INREQ</b>	Enhanced effectiveness and safety of rescuers involved in high risk activities by designing innovative rescue	RFCS	01.07.2012 – 30.06.2015	Rainer Rellecke



	equipment systems			
<b>WTZ China Yangtze GEO II</b>	Land Use Change, Soil Erosion, Mass Movements, and Diffuse Matter Inputs at the Yangtze River in the Three-Gorges Region; Focus: Subproject 3 - Quantification of Geogenic Structures and Processes by way of Geophysical and Geodetic Monitoring	BMBF	01.06.2012 – 31.12.2015	Paul Althaus

#### Projekte aus 2014

<b>Projekte aus 2014</b>	<b>Beschreibung</b>	<b>Gefördert durch</b>	<b>Zeitraum</b>	<b>DMT - Ansprechpartner</b>
<b>CO2RINA</b>	CO2RINA – Integrated risk assessment of CO2 storage in deep geological formations	BMBF	01.09.2011 – 31.08.2014	Ralph Schlueter
<b>GMES4 Mining</b>	GMES4 Mining: GMES-based Geoservices for Mining Areas in	Land NRW	15.08.2011 – 14.08.2014	Karsten Zimmermann

	Support of Processes in Prospection, Exploration and Monitoring for Environmental Protection and Operational Safety			
<b>Unterirdische Pumpspeicherkraftwerke</b>	Development of a Realization Concept for the Utilization of Facilities of Coal Mining as an underground Pumped-Storage Power Plant	Land NRW	15.10.2012 – 30.04.2014	Jens-Peter Lux

### Projekte aus 2013

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<b>CoGasOut</b>	Development of novel technologies for predicting and combating gas outbursts and uncontrolled emissions in thick seam coal mining	RFCS	01.07.2010 – 30.06.2013	Ulrich Brandt

<b>DENSI-CHARGE</b>	Improving the use of alternative raw materials in coking blends through charge densification	RFCS	01.07.2010 – 30.06.2013	Drazen Gajic, Friedhelm Strelow
<b>MISSTER</b>	Mine shafts: improving security and new tools for the evaluation of risks	RFCS	01.07.2010 – 30.06.2013	Rainer Kuchenbecker, Martin Weber
<b>MINFIREX</b>	Minimising risk for and reducing impact of fire and explosion hazards in underground coal mining	RFCS	01.07.2010 – 30.06.2013	Heinrich Petersmann

### Projekte aus 2012

<b>Projekte aus 2012</b>	<b>Beschreibung</b>	<b>Gefördert durch</b>	<b>Zeitraum</b>	<b>DMT - Ansprechpartner</b>
<b>EMIMSAR 11500</b>	Enhanced miner-information interaction to improve maintenance and safety with augmented reality technologies	RFCS	01.07.2009 – 30.06.2012	Dietmar Plum

	and new sensors			
<b>IMPACTMIN</b>	Impact Monitoring of Mineral Resources Exploitation	RFCS	01.01.2010 – 31.12.2012	Dieter Wittenberg, Gregor Hannsmann
<b>UCG CO2-Storage</b>	Study of deep underground coal gasification and the permanent storage of CO <sup>2</sup> in the affected areas	RFCS	01.07.2010 – 31.12.2012	Ralph Schlüter

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<b>CLEAN CO2 Altmark</b>	Design and development of an Optimal Seismological Monitoring Network for the Monitoring of Reservoir Overburden and Cap Rock (TV IV, CO <sub>2</sub> MONITOR) – Special GEOTECHNOLOGIES Program	BMBF	01.07.2008 – 30.06.2011	Ralf Fritschen

<b>COALSWAD</b>	Investigation of adsorption and swelling behaviour of coal to determine the feasibility of CO <sub>2</sub> sequestration and CH <sub>4</sub> production enhancement	RFCS	01.07.2008 – 30.06.2011	Ralph Schlueter
<b>EDAFFIC</b>	Early Detection and Fighting of Fires in belt Conveyors	RFCS	01.07.2008 – 30.06.2011	Heinrich Petersmann
<b>EMTECH</b>	Fires, Evacuation, Refuge and Rescue Support	RFCS	01.07.2008 – 30.06.2011	Rainer Rellecke
<b>FLOMINET</b>	Flooding Management for underground coal mines considering regional mining networks	RFCS	01.07.2008 – 30.06.2011	Christoph Klinger
<b>IMPRES</b>	Improved Extraction Ratios for Deep Coal Mines	RFCS	01.07.2008 – 30.06.2011	Hans-Werner Huwe, Jürgen te Kook

### Projekte aus 2010

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<b>CO2 SINUS</b>	Evaluation of the Efficiency and Sustainability of CO2 Storage in "in situ" Converted Coal Seams - Special GEOTECHNOLOGIES Program	BMBF	01.06.2008 – 30.11.2010	Ralph Schlueter
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