The best climate for success

Business Location
Ruhr Metropolis

Editorial

Resources, mindset, diversity are what nowadays drive success. They constitute the ecosystem or indeed the climate of a region. Here, the Ruhr Metropolis is facing up to the global competition for talent and for companies. We are ready.

It's the people. Open and direct, that's what they say about the people in the Ruhr area. They originate from over 180 countries. The welcoming culture that has been practised since the days of mining is building bridges between nations and cultures. Today, the Innovation Bridges of Business Metropole Ruhr to the future markets in Asia, Europe and North America are seizing on this. That's because the yardstick of a metropolis of 5 million people can only be international.

It's the opportunities. Designing and developing is only possible with leeway which is facilitated by the polycentricity of our region. It offers plenty of opportunities in the west and the east, in the north and the south, to work on the most crucial topics of our time. There are no ready-made solutions. Rather, there's creative leeway. The start-up spirit is evident in many different sectors; the Ruhr Metropolis business location is already the third largest start-up scene in Germany. A wide range of specialisations has been developed.

It's the knowledge base. With 22 universities and universities of applied sciences and an extensive range of dual vocational training opportunities, especially in the fields of technology and manufacturing, the modern Ruhr area is one of the leading regions of knowledge in the heart of Europe. 150 incubators, research and technology centres network the knowledge with practitioners in corporations and start-ups.

It's tradition in transformation. The Ruhr Metropolis has already reinvented itself many times over. Change is a constant. This helps in tackling the big issues. As an energy region, we are a real laboratory for climate-friendly approaches and interconnect the environment with the economy. The Ruhr area has long been on its way to becoming the world's greenest industrial region. We are proud of this transformation.

Be part of it. Shape the future with us. If that's what you want to do, do it here.

Prof. Dr. Julia Frohne
Chairwoman of the Board
Business Metropole Ruhr GmbH

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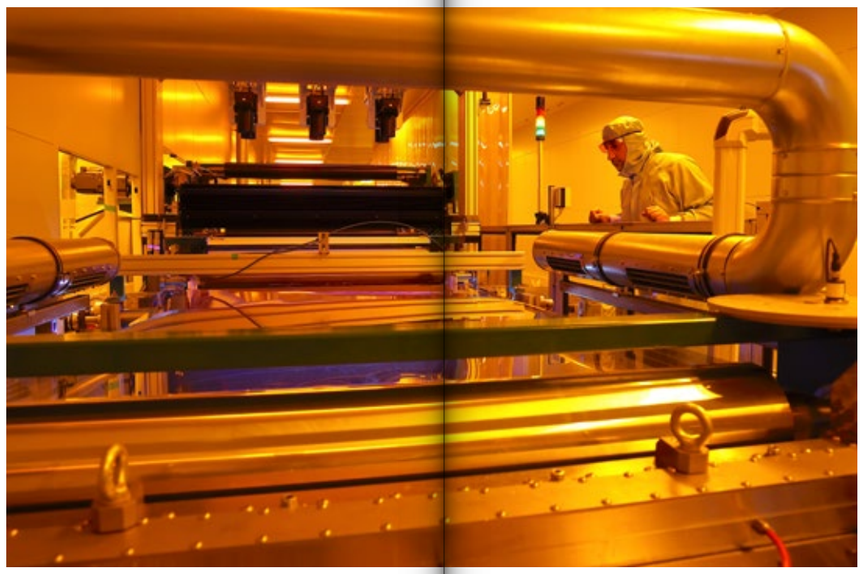


Facts & figures

5.1 mio.
inhabitants
Largest metropolitan area in Europe

Largest
inland port logistics hub in Europe

404,144
people in vocational colleges and studies, including 248,000 students at 22 colleges and universities

Direct
train connection to China

150
technology & research centres, incubators & innovation centres

60 mio.
people can be reached by truck in 3 hours

53
cities and municipalities

1,811,448
employees subject to social insurance

For more facts and figures, please visit:

Investing in the Ruhr Metropolis

The Ruhr Metropolis — a metropolitan area in constant change. It is here where forward-looking innovations are created. Be it housing, working or mobility — new concepts are not only thought up in the Ruhr area, but are also incorporated into concrete planning and implemented in a practical manner. Emerging quarters are characterised by a high share of green and open spaces. There is also a focus on promoting multimodal, climate-friendly transportation.

New quarters

Hafenquartier Dortmund: Digital and Creative Campus

The Port of Dortmund — Europe's largest canal port — is an industrial and logistics location of international importance, a goods hub for the entire Ruhr area, connected to the German seaports as well as the so-called ZARA seaports: Zeebrugge, Antwerp, Rotterdam and Amsterdam. By 2025, a new, low-car quarter with office buildings, restaurants and leisure areas will be built east of the port basins. Already now, many students are drawn to live in the Dortmund Port quarter, and artists and creative companies have recognised the innovative power of the quarter in recent years — for example, the "Academy for Theatre and Digitality", a unique institution in all of Europe, has settled in the "Digital Campus". On a total area of around 16,500 square metres and in three building phases, the investment company "Landmarken AG" is developing co-working, gallery and exhibition spaces and a restaurant plus a start-up centre, to be rented by the city of Dortmund.

Mark 51°7 in Bochum: Knowledge generates business

Mark 51°7 — an innovation quarter on the former Opel industrial sites near the Ruhr University Bochum: Started as a non-profit public-private partnership with Opel Automobile GmbH, the properties have been developed exclusively by the city of Bochum since early 2021, with the support of the state of North Rhine-Westphalia and the district government as funding bodies.

