

Factory of the Future

The Siegen University and the RWTH Aachen University cooperate to prepare companies in South Westphalia in the area of factory planning and production management for industry 4.0.

How does the factory of the future look like? The Siegen University and the RWTH Aachen University want to explore. The university teams investigate with bundled competencies and in cooperation with companies of South Westphalia how factories can develop and optimize in times of digitalization. On Wednesday, January 24, 2018, the Rector of Siegen University, Prof. Dr. Holger Burckhart, his colleague Prof. Dr.-Ing. Ernst Schmachtenberg from Aachen and Prof. Dr.-Ing. Peter Burggräf from Siegen University officially signed the cooperation agreement.

“There will be a mutually beneficial cooperation for the subject itself and the locations themselves”, said Prof Burckhardt at the signing ceremony. RWTH Aachen University has over 100 years of experience in the field of production technology and production management. Conversely, the cooperation with Siegen University offers direct access to medium-sized businesses in South Westphalia, one of Germany's strongest industrial regions. "We need industry as an important research topic," explained the rector of Aachen, Prof. Schmachtenberg. "Cooperation with the University of Siegen promises valuable cooperation on a subject that is of existential importance for our country.”

In course of the cooperation, the Siegen University will build a demonstrational factory – a lively laboratory. It will have an area of about 2,000 square meters and employ up to ten employees in production, including technicians and supervisors. It is planned to produce body components for electric cars and consequently to act as a supplier. "The demonstrational factory is a production site under real conditions. It is a place where we can look behind superficial problems," explained Prof. Burggräf. Together with Professor Dr.-Ing. Günther Schuh of RWTH Aachen University, he is mainly responsible for the cooperation. The advantage of a demonstrational factory over real factories: Research work can be integrated into everyday processes. "We cannot experiment in a real factory without disturbing the process. This is exactly what is possible in the demonstrational factory," said Prof. Burggräf.

The Siegen factory will network with the existing demonstrational factory of RWTH Aachen University. The advantage: the universities can practically research how data and experience can be transferred from one location to another - the so-called horizontal networking between production sites. This type of research is unique in Germany. Research will also be conducted, for example, on how Artificial Intelligence can be used in management tasks at the demonstrational factory. The scientists also want to find ways in which small and medium-sized enterprises can make the change towards Industry 4.0 without cutting employment.

The scientists pass on their research results to companies in the region. "The cooperation is the first step in the direction of intensive cooperation in order to have an impact on the companies in South Westphalia, especially the medium-sized companies, and to advance them", said Axel Barten, Vice President of the Chamber of Industry and Commerce (IHK) Siegen.

The project teams, consisting of experts from Aachen and Siegen, advise companies whether they are planning new factories on an empty site, whether they want to modify and optimize existing factories or whether they want to relocate their sites abroad. "Small and medium-sized enterprises in particular cannot have experts in all areas. We therefore support them in factory planning and production management and develop solutions together," said Burggräf.

Picture:



Prof. Dr.-Ing. Peter Burggräf, Johannes Wagner, Prof. Dr. Holger Burckhart (rector Uni Siegen), Axel Barten, rector of RWTH Prof. Dr.-Ing. Ernst Schmachtenberg (from left to right)
picture: University Siegen

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