

# Prep for Innovation: Reallabor Nivelstein

The raw materials and energy industry is currently undergoing a transformation of particular magnitude. One of the main reasons for this is the move away from the domestic extraction and conversion of the fossil primary energy sources hard coal and lignite. In order to counteract the structural change triggered by this, the need for innovative and interdisciplinary cooperation between the primary industries concerned has arisen.

Within this project, a basic infrastructure in the form of a real laboratory is being promoted, with which all relevant interest groups will be provided with a platform for the collaborative mastering of the challenges ahead. On the premises of the Nivelsteiner Sandwerke (NSW) in Herzogenrath, a research hall was built under the management of NSW, which was designed and equipped as part of this project. For this purpose, the main area of the living lab was be equipped with laboratory and workshop equipment necessary for research. In addition, a concept for an approx. 100 m<sup>2</sup> co-working space on the upper floor of the main hall was developed and implemented. Last but not least, the real lab was equipped with modern network equipment and fully covered with W-Lan and connected via fiber optics to the central infrastructure of the institutes 15 km away. In the second part of the project, comprehensive process analyses as well as an approach for a modular, adaptable pilot plant architecture was developed, providing the basis for the application of follow-up projects.

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