With various transfer and research institutions, the Ruhr University forms the heart of the development on a total area of 70 hectares. Investors are constructing office buildings with space for co-working and FabLabs, and companies from the areas of IT security and automotive have already settled here. It is planned to provide the site with a sustainable supply through an intelligent district heating network with energy feed-in options, as well as the targeted promotion of low-emission transport. The quarter development Mark 51°7 was awarded the 1st prize of the polis Award for Urban Land Recycling in 2019.

6-Seen-Wedau in Duisburg: A new dimension of urban development

6-Seen-Wedau is a project that shines far beyond the city limits of Duisburg. Not only is urgently needed residential space being created here. With 90 hectares of railway land no longer needed for commercial operations, Duisburg-Wedau is home to one of the largest urban development projects in North Rhine-Westphalia. A regionally significant residential area with around 3,000 residential units is to be built on the approximately 60-hectare southern site. In a direct waterfront location and proximity to the Wedau Sports Park and its high recreational quality, GEBAG Duisburger Baugesellschaft and the City of Duisburg are planning a wide range of high-quality residential forms and types in both the owner-occupied and rental segments. The planning in Duisburg-Wedau is combining the history of the site with forward-looking urban development in an attractive manner: Heritage-protected buildings such as a heating plant, a railway signal box and a brick water tower as well as an approximately 18,000-square-metre factory hall will remain preserved. On the northern area of the site, the so-called Campus Quarter for research, technology and business start-ups is being built in cooperation with Duisburg-Essen University. Aspects such as water-sensitive urban development, environmentally friendly mobility and climate-friendly architecture play a central role in the planning of all 6-Seen-Wedau quarters.

Regarding the Ruhr real estate market:

thyssenkrupp quarter in Essen: Place of New Work

The thyssenkrupp company has been shaping the industrial history of the Ruhr Metropolis for 200 years. In 2010, the Group rebuilt its headquarters in Essen in accordance with the latest urban design and New Work principles. The thyssenkrupp quarter is a campus with an open layout and a total of 13 buildings. A modern working environment of short distances was created in the immediate vicinity of the original Krupp headquarters. The requirements for sustainable use of raw material resources were taken into account in both the planning and the realisation of the buildings as well as the outdoor area.

All of the office buildings are heated by a geothermal system, and an innovative solar protection system provides the outside of the main building with a face. The buildings are all connected by an open space concept with more than 700 trees. The Krupp Park with a large water area significantly improves the microclimate of the area. For the innovative rainwater decoupling in the quarter, thyssenkrupp was awarded the "Wasserzeichen" by the Emschergenossenschaft, a seal for the particularly sustainable use of rainwater.

InnovationCity Ruhr: Smart, digital and climate-friendly

How can climate-friendly cities be realised? With the pilot project of “InnovationCity Ruhr | Model City Bottrop”, Innovation City Management GmbH has developed solutions to this question between 2010 and 2020 and tested them in the city of Bottrop. With their experience gained, the interdisciplinary teams of InnovationCity Ruhr GmbH are by now developing holistic concepts for climate-friendly urban redevelopment throughout Germany.

The concepts in Bottrop were implemented hand in hand with representatives of the local business community and citizens. The track record is impressive: Within the ten-year period of the project, the CO_2 emissions of the city of Bottrop have been cut to 50%. It was possible to greatly reduce the CO_2 emissions per capita: While the national average is 9.2 tonnes in Germany, it was only 2.44 tonnes in the Bottrop model area in 2020. Another finding of the pilot project: Networking and sector coupling — like in connecting buildings and electric cars — is only possible with intelligent control, i.e., digitally and smartly.

For additional information, please visit:

Kreative.Quartiere Ruhr: Space for societal relevance

The European Capital of Culture RUHR.2010 gave rise to the Kreative.Quartiere Ruhr programme, funded by the Ministry of Culture and Science of the State of North Rhine-Westphalia and implemented by ecce — european centre for creative economy GmbH.

The background: Creative people and companies in the creative sector are expected to revitalise cities with their projects and offers and make them more attractive for “high-professionals” from other economic sectors. The Kreative. Quartiere Ruhr programme caters to a variety of demands on modern urban development: Creative and cultural initiatives receive affordable spaces for their societally relevant work; at the same time, creative environments contribute significantly to the attractiveness and success of cities. Since 2011, a total of 86 cultural and artistic projects have been successfully implemented in 16 creative quarters in 14 cities in the Ruhr area.

Strong region of knowledge & research

22 universities, 400 courses of study, around 250,000 students from all over the world — the Ruhr Metropolis boasts the densest university landscape in Europe. In addition, there are powerful networks in the form of Universitätsallianz Ruhr, a strategic alliance of Ruhr University Bochum, the Technical University of Dortmund and Duisburg-Essen University, as well as the 'ruhr valley', a cooperation of more than 100 tech companies and public institutions located in the Ruhr area with the universities in Bochum and Dortmund as well as the Westphalian University of Applied Sciences. In addition, numerous well-known non-university research institutions are also based in the Ruhr Metropolis. Best prospects for scientists to teach, research and pilot forward-looking developments in entrepreneurial practice here.

Incubator for technology start-ups

An interview with Dirk Stürmer, Managing Director of the Technologie ZentrumDortmund (TZDO)

The TechnologieZentrum Dortmund (TZDO) network currently consists of six centres at four different locations in Dortmund. What are the main sectors covered by the centres and what role does the TZDO play in the network?
The TZDO is a broadly positioned location community of young technology start-ups and innovative growth companies. Under the umbrella of the TZDO, more than 200 companies gather in our competence centres with a sector-specific focus.

