



## **Digital transformation – we make SMEs fit!**

The Technology-Network: *Intelligent Technical Systems OstWestfalenLippe, Germany*

# **it's owl**

## Engine for regional development

In the technology network it's OWL – short for 'intelligent technical systems OstWestfalenLippe' – comprises 200 companies, research institutions and organizations that jointly develop new technologies for the factory of the future. Awarded in the competition for the cluster of excellence by the German Federal Ministry of Education and Research (BMBWF), it's OWL is one of the largest initiatives for Industrie 4.0 in the SME sector in Germany.

From 2012 to 2017, 47 projects came up with concrete solutions that companies can use to improve the reliability, resource efficiency and user-friendliness of their devices, machines and plants. An innovative transfer concept has allowed small and medium-sized enterprises in particular to benefit from this. In 171 transfer projects, they were able to solve specific operational challenges and take the first steps on the way to Industrie 4.0.

The cooperation between business and science at it's OWL is a successful model that will be continued. In times of rapid technological change, we want to develop new solutions, services, business models and training offers for SMEs over the next five years. The state of North Rhine-Westphalia provides funding for such projects.

it's OWL – that's OstWestfalenLippe. Innovative companies. Application-orientated, cutting-edge research. A strong network. Attractive employers in business and science. In OWL, we make SMEs fit for the digital transformation.

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## Technology leader and cutting-edge research

OstWestfalenLippe is among the strongest production locations in Europe, distinguished by a high concentration of employment, capacity for innovation, and export quota. The region has 400 companies in **mechanical engineering, the electrical and electronics industry and the automotive supply industry**, employing about 80,000 individuals and generating annual revenue of Euro 17 billion.

The core of the cluster is composed of family-run businesses and a wide range of medium-sized firms. These include numerous **global market leaders** – strong brands such as Benteler, Claas, Diebold Nixdorf, DMG Mori, GEA, Hella, Hettich and Miele, but also many hidden champions such as Kannegiesser and WP Kemper. Beckhoff, Harting, KEB, Lenze, Phoenix Contact, Wago and Weidmüller set global standards in industrial electronics. They hold 75% of the global market share for connector technology.

The region's universities and research institutions are known for **cutting-edge interdisciplinary research** in the fields of self-optimisation, cognition and industrial automation. In one excellence cluster, three collaborative research centres, 18 research institutes and three Fraunhofer institutes, around 1,000 scientists are working on the solutions of tomorrow. The universities offer excellent training in "MINT" subjects (mathematics, IT, natural sciences and technology) for more than 20,000 students.

it's OWL sends a strong signal for the **competitiveness of the manufacturing industry** in OstWestfalenLippe. Since the launch of the Leading-Edge Cluster in 2012, the companies have created about 8,000 new jobs. 34 companies were founded. Seven research institutes and 23 new degree programmes have been created. The number of „MINT“ students has increased by 48%.

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## We facilitate intelligent production: With specialists from OstWestfalenLippe.

Innovation drivers for Industrie 4.0 and intelligent production: Over 200 companies, research institutes and organisations have joined forces in the it's OWL technology network; among them are key pioneers of the fourth industrial revolution. The result: Solutions that change production today and ensure Germany's competitiveness tomorrow.

[www.its-owl.com](http://www.its-owl.com)

