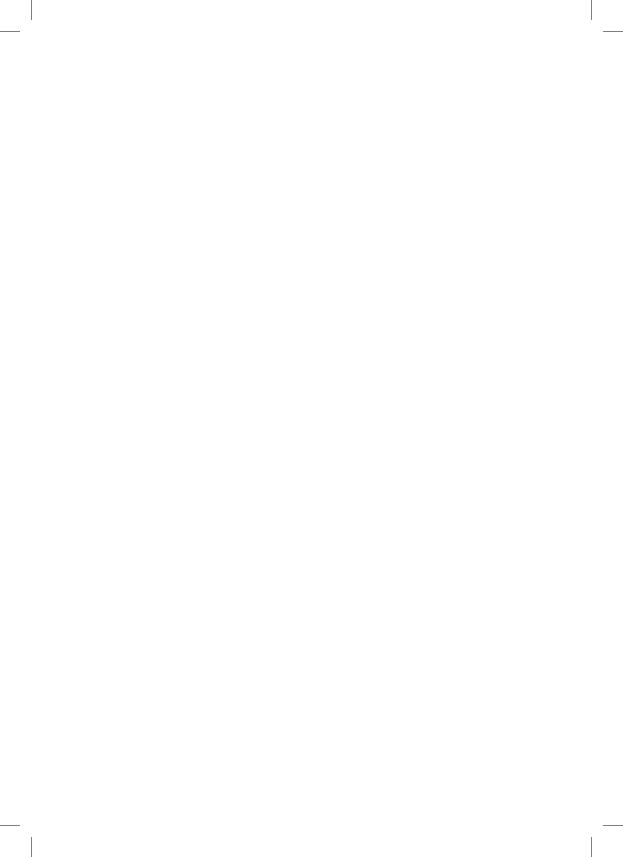
Kreis Recklinghausen tions beselves ruhrvalley The DeepTech Dortmund Innovation Network Research.Development.Innovation

> ruhr valley DeepTech



ruhrvalley Das DeepTech Innovationsnetzwerk

Forschung.Entwicklung.Innovation

ruhrvalley Management Office 2024



ruhrvalley The DeepTech Innovation Network

We are an innovation network of companies, universities of applied sciences, and public organisations. Together we work on forward-looking solutions for a post-fossil-fuel, interconnected society. Research-intensive technologies are our basis; substantial innovation is our goal. This is what we call DeepTech and it is how we strengthen the innovative power and value creation of our partners from industry and science.



Our Network

Alliance of Universities of Applied Sciences Ruhr

Three large universities of applied sciences—Hochschule Bochum, Fachhochschule Dortmund, and Westfälische Hochschule—pool their expertise in joint research and development projects. Making them an important innovation driver for the region.





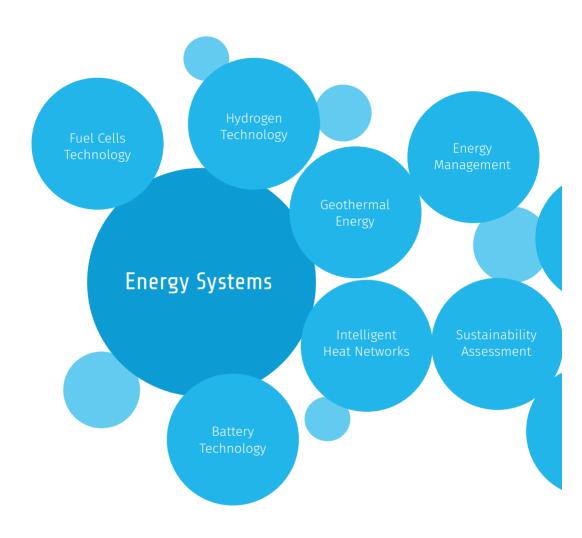
- 580 professors with expertise in applied research
- 30.000 students in technical-economic majors
- Around 200 doctoral students at the participating instituts (2017-2024)
- Around 60 Mio. € project volume per year
- 56 spin-offs over the past 6 years

Economic Partners

Many regional business partners joined forces to form ruhrvalley. Their goal is it to actively shape change and to work in a service- and future-oriented manner for the environment, the local companies, and, last but not least, for the people in the region. The network includes large companies, small and medium-sized enterprises, start-ups, municipalities, and municipal enterprises.