These application centres represent the technology fields of biomedicine and biotechnology, production technology, microtechnology and nanotechnology, logistics, as well as software and IT, among many others.

In this context, our companies are represented in almost all technology-driven economic sectors and develop industry-specific solutions, for example for medical technology and active ingredient research, mechanical and plant engineering, robotics and automation technology, as well as for the various areas of information and communication technology. The founders from the TZDO are characterised here by both a wide range of technologies as well as broadly spread areas of application.

As such, our tenants deliver innovative solutions for SMEs and industry in all areas of digitalisation.

The TZDO was founded in 1985 — when the Ruhr Metropolis was mastering major challenges of structural change. How have requirements and demands changed in close to 40 years?
In response to the structural change and deindustrialisation processes, Dortmund set out early on to become a multifaceted knowledge and service location. The promotion of business start-ups and the continuous transfer of technology from the universities into the economy has brought many new impulses. The TZDO was the starting point for the development of one of the largest technology parks in Europe: These days, more than 350 companies with approx. 13,500 employees are working on the Science and Technology Campus Dortmund. We are a location with many service providers, advisors and knowledge carriers. Dortmund features a highly differentiated, established start-up ecosystem that is locally anchored and globally interconnected.

The TZDO supports this system as a network platform and information interface and is now one of the largest technology incubators in Europe, providing start-ups with infrastructure adapted to their needs. In this way, the TZDO provides the basis for further innovative technologies and knowledge-based start-ups.

The Centre for Entrepreneurship & Transfer (CET), which was distinguished as an Excellence Start-up Centre (ESC), moved as a tenant into the TZDO in 2019. What impulses does the CET generate for the transfer from research to industry?
The CET is a key partner for the TZDO in its efforts to identify people from the university who are interested in setting up a business and to support them in the best possible way in implementing promising business ideas. This is how numerous exciting start-ups and spin-offs from TU Dortmund have emerged in recent years. The CET is strengthening the start-up spirit and innovative power of Dortmund as a leading location for knowledge-based start-ups and research transfer.

How well-connected is the TZDO with the start-up and technology scene — not only in Dortmund, but in the entire Ruhr Metropolis and beyond?
The TZDO is one of the central drivers of innovation in the Ruhr Metropolis and is closely connected to the technology and innovation centres in the region, such as the TECH5plus network in the eastern Ruhr area. We actively promote the close connection of our start-up ecosystem with the SMEs in the region. In addition, the more than 200 companies from the TZDO are perfectly networked in Germany, in Europe and globally.

For additional information, please visit:

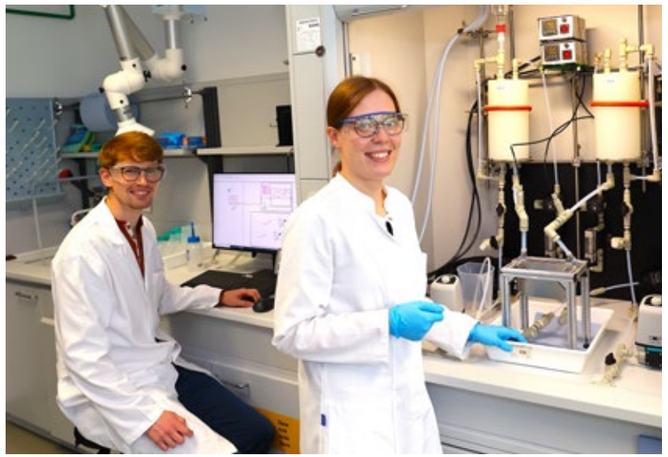
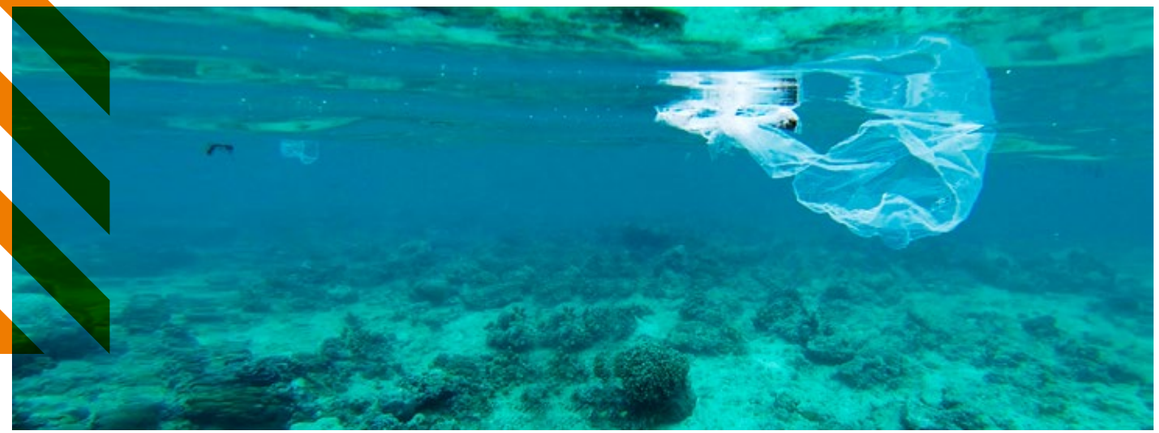


Image 1 Cleen room of temicon GmbH at ZfP Dortmund
Image 2 Laboratory of WEW GmbH in the MST.factory dortmund

Fraunhofer UMSICHT: Paving the way to a sustainable world



Fraunhofer UMSICHT in Oberhausen has set itself no less a goal than this: A planet Earth that is worth living on. A planet Earth on which nature and civilisation are not mutually exclusive. With its research in the areas of climate-neutral energy systems, resource-efficient processes and circular products, the Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT is making tangible contributions to achieving the 17 Sustainable Development Goals (SDGs) of the United Nations.