# Programme structure

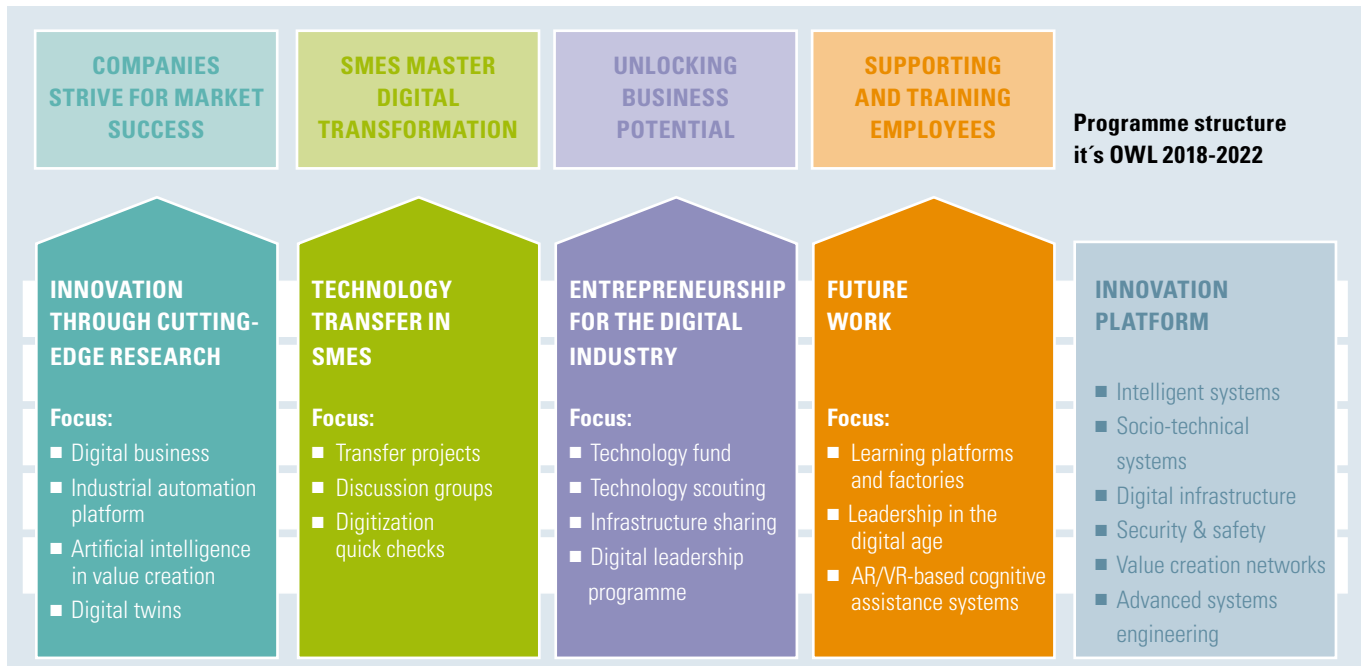
To maintain their technological leadership, companies must increase the intelligence of their products and production processes and open up new potential benefits. That's why the it's OWL innovation platform will be further developed, for example with basic technologies, solution models and software libraries, especially in the fields of intelligent systems, digital infrastructure and systems engineering.

Companies and research institutions develop new solutions as part of innovation projects. In doing so, they focus on two main topics. Firstly, it's about unlocking **digital platforms'** potential for success. Approaches include data-based services for mechanical engineering and a platform in the field of industrial automation. A second topic deals with **artificial intelligence** processes, especially machine learning. This addresses applications in production, the supply chain and autonomous systems.

In the future too, SMEs, in the context of Industry 4.0 as part of **transfer projects** paired with a research institution, will have the opportunity to solve concrete challenges and exchange experiences with other companies.

It's also a matter of identifying new **business ideas** in the field of intelligent manufacturing and developing them into promising business concepts. **Start-ups** are promoted and their cooperation with companies intensified.

In addition, practical solutions for shaping the **working world of the future** are developed by involving employees. The competencies and experience of companies and research institutions are made available in needs-based **advanced training courses**.



## Offers for SMEs

- Find out about new research approaches and solutions at our specialist events.
- Experience the application of new technologies for the factory of the future at our demonstration centres.
- Exchange ideas with companies and research institutions in our specialist groups.
- Improve your qualifications in our advanced training courses.
- Use our Industrie 4.0 checks to identify the potential of digital transformation for your company.
- Make contacts with companies and research institutions.
- Use our international contacts for new cooperative partnerships.
- Apply for transfer projects to work together with research institutions to tackle challenges in your company.
- Develop project ideas and participate in the tenders of the state of North Rhine-Westphalia.
- Work with us to develop new business concepts for intelligent manufacturing.

