

Completed innovation and research projects

Projects in 2020

Projects in 2020	Description	Funded by	Duration	DMT - Contact
AGEnT	Tonstudie / Ausbautechnik für Endlager	BMW i	01.10.2018 – 30.09.2020	Jürgen te Kook
EC-Geo-Sustain	European MSc in Geomatics for Sustainable Mineral Resource Management	EIT Raw Materials	01.04.2018 – 31.12.2020	Karsten Zimmermann
ESTIVAL	ESTimation of coal VALue-in-use in terms of CSR under different carbonization conditions	RFCS	01.07.2017 – 30.06.2020	Drazan Gajic
FIREM II	IT communication hub for mining community to optimize machine, systems and process performances	EIT Raw Materials	01.01.2019 – 31.12.2020	Norbert Gomolla
Gateway 2	Gateway to developing economies	EIT Raw Materials	01.04.2017 – 31.03.2020	Philip Mittelstädt
Geosmart	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

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

Projects in 2019

Projects in 2019	Description	Funded by	Duration	DMT - Contact
GW RUHR II (Mine Water Ruhr)	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
HUBGREECE	EIT RawMaterials Hub Greece. A Hub for the Greek Raw Material Sector	EIT Raw Materials	01.01.2018 – 31.12.2019	Norbert Bececke
MERIDA	Management of Environmental Risks During and After Mine Closure	RFCS	15.12.2015 – 14.12.2019	Karsten Zimmermann
Mine Service	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
raPHOSafe	Classification and Sorting of Radium-rich	EIT Raw material	01.01.2018 – 31.03.2019	Marie Charlotte Bornhöft

	Phosphogypsum Tailings			
RE-ACTIVATE	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
RMProSchool	EIT Raw Materials High Level Professional School	EIT Raw Materials	01.01.2016 – 31.12.2019	Knut Hirsch
RockVader	Smart Hard Rock Mining System	EIT Raw Materials	01.04.2017 – 31.12.2019	Norbert Gomolla

Projects in 2018

Projects in 2018	Description	Funded by	Duration	DMT - Contact
BioMore	New Mining Concept for Extracting Metals from Deep Ore Deposits using Biotechnology	HORIZON 2020	01.02.2015 – 31.07.2018	Knut Hirsch
iDeepMon	Intelligent Deep Mine Shaft Laser Scanning and Monitoring	EIT Raw Materials	01.04.2016 – 31.12.2018	Norbert Benecke
iMine	European Demonstration and Test Facilities	EIT Raw Materials	01.01.2016 – 31.12.2018	Norbert Benecke

iRIS	Intelligent Risk Identification System for safer Mines	EIT Raw Materials	01.04.2016 – 31.12.2018	Ulrich Hoischen
GeoHazCoal	Geohazard Assessment in European and Asian Mining	EUREKA	01.05.2017 – 30.04.2018	Thomas Imgrund
STAMS	Long-term Stability Assessment and Monitoring of flooded Shafts	RFCS	01.07.2015 – 31.12.2018	Klaus Siever
STORM	Industrial Symbiosis for the Sustainable Management of Raw Materials	EIT Raw Materials	01.01.2016 – 31.12.2018	Knut Hirsch
UPSW II	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

Projects in 2017

Projects in 2017	Description	Funded by	Duration	DMT - Contact
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Coal2Gas	Enhanced Coal Exploitation through Underground Coal Gasification (UCG) in European Lignite Mines	RFCS	01.07.2014 – 30.06.2017	Stephan Peters
LayTerm	Layman courses for the Transfer of Expertise on Raw Materials	EIT Raw Materials	01.01.2016 – 31.12.2017	Knut Hirsch

Projects in 2016

Projects in 2016	Beschreibung	Funded by	Duration	DMT - Contact
AMSSTED	Advancing Mining Support Systems to Enhance the Control of Highly Stressed Ground	RFCS	01.07.2013 – 30.06.2016	Torsten Gorka, Stephan Peters
ArchHUB I	Arctic Network Hub Pilot	EIT	01.01.2016 – 31.12.2016	Norbert Benecke
COGAR	Underground Coal Gasification in Operating Mine and Areas of High Vulnerability	RFCS	01.07.2013 – 30.06.2016	Torsten Gorka
COWEST	Coal Weathering Study to Predict	RFCS	01.07.2013 – 30.06.2016	Drazen Gajic