The Institute is developing solutions that provide decisive contributions to a resource-conserving society and economy, and is thereby paving the way to a more sustainable world. Work is being carried out on innovative technologies that can be implemented on an industrial scale, as well as products and services for the circular economy in the areas of energy, processes and products. The objective is to advance the developments to application maturity.

Manfred Renner, Director of the Institute, regarding this: “What will the products of tomorrow look like? Based on what principles are they going to be produced and used? And how will the products be handled at the end of their useful life? We will provide answers to these and other challenging questions!” In this, the focus will be on the balance between economically successful, socially just and environmentally compatible innovations.

An important hallmark of the Institute is that researchers continuously evaluate the project work in terms of sustainability. The institute offers a wide range of services to partners from industry, the service sector and politics: From market analyses and innovation consultations via the optimisation of process or organisational forms to product development or improvement (up to small series) as well as licensing, licence takeovers or certifications.

The projects are just as varied: Together with Duisburger Hafen AG (duisport), for example, the experts are studying in the context of the “enerPort” project how mixed commercial, industrial and residential locations can be further developed with an eye on the challenges of the energy transition. The junior research group “H_2Organic” in turn has set itself the goal of using electricity from renewable sources with the help of an electrochemical synthesis process to produce chemical products with a “green footprint”. And in Oberhausen-Tackenberg, housing cooperatives and the municipality are working together with experts from Fraunhofer UMSICHT on the QUENTIN project. In the future, four flexible district heating islands are to supply more than 800 residential units, two schools and a sports hall with climate-neutral heat.

In total, there are well over 100 projects that are being advanced by multi-professional teams. Prof. Dr.-Ing. Christian Doetsch, Director of the Institute: “Efficient energy processes are just as much the focus of our research as new storage technologies and intelligent system solutions. What makes it special: We work on innovations in an interdisciplinary manner and across sector boundaries.” Fraunhofer UMSICHT, with locations in Oberhausen and Sulzbach-Rosenberg (Bavaria) as well as a plastics technology centre in Willich, is connected worldwide as an Institute of the Fraunhofer-Gesellschaft.

Non-university research in the Ruhr Metropolis

Bochum

- German Mining Museum Bochum — Leibniz Research Museum for Geo-resources (DBM)
- Fraunhofer Research Institution for Energy Infrastructures and Geothermal Energy IEG
- Max Planck Institute for Security and Privacy

Dortmund

- Fraunhofer Institute for Material Flow and Logistics (IML)
- Fraunhofer Institute for Software and Systems Engineering (ISST)
- Research Institute for Regional and Urban Development (ILS)
- Leibniz Research Centre for Working Environment and Human Factors (IfADo)
- Max Planck Institute of Molecular Physiology
- Institute for Research and Transfer (RIF)
- Leibniz Institute for Analytical Sciences (ISAS)

Duisburg

- Development Centre for Ship Technology and Transport Systems (DST)
- Fraunhofer Institute for Microelectronic Circuits and Systems (IMS)
- Institute for Energy and Environmental Technology (IUTA)
- The hydrogen and fuel cell center (ZBT)

Essen

- Leibniz Institute for Economic Research (RWI)
- Salomon Ludwig Steinheim Institute for German-Jewish History (STI)
- Center for Turkish Studies and Integration Research (ZfTI)
- German Cancer Consortium (DKTK)

Gelsenkirchen

- Institute for Underground Infrastructure (IKT)

Mülheim an der Ruhr

- IWW Water Centre
- Max Planck Institute for Chemical Energy Conversion
- Max Planck Institute for Coal Research

Oberhausen

- Fraunhofer Institute for Environmental, Safety and Energy Technology (UMSICHT)

Witten-Herdecke

- German Centre for Neurodegenerative Diseases (DZNE)

Image 1 Plastic bag in the ocean
Image 2 Micro- and macroplastics found on the beach

Potentials of the healthcare industry

The Ruhr Metropolis is characterised by a hospital landscape that combines cutting-edge medical expertise with innovative research and excellent care. The Essen University Medical Centre combines numerous specialist hospitals with international appeal on a compact campus. The Ruhr University Bochum (RUB) and the private University of Witten/Herdecke with their affiliated hospitals of different carriers form a structure that combines university research and teaching with hospital care close to home. In addition, numerous companies in the healthcare industry have settled into this environment.

Mini fact

- With a share of 20% of total employment, the healthcare sector is the most important key market in the Ruhr Metropolis in terms of employment policy.
- SvB in the Ruhr Metropolis (2021): 361,678
- The hospital landscape in the Ruhr Metropolis is among the best in Europe with respect to size, density and diversity.

Bochum: HealthCampus for high-tech healthcare

The HealthCampus in Bochum combines public facilities of the healthcare administration and research as well as space for innovative companies in the healthcare industry. The spatial proximity allows a close interdisciplinary cooperation, knowledge transfer and innovation dynamics.

The interaction between academic research and economic exploitation is coordinated by the HealthCampus agency. The subsidiary of Bochum Economic Development is addressing both companies as well as founders from the fields of medical technology, medical IT and biomedicine. The experts provide advice to founders on the preparation of business plans, arrange network contacts, support in the acquisition of funding and help to find suitable premises for the respective projects.