Further information available at [www.its-owl.de/com](http://www.its-owl.de/com)



## Cluster Management

it's OWL Clustermanagement GmbH coordinates the development of projects, the implementation of support offers, and the communication work. The sole shareholder of this company is it's OWL e.V., in which the cluster partners pool their interests. The association's executive board – the cluster board – determines the strategic direction of it's OWL. A scientific advisory board of internationally renowned scientists provides advice on developing the strategy further.

### Clusterboard

- Hans Beckhoff**, Managing Partner of Beckhoff Automation GmbH & Co. KG (Vice Chairman)
- Roland Bent**, Managing Director of Phoenix Contact GmbH & Co. KG
- Steffen Bersch**, Board Member of GEA Group Aktiengesellschaft
- Thomas Böck**, Managing Director of CLAAS KGaA mbH
- Dr. Stefan Breit**, Managing Director of Miele & Cie. KG
- Prof. Dr. Jürgen Gausemeier**, Heinz Nixdorf Institute (Chairman)
- Dr. Dietmar Harting**, Shareholder and Board Member of Harting KGaA
- Sven Hohorst**, Managing Partner of Wago Kontakttechnik GmbH & Co. KG
- Martin Kannegiesser**, Managing Director of Herbert Kannegiesser GmbH
- Prof. Dr. Jürgen Krahl**, President of Ostwestfalen-Lippe University of Applied Sciences
- Oliver Lang**, Board Member of Benteler Automobiltechnik GmbH
- Frank Maier**, Board Member of Lenze SE
- Manfred Müller**, Chairman of the Shareholders' Meeting of OWL GmbH
- Simone Probst**, Vice-President of the University of Paderborn
- Prof. Dr.-Ing. Gerhard Sagerer**, Rector of the University of Bielefeld
- Dr. Eduard Sailer**, Managing Director of Miele & Cie. KG, ret. (Vice Chairman)
- Prof. Dr. Ingeborg Schramm-Wölk**, President of the University of Applied Sciences Bielefeld
- Herbert Sommer**, Chairman Economy and Science for OWL e.V., ret.
- Karl-Heinz Stiller**, Chairman of the Supervisory Board at Wincor Nixdorf AG, ret.
- Hans-Dieter Tenhaef**, Board Spokesman of OWL Maschinenbau

### Scientific advisory board

- Prof. em. Dr. Otthein Herzog**, Jacobs University Bremen
- Prof. Dr. Edgar Körner**, Honda Research Institute Europe GmbH
- Prof. Dr.-Ing. Dr. h.c. Manfred Nagl**, RWTH Aachen
- Prof. Dr. Ir. Fred J.A.M. van Houten**, University of Twente

### Managing directors

- Günter Korder**
- Prof. Dr.-Ing. Roman Dumitrescu** (Strategy, R&D)
- Herbert Weber** (Regional Development)



# it's OWL Association

## Companies



## Universities and Research Institutes



## Transfer Partners



## Sponsor members

More than 150 sponsor members – particularly small and medium-sized enterprises – use the offerings of the Leading-Edge Cluster to network and to make their businesses fit for the digital transformation. Interested companies, scientific institutions and commercial organizations are more than welcome to get involved with the Leading-Edge Cluster and join the association. For more information on the association (charter, membership fee regulations and membership declaration) as well as other partners, please go to [www.its-owl.com](http://www.its-owl.com)

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Sponsored by:

Ministry of Economic Affairs,  
Innovation, Digitalization and Energy of the  
State of North Rhine-Westphalia



Ministry of Culture and Science  
of the German State  
of North Rhine-Westphalia



The region:

**OWL OstWestfalenLippe**  
Eine Region. Ein Wort.