

Innovation Facilities



Material conversion | Recycling management | Environmental technology

The Waste Disposal Centre Leppe is one of the most modern waste disposal sites in Europe and a reference facility for international experts. The objective of the :metabolon project is to redevelop the current Waste Disposal Centre Leppe by turning it into a competence, learning and innovation site for material conversion and location-related environmental technology and techniques.

RATIONALE

- ◆ The need to meet the challenges of ever scarcer fossil resources and the influence of human activity on the environment are shaping the future of industrial society.
- ◆ A completely new strategy has to be found for handling the material resources to meet the needs of society on the basis of usable resources.
- ◆ Develop :metabolon into an internationally recognised knowledge centre for metabolic material conversion between society and nature.

PROJECT OBJECTIVES

- ◆ To make available a spacious technology facility and modern laboratory environment for an international research community.
- ◆ To examine scientifically and optimised the key technologies for material conversion and the fundamental methods for the regional organisation and control of local resources.

INNOVATION SUPPORT

- ◆ :metabolon makes available an infrastructure in the form of a technology facility with state-of-the-art pilot plants and laboratory equipment with which it is possible to transfer research results into industrial practice.
- ◆ Participation in a broad international network of research partners collaborating on innovative technical and structural solutions.

BERGISCH ENERGY COMPETENCE CENTRE

- ◆ Knowledge and information sharing where the key players from the competence fields of energy, energy efficiency and climate protection have joined forces.

SEEING IS BELIEVING

- ◆ Demonstration and understanding - technologies and products you can touch.
- ◆ Hands-on learning supporting schools' curriculum - pupils can spend a morning working on the topics waste prevention, recycling and energy.

RESEARCH

The facilities at :metabolon support current research projects related to resource recovery. The optimisation of biogas plants is undertaken by an interdisciplinary team from Fachhochschule Köln. Expertise in process measurement and control, and the testing of new sensors in a real-life environment, allows practical solutions in the areas of engineering and computer science to be developed and put into operational practice.

Research by University of Duisburg-Essen within ReNEW has constructed and is optimising a pilot scale bioleaching plant for the recovery of copper and other metals from electronic wastes.

SUSTAINABLE INDUSTRIAL ESTATE

Within :metabolon the development of a sustainable industrial estate on the former landfill site has been implemented which is reserved especially for companies in the fields of waste management, material conversion und environmental technologies.

The project has been designated an official partner location of the model project "Nachhaltige Gewerbeflächenentwicklung in NRW" (Sustainable development of industrial estates in NorthRhine-Westphalia).

DEVELOPMENT

Established in 2010, following the closure of Leppe landfill in 2006, :metabolon is a cooperative project of the waste management organisation Bergischer Abfallwirtschaftsverband and Cologne University of Applied Sciences, Gummersbach Campus.

Partners:

- ◆ various institutes of higher education
- ◆ research and development facilities
- ◆ associations
- ◆ regional companies

Gefördert mit Mitteln
der Städtebauförderung durch:

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Bauen, Wohnen und Verkehr
des Landes Nordrhein-Westfalen



aufgrund eines Beschlusses
des Landtages Nordrhein-Westfalen

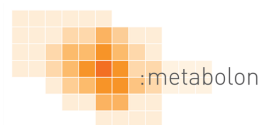


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Case study produced by the ReNEW Project under Action 6 (Innovation facilities and needs) examining how facilities for scale up, testing and training are a vital part of developing processes for resource recovery. For further information: www.renew-network.eu