The proximity to Ruhr University Bochum and the other Bochum colleges as well as to numerous academic institutions in the Ruhr Metropolis makes a settlement into the HealthCampus Bochum an attractive proposition. Another major advantage of the location is the density of medical practices, clinics, health care providers and nursing homes, which is unparalleled in Europe. All these healthcare facilities generate a huge potential demand for services, products and technologies. Offers that are at the cutting edge of science or innovative technical achievements are promptly applied in daily practice in this way. One example for this is SNAP GmbH, a technology company specialising in AI solutions and digital assistance systems. “Sensor-based Neuronal Adaptive Prosthetics” (SNAP) makes it possible to digitally record brain activity and use it for the control of prostheses.

Image 1 A new office building is being erected on the southern part of the HealthCampus Bochum, in the immediate vicinity of the Ruhr University.

Essen: Location for the healthcare of tomorrow

Three questions for Prof. Dr. Jochen A. Werner, Medical Director and Chairman of the Board of the University Medical Centre Essen

About

Prof. Dr. Jochen A. Werner is an ear, nose and throat specialist. His scientific interest lies in the field of oncology, especially in lymphogenic metastasis. He developed innovative methods of surgery.

After his move into hospital management, Prof. Dr. Werner is now intensively involved with the challenges of digitalisation and personalised healthcare.

He has been Medical Director and Chairman of the Board at Essen University Hospital since 1 October 2015. Together with his management team, Prof. Dr. Werner has since been transforming Essen University Hospital into a Smart Hospital and has received several awards for this initiative.

The University Medical Centre Essen is a central provider in the largest industrial metropolitan area in Europe and an important employer. What does this mean in numbers?
The University Medical Centre Essen comprises the Essen University Hospital as well as 15 subsidiaries, including the Ruhrlandklinik, St. Josef Hospital Werden, Heart Surgery Huttrop and the West-German Proton Therapy Centre Essen. With 10,500 employees and 1,700 beds, we are the leading location for the care of the sick, research, and teaching in the Ruhr Metropolis.

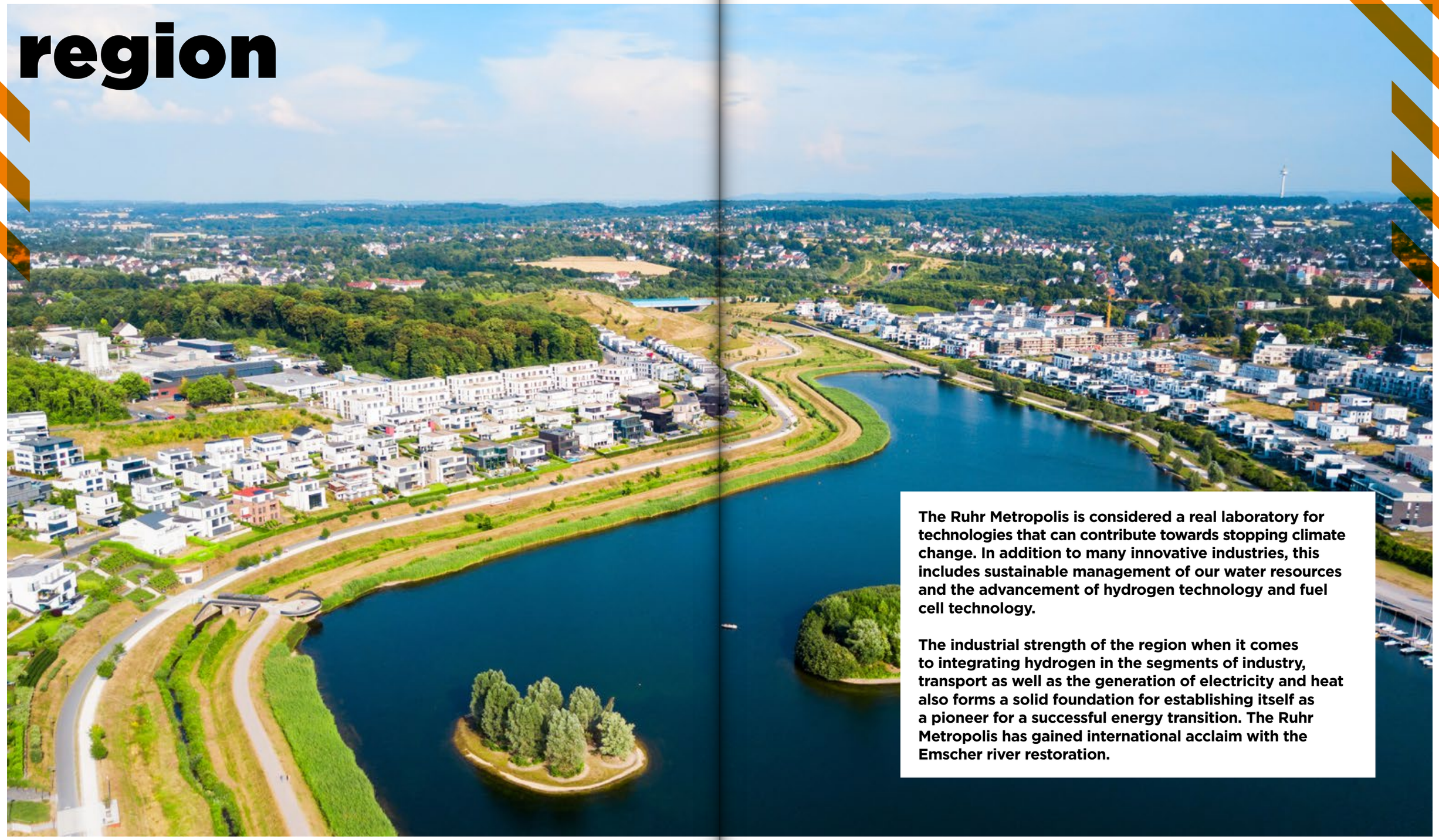
In 2015, the University Medical Centre Essen set out on the path to becoming a Smart Hospital. What does that mean?
Digitalisation is the means to place the focus in healthcare much more strongly than in the past on patients, relatives and staff. We have, for example, rolled out the electronic patient file in the clinics of the Essen University Medical Centre in order to make patient documentations easier on staff and to optimise the exchange between experts. Our new digitalised emergency department makes emergency medicine better, faster and safer. In our Institute for Artificial Intelligence in Medicine, we are investigating not only how AI can support the care of patients, but also the training of medical professionals. These are but a few examples of the healthcare of tomorrow that is already being practised in the Ruhr Metropolis today.

The topic of sustainability in healthcare is also important to you…
The healthcare industry is one of the major emitters of greenhouse gases. Of global CO_2 emissions, 4.4 percent are attributable to the healthcare sector alone. The healing of patients and the alleviation of illnesses is, of course, our core task. But people can only become healthy and remain healthy in an intact environment. That is why we at the University Medical Centre Essen have developed a varied portfolio of measures in order to be able to actively address the topics of sustainability and green hospital.

The Smart Hospital is the digital backbone for a successful transformation towards this sustainability and resource conservation, such as specifically in our pilot project to recycle anaesthetic gas. Due to its pioneering role in both areas, the University Medical Centre Essen is not only an attractive employer with the best development opportunities, but it also serves as a model for a North Rhine-Westphalia-wide smart hospital initiative.

Essen University Hospital is leading a consortium that is working with a team of scientists from the Fraunhofer Institutes for Intelligent Analysis and Information Systems IAIS and for Digital Medicine MEVIS, RWTH Aachen and TU Dortmund together with experts from industry to develop transferable concepts and smart solutions.

Green industrial region



The Ruhr Metropolis is considered a real laboratory for technologies that can contribute towards stopping climate change. In addition to many innovative industries, this includes sustainable management of our water resources and the advancement of hydrogen technology and fuel cell technology.

The industrial strength of the region when it comes to integrating hydrogen in the segments of industry, transport as well as the generation of electricity and heat also forms a solid foundation for establishing itself as a pioneer for a successful energy transition. The Ruhr Metropolis has gained international acclaim with the Emscher river restoration.

About

Karola Geiß-Netthöfel has been the Regional Director of the Ruhr Regional Association (RVR) since 2011. She was Vice President of the Arnsberg district government from 2008 to 2011.

Prior to that, Karola Geiß-Netthöfel was head of the department responsible for, among other things, regional development, economic development, as well as supervision of municipal and construction work.

Metropolis of green transformation

In conversation with Karola Geiß-Netthöfel, Regional Director of the Ruhr Regional Association (RVR).

Hydrogen technology is an important building block for the energy transition to succeed. The Ruhr area is currently developing into a model region for the hydrogen economy and is taking on a pioneering role with regard to green transformation.

Dear Mrs Geiß-Netthöfel, what is the significance of the topic of hydrogen for the Ruhr area and what distinguishes the Ruhr Metropolis from other regions when it comes to the hydrogen economy?
The Ruhr Metropolis is ideally positioned for the successful market ramp-up of the hydrogen economy. If it is possible here to use hydrogen on a large scale in industry, in heavy goods transport and in the quarters, the effect on climate protection will be the most significant. Our region can draw on an excellent energy infrastructure in order to supply the numerous potential customers in industry and the other sectors with hydrogen. Due to the high density of research institutions and innovative companies, the Ruhr area is in a position not only to use hydrogen in energy-intensive production processes, but also to allow the entire value creation chain to participate.

What challenges does the region have to overcome in order to further expand its pioneering role?
The central challenge is to secure the supply of green hydrogen. It is important to bundle the strengths of the region and to communicate needs clearly and in a targeted manner in order to be provided with sufficient consideration where import strategies are concerned. In addition, there are a large number of different activities and local networks in the Ruhr Metropolis in the area of the hydrogen economy. Our goal is to optimally network this diverse landscape of stakeholders and make it more visible beyond the region.

What potential do you see for the Ruhr Metropolis in the expansion of the hydrogen economy?
The hydrogen economy has the potential to act as a job guarantor and job engine in the Ruhr Metropolis. Steel production, for example, is already being gradually transitioned to “green steel”. This is existential for the long-term protection of the industrial jobs. However, a completely new value creation chain will develop around the hydrogen economy — this is an opportunity for the entire region.

What are the tasks of the Hydrogen Ruhr Metropolis (HyMR)?
The HyMR is intended to serve as an umbrella around the various stakeholders, projects and networks in the region and to market them supra-regionally. Regional hydrogen needs and synergy potentials must be identified and realised. The infrastructure for which the RVR is carrying out the regional planning procedures must be planned strategically. And last, but not least, HyMR is working closely with all relevant stakeholders in the region. It is intended to support them in the acquisition of funding.

What are the next steps to be taken in order to further promote the industrial and climate-friendly transformation of the Ruhr Metropolis?
At present, work is underway on a concept that will work out clear recommendations for action and concrete measures for the Ruhr Metropolis in order to develop the Ruhr area as a model region for the hydrogen market ramp-up in Germany and Europe. The most important prerequisite is to create the transport infrastructure for the supply of imported and supra-regionally produced hydrogen. In parallel, an H_2 distribution network must be initiated to supply hydrogen to the consumption clusters. At the same time, the technical prerequisites in the processes of the end users in the industry must be created. In addition to the IPCEI projects such as GetH_2, attention must be paid to the substitution of natural gas in the SME economy.

Due to the energy-structural consequences of the Ukraine war, the pressure to act is enormous. In the long term, the goal is to use hydrogen in all sectors in the region and thereby create a nucleus for the roll-out to other regions. This would be a big step on the way to becoming the greenest industrial region in the world.

HyMR

With the Hydrogen Ruhr Metropolis (HyMR), the Ruhr Regional Association and Business Metropole Ruhr are creating an umbrella for hydrogen activities in the Ruhr area.

The goal of the Hydrogen Ruhr Metropolis is to advance the industrial and climate-friendly transformation of the Ruhr area. HyMR aims to bring together existing stakeholders in the region and market them under the umbrella of the Ruhr Metropolis. The Ruhr area is to become more visible as the central energy and hydrogen region in Germany and the impact of the regional networks is to be increased by bundling competences.

For additional information, please visit:

The Emscher river restoration — a project of the century

1992
Ground-breaking ceremony for underground sewer in Castrop-Rauxel

2009
Ground-breaking ceremony for underground sewer and pumping stations in Gelsenkirchen and Bottrop

2017
Completion of all tunnelling work for the underground sewer canal

2021
The Emscher river is completely free of wastewater.

The Emscher is an 83-kilometre-long river that flows right through the Ruhr area. With the onset of industrialisation, wastewater was increasingly discharged into the river, and by the middle of the twentieth century the Emscher was considered the dirtiest river in Germany. A new way of thinking set in: At the beginning of the 1980s, a pilot project for renaturation was launched, since 1992, the Emschergenossenschaft has been planning and implementing the Emscher conversion.

The expertise that was bundled and developed over the course of decades is now in demand for similar projects worldwide. A wide range of planning partners, commercial enterprises and, last but not least, the citizens of the region are involved in the restoration and, above all, in the much more far-reaching realisation of the New Emscher River Valley. Since 2021, the Emscher river has been free of any wastewater.

Emscher river

Emscher wastewater canal

Pumping and sewage treatment plants

Image 1 The BernePark on the site of a decommissioned sewage treatment plant in Bottrop

Image 2 Dortmund — Emscher, renaturalised river in Dortmund-Schönau

International metropolis

The Ruhr Metropolis, a space where people with courage and ideas — of the most diverse cultural origins — are welcome. The densest university landscape in the whole of Europe and numerous high-calibre corporations provide the perfect fertile ground for this. Here, motivated people can acquire qualifications and realise innovations in order to transform them into effective business models.

Since industrialisation, the economic strength of the region has been based on open interaction of people with one another. They have all found a home in the Ruhr area.

Internationally in demand

Prof. Dr. Julia Frohne, Managing Director of Business Metropole Ruhr, and Frank Speer, Head of Internationalisation and Location Marketing, in conversation

Under the umbrella of Innovation Bridges, Business Metropole Ruhr would like to deepen its relations and exchange with other countries. The goal is to build a strong network in international innovation ecosystems. The settlement of foreign companies in the Ruhr Metropolis is to be supported just as much as the market development of domestic companies abroad.

Are international relations with the Ruhr area in demand?
Prof. Dr. Julia Frohne: They are in demand both to and from the Ruhr area. Foreign economic development agencies contact us to learn how the region has managed to overcome the challenges of structural change so well to date. The stakeholders in the Ruhr Metropolis are also aware of this: The immense challenges of our time call for international cooperation. Be it climate change, energy transition, industrial transformation, or IT security, companies from the Ruhr area have long since emerged from the shadows of the coal and steel era and are contributing to technical and entrepreneurial solutions for the most pressing problems of our time.

Frank Speer: By now, the Ruhr area is in many areas an international top-class region. For example, the companies, start-ups and researchers in the field of IT security in Bochum, Essen and Gelsenkirchen have been playing in the Champions League for years and are travelling all over the world for guest lectures and conferences. The 2022 Nobel Prize in Chemistry went to Mülheim an der Ruhr.

How does BMR go about its international activities?
Prof. Dr. Julia Frohne: Our motto is innovation through cooperation. As a region, we are large enough and actually relevant for international corporations. We therefore self-assuredly position the Ruhr Metropolis at leading international trade fairs and tech conferences, organise webinars and international events and broker business contacts and real estate in the Ruhr area. With our Innovation Bridges, we connect stakeholders from business, science and administration as well as from foreign innovation centres and bring them together with our innovation ecosystem.

We highlight topics, such as those mentioned above, in which we have strengths to offer to foreign companies and institutions. We focus on companies and research centres that are potential customers or cooperation partners for abroad. Here, we see ourselves as regional economic development in the role of networkers and bridge builders.

Frank Speer: Via these strong networks, young, fast-growing companies then come to us who are interested in the German and European market and are looking for an attractive location. Those who want to establish themselves abroad prefer to go to a place where they know someone. We establish these networks with our Innovation Bridges. The good networking of the various stakeholders in the Ruhr area with each other then leads to the right contacts being established more quickly.

What are the opportunities and advantages for foreign companies in settling in the Ruhr area?
Prof. Dr. Julia Frohne: As the largest metropolitan area in Germany, the Ruhr Metropolis has a well-established industrial structure in the B2B sector. The location in the middle of Europe makes the logistics location favourable with excellent connections to road, rail and water. The Ruhr area has the highest density of institutions of higher education in Europe, first-class research centres and has a well-trained specialist workforce. The high industrial density, the large DAX-listed corporations, a heterogeneous and diversely positioned SME sector make the Ruhr area so attractive as a location for innovation. And last, but not least, the Ruhr Metropolis is also a convincing location with its moderate cost of living, affordable housing and a great range of leisure and cultural activities.