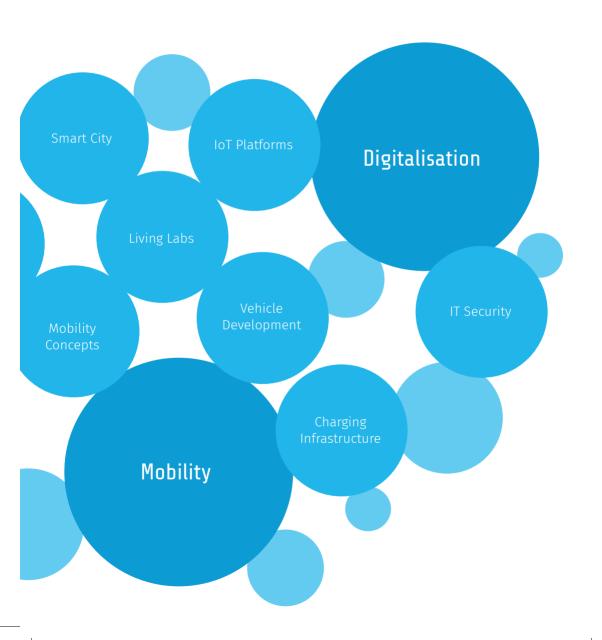
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- Over 100 partners cooperate within research & development projects
- Provide around 5 Mio. € in equity for the projects
- Have expertise in the areas of energy and hydrogen, smart city, electric mobility, and IT-security





We use our expertise and competences to explore new research and development fields.

Topics and Competences



Key Topics

The goal that unites us is developing life in the Ruhr region in a sustainable and future-oriented manner. To this end, we work on interconnected solutions across systems in the areas of mobility, energy and digitalisation. Instead of treating these topics individually, we examine them together within our research & development projects.

Scientists working in the laboratory at the Westphalian University of Applied Sciences





The SolarCar Thyssenkrupp SunRiser of Bochum University of Applied Sciences at the ILumen European Solar Challenge

Mobility

Currently, individual mobility is often synonymous with personal freedom and for this reason the transport sector is one of the biggest emitters of greenhouse gases in Germany. In the Ruhr region, cars are still the preferred method of transport. Accordingly, the transition from internal combustion engines to electric drives in the field of motorised private transport is not enough–additionally, cycling, local public transport, and freight transport must also be considered in an interconnected way. This way of considering the different areas of mobility as part of an integrated system enables new markets and business models, which are also investigated in the transdisciplinary research projects.







Energy systems

The energy transition is key to achieve climate targets. However, in spite of the rapid expansion of renewable energies in North-Rhine-Westphalia, the state is still heavily dependent on the use of fossil fuels for producing energy and heat. Efficient energy storage technologies for renewable energy can help to minimise the dependency on fossil fuels and to guarantee supply security. The coupling of electricity, heat, and mobility through green hydrogen is emerging as a key technology for the successful implementation of the energy transition in the Ruhr area. Digitalisation makes the use of green energy possible in an ecologically-sustainable, economically-feasible, and secure way for the mobility and industrial sectors, for businesses, and for households. That is why we develop digital solutions for urban energy and mobility systems.



Find out more about our projects in the field of energy https://ruhrvalley.tech/en/topics/#energie



Experimental apparatus for water electrolysis in the laboratories of the Westphalian Energy Institute at Westphalian University of Applied Sciences





In the electronics laboratory at the Institute for Communication Technology of Fachhochschule Dortmund

Digitalisation

Coal and steel structurally shaped the Ruhr area and turned it into one of the largest metropolitan areas in Europe. Nowadays it is the ongoing structural transition that characterises the region, and especially the digital transformation shapes the mobility and energy systems in a new way. Our goal is to improve technology, value-creation, and information chains in an intelligent and integrated manner. The integration of systems based on digital technologies does not only require competences regarding the technology stack, but also demands knowledge about business models, project management and implementation in the society. The industry, municipalities, and science are faced by numerous questions from the joint use of data to the development of new digital services. In the search for answers, we work on solutions for the sector coupling in order to make them more energy-efficient and resource-saving.





Benefits

In ruhrvalley ...

- partners from science, industry, and the public sector meet and discuss new research and development topics.
- the Management Office team supports the partners to increase their research and development activities by designing eligible projects.
- project partners benefit from a diverse infrastructure consisting of maker spaces and laboratories.
- the network strengthens the innovative and value-creating capacities of the individual partners while minimising their innovation risks.
- the partners work together on forward-looking solutions for a post-fossil, interconnected society and tests promising solutions in real life
- joint activities like events or publications increase the visibility of the partners.
- start-ups get in touch with prospective partners and investors.



ruhrvalley Management Office

The ruhrvalley Management Office organizes the professional exchange, joint publications, events, and the formation of new project consortia.

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ruhrvalley Cluster Association

The ruhrvalley Cluster Association provides support for the execution of research, development, and innovation tasks, and promotes the transfer of knowledge between science and business. Members benefit from the offers of the DeepTech Innovation Network.

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