	Oxidation, Improve Coke Properties and Protect Coke Oven Operation			
HEATFLOW	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
MANAGER	Management of Mine Water Discharges to Mitigate Environmental Risks for Post- Mining Period	RFCS	01.07.2013 – 30.06.2016	Christoph Klinger
M SmartGrid	Mining Smart Electrical Grids	RFCS	01.07.2013 – 30.06.2016	Rainer Rellecke

Projects in 2015

Projects in 2015	Description	Funded by	Duration	DMT - Contact
AVENTO	Advance tools for ventilation and methane emissions control	RFCS	01.07.2012 – 30.06.2015	Rainer Rellecke
COMEX	Complex mining exploitation: optimizing mine design and reducing the impact on human environment	RFCS	01.07.2012 – 30.06.2015	Stephan Peters
I2Mine	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
INREQ	Enhanced effectiveness and safety of rescuers involved in high risk activities by designing innovative rescue equipment systems	RFCS	01.07.2012 – 30.06.2015	Rainer Rellecke
WTZ China Yangtze GEO II	Land Use Change, Soil Erosion, Mass Movements, and Diffuse Matter Inputs at the	BMBF	01.06.2012 – 31.12.2015	Paul Althaus

	Yangtze River in the Three-Gorges Region; Focus: Subproject 3 - Quantification of Geogenic Structures and Processes by way of Geophysical and Geodetic Monitoring			
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Projects in 2014

Projects in 2014	Description	Funded by	Duration	DMT - Contact
CO2RINA	CO2RINA – Integrated risk assessment of CO2 storage in deep geological formations	BMBF	01.09.2011 – 31.08.2014	Ralph Schlueter
GMES4 Mining	GMES4 Mining: GMES-based Geoservices for Mining Areas in Support of Processes in Prospection, Exploration and Monitoring for Environmental Protection and Operational Safety	Land NRW	15.08.2011 – 14.08.2014	Karsten Zimmermann

Unterirdische Pumpspeicherkraftwerke	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
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Projects in 2013

Projects in 2013	Description	Funded by	Duration	DMT - Contact
CoGasOut	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
DENSI-CHARGE	Improving the use of alternative raw materials in coking blends through charge densification	RFCS	01.07.2010 – 30.06.2013	Drazen Gajic, Friedhelm Strelow
MISSTER	Mine shafts: improving security and new tools for the	RFCS	01.07.2010 – 30.06.2013	Rainer Kuchenbecker, Martin Weber

	evaluation of risks			
MINFIREX	Minimising risk for and reducing impact of fire and explosion hazards in underground coal mining	RFCS	01.07.2010 – 30.06.2013	Heinrich Petersmann

Projects in 2012

Projects in 2012	Description	Funded by	Duration	DMT - Contact
EMIMSAR 11500	Enhanced miner-information interaction to improve maintenance and safety with augmented reality technologies and new sensors	RFCS	01.07.2009 – 30.06.2012	Dietmar Plum
IMPACTMIN	Impact Monitoring of Mineral Resources Exploitation	RFCS	01.01.2010 – 31.12.2012	Dieter Wittenberg, Gregor Hannsmann
UCG CO2-Storage	Study of deep underground coal gasification and the permanent storage of CO ²	RFCS	01.07.2010 – 31.12.2012	Ralph Schlüter

	in the affected areas			
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Projects in 2011

Projects in 2011	Description	Funded by	Duration	DMT - Contact
CLEAN CO2 Altmark	Design and development of an Optimal Seismological Monitoring Network for the Monitoring of Reservoir Overburden and Cap Rock (TV IV, CO2 MONITOR) – Special GEOTECHNOLOGIES Program	BMBF	01.07.2008 – 30.06.2011	Ralf Fritschen
COALSWAD	Investigation of adsorption and swelling behaviour of coal to determine the feasibility of CO2 sequestration and CH4 production enhancement	RFCS	01.07.2008 – 30.06.2011	Ralph Schlueter
EDAFFIC	Early Detection and Fighting of	RFCS	01.07.2008 – 30.06.2011	Heinrich Petersmann

	Fires in belt Conveyors			
EMTECH	Fires, Evacuation, Refuge and Rescue Support	RFCS	01.07.2008 – 30.06.2011	Rainer Rellecke
FLOMINET	Flooding Management for underground coal mines considering regional mining networks	RFCS	01.07.2008 – 30.06.2011	Christoph Klinger
IMPRES	Improved Extraction Ratios for Deep Coal Mines	RFCS	01.07.2008 – 30.06.2011	Hans-Werner Huwe, Jürgen te Kook

Projects in 2010

Projects in 2010	Description	Funded by	Duration	DMT - Contact
CO2 SINUS	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