How were you able to maintain the international contacts during the Corona pandemic?
Frank Speer: Here, we relied on our digital B2B matching platform Matchmaker.Ruhr. Originally launched as a start-up platform for innovators, it now connects over 4,300 users from companies, start-ups, municipalities and science. We can also use the platform to map international digital and hybrid events, including webinars and meetings — that facilitates the exchange enormously.

Prof. Dr. Julia Frohne: In addition to the virtual exchange, direct contact is and remains indispensable in our opinion. The Innovation Bridge North America started under Corona conditions in 2021, so it is even nicer that we were now able to meet our partners in Canada and the USA on-site.

We all came back from this trip in which representatives from companies, universities, municipalities and network initiatives participated, inspired and have returned with a suitcase full of good ideas. Innovation needs inspiration, for which we as BMR would like to create offers and content with the Innovation Bridges.

Click here to visit Matchmaker.Ruhr:

About

Prof. Dr. Julia Frohne has been Chairwoman of the Executive Board of Business Metropole Ruhr since 2021. She is a professor of communication management at the Institute for Journalism and PR at the Westphalian University of Applied Sciences in Gelsenkirchen. Prior to that, she held a professorship in business psychology and management at the International School of Management in Dortmund, where she founded and headed the "Kienbaum Institute@ISM for Leadership & Transformation" as Academic Director.

Frank Speer is responsible for internationalisation and location marketing at Business Metropole Ruhr. In this function, he helped to develop the concept of the "Innovation Bridges" and is continuously expanding the projects.

Innovation Bridges identify trends

To provide cities and companies in the Ruhr Metropolis, as well as companies planning investments in the Ruhr area, with access to the expertise of other countries — that is the goal of the "Innovation Bridges" project of Business Metropole Ruhr. To date, the focus has been on China, Israel, the USA and Canada as well as the Netherlands. In the future, more bridges will be built with the world. In areas such as smart city, artificial intelligence, mobile payment, e-commerce and electromobility, the Chinese national economy has taken a leading position at a rapid pace. The Ruhr Metropolis is therefore establishing contacts with Chinese innovation centres such as Shenzhen, Shanghai and Beijing in order to network stakeholders from the Ruhr area with the pacesetters in China.

Under the umbrella of Innovation Bridge Israel, the Ruhr Metropolis is strengthening its relations and exchange with Israel, especially with the start-up metropolis of Tel Aviv. One pillar of that Innovation Bridge is the "Innovation Scouting" project. Since 2017, an innovation scout has been analysing future markets and identifying trends in cooperation with the German-Israeli Chamber of Industry & Commerce (AHK Israel).

The goal of Innovation Bridge North America is to strengthen networking between the IT industry in the Ruhr area with the United States and Canada. Together with the Worldfactory Start-up Center at Ruhr University Bochum and the Chambers of Commerce Abroad in the United States and Canada, Business Metropole Ruhr has developed various formats to promote exchange with innovation ecosystems in the US and Canada.

The first Innovation Bridge within Europe connects the Ruhr Metropolis to the Netherlands. It strengthens already existing economic relationships that have grown over many years due to the geographical proximity. But the two regions also complement each other in terms of current economic and ecological challenges: In the future, in topics such as resource economy, hydrogen and health, the partners want to meaningfully combine and improve their market access and innovation forces for mutual benefit.

Tech innovation for the care market

In Germany, the number of people over the age of 67 years will increase by 22 percent from 16 to a projected 20 million by 2035. This certainly holds opportunities for economic growth strategies: In no age group is purchasing power increasing as strongly as among the best agers. Germany is virtually predestined to be the lead market for AgeTech.

The founders of the Bochum-based tech company Pflegix, Andreas Helget, Patrick Schramowski and Tim Kahrmann, have realised this: Since 2016, the company has grown into a care service provider operating throughout Germany in the business fields of counselling, placement and care. The smart platform developed by Pflegix GmbH serves as a digital interface between people in need of support and those who can provide help. At the same time, the portal helps to reduce expenditures and costs for cost carriers. With a network of now more than 19,000 daily-living helpers and care professionals, Pflegix helps to relieve the burden on care-giving relatives and professional care structures.

"The family is the largest care provider, yet it is often difficult for caregivers in Germany to organise a well-functioning care network. The Pflegix portal not only connects helpers from our extensive network, but also offers the numerous regional providers a platform to inform themselves easily and clearly about the best possible care, to coordinate it and to control it in terms of quality," explains Thomas Wötzel, Managing Director of Pflegix.

The company was founded in 2016 at the Entrepreneurship Zentrum Witten (EZW) at Witten-Herdecke University. In 2018, Pflegix received the SENovation Award. The Founder's Prize honours innovations that focus on customers in their senior years. Europ Assistance, a subsidiary of the Generali Insurance Group, has been a strategic investor and majority shareholder in Pflegix since 2019.

Data mining for the heavy industry

Mining in the Ruhr area is history. But the founding spirit lives on — companies like Essen-based talpasolutions GmbH are shaping the future and taking the know-how gained over the years in the Ruhr Metropolis to a new level.

In August 2016, Sebastian-Friedrich Kowitz, Kai Meschede, Artem Zitzer and Philipp Lorenz founded talpasolutions. The company name, with its prefix derived from the Latin word talpa for "mole", gives away what it is all about: The Essen-based start-up carries out data mining. It develops software solutions that network machines, collect data and provide analyses to optimise machines in the heavy industry.

"We, at talpasolutