

IN-Campus – a striking achievement

New Audi technology park on remediated site

- A technology park will host thousands of highly skilled experts
- The 75-hectare site in eastern Ingolstadt was once home to a refinery
- The extensive remediation project is one of the biggest in Germany
- Special methods used include air sparging, honeycomb excavation, soil washing and groundwater treatment

Ingolstadt, March 14, 2019 – Audi is building its future, and to do so, it is revitalizing an industrial wasteland. Not far from its main factory in Ingolstadt, the company is developing the IN-Campus, a 75-hectare technology park, on the site of a former oil refinery. IN-Campus GmbH, a joint venture between AUDI AG and the city of Ingolstadt, is working with partners to employ innovated methods of decontaminating land that is polluted in places. This remediation project is one of the biggest in Germany and unprecedented as an environmental project in Bavaria. The remediation, already under way for more than a year, is due to finish in 2022.

The name “IN-Campus” refers to a technology park that Audi is going to be building at its Ingolstadt site—a center for development and preliminary design that will one day be a place of work for thousands of experts. On the IN-Campus, Audi will be creating space for diversity and a culture of innovation. It will be a new working world for highly skilled Audi employees and high-tech service providers. The company has partnered with the city of Ingolstadt to form a joint venture named IN-Campus GmbH. The IN-Campus does not require any undeveloped land to be covered up—on the contrary, the project will breathe new life into a heavily contaminated industrial wasteland. The clean-up process required is projected to take around five years.

The IN-Campus will be situated on the site of a former refinery in eastern Ingolstadt that produced a range of petroleum products for 43 years. It ceased operations in 2008, and demolition of the facilities continued until 2013. Three quarters of the site, which covers almost 100 hectares, were purchased in fall 2015 for the symbolic price of one euro by IN-Campus GmbH, the company set up specifically for the project. The public remediation contract was signed just a few months later.

The 1,200 or so exploratory drilling operations and 50,000 laboratory analyses conducted over a number of years had revealed that 22 of the 75 hectares were polluted and in need of remediation. The soil contained 900 metric tons of fuel oil, 200 metric tons of light gasoline and 100 kilograms of perfluorinated and polyfluorinated chemicals (PFCs). ARGE IN-Campus GbR, a consortium of three specialist companies, began remediation work in fall 2017. The project incorporates four particular methods: Groundwater treatment, air sparging, honeycomb excavation and downstream soil washing.

IN-Campus GmbH

Groundwater treatment involves ten wells at the edge of the site that are equipped with electric pumps to draw polluted groundwater out of the soil. A treatment system removes up to over 99.9% of pollutants. The **air sparging method** is designed to combat volatile hydrocarbons, which are components of gasoline fuels. Air is blown into the ground through hundreds of pipelines and picks up dissolved pollutants in the soil and groundwater. Just beneath the surface of the site, the air is extracted through drainage pipes and cleaned.

The polluted soil is excavated so that the PFC residues from firefighting foams and total petroleum hydrocarbons—left by the fuel oil—can be eliminated. This takes place by means of an innovative and high-precision technique in which hydraulic rams drive **steel hexagons** into the earth using vibration. In total, they are excavating 600,000 metric tons of material from the soil, mostly involving the sand and gravel typical of the site. A **soil washing facility** uses water to clean pollutants from the soil grains. The water circulates via a treatment system, while another system cleans the resultant exhaust air. More than 90% of the material delivered to the facility is returned to the hexagonal “honeycomb” holes; the rest is disposed of.

The remediation of the IN-Campus site is one of the largest ongoing projects of its kind in Germany and the first complete remediation of a refinery site ever to take place in Bavaria. A team of independent experts monitors all the processes and documents them in a geospatial information system. The Audi project has already met with plenty of interest in professional circles, and guests often visit the site to find out more.

Apart from groundwater treatment, which is expected to continue until 2028, the remediation work is due to finish by the end of 2022. In the future, IN-Campus GmbH will use 60 hectares of the land for business and industrial purposes, while the remaining 15 hectares in the north and east will be set aside for ecological compensation in the form of a near-natural alluvial forest. Construction of the IN-Campus has already begun in the northwestern section of the site, which is unpolluted. The first building is the “Project House” for around 1,400 Audi employees and development partners working in the field of new technologies and is due to be completed by the end of 2020. It will gradually be followed by additional structures including a vehicle safety center, an IT center and an energy management center.

Statements on IN-Campus

Dr. Christian Lösel, Mayor of the city of Ingolstadt: “What is gradually being created here is a center for advanced and pioneering technologies and innovations. I am particularly pleased that after extensive remediation, the old refinery site will find its place as an important element in the future of Ingolstadt. That is a win for the city and the environment.”

Thomas Vogel, Managing Director of IN-Campus GmbH (AUDI AG): “I view the project as an enormous opportunity. In developing this area, we are making a hugely important contribution to the future viability of Ingolstadt as a high-tech hub and for the wider region.”

IN-Campus GmbH

Norbert Forster, Managing Director of IN-Campus GmbH (IFG Ingolstadt): “Once IFG and AUDI AG have gotten the freight handling center – already one of the most state-of-the-art logistics facilities in Europe – up and running, we will make the IN-Campus project another milestone in digitalization and innovation.”

Klaus Mittermaier, Chairman of the General Works Council of AUDI AG: “The sustainable remediation of the site is a logical step toward the future. We are turning an industrial wasteland into an innovative industrial center that can secure jobs in the region and take some of the strain off Ingolstadt’s infrastructure.”

Dr. Rüdiger Recknagel, Head of Environmental Protection at AUDI AG: “What we are carrying out here is an environmental project *par excellence*. We are making a commitment to Ingolstadt as a location and writing city history at the same time. We are proud to be conducting the first comprehensive remediation of a refinery site in Bavaria with this eco-friendly remediation project. In so doing, we are giving something back to both society and nature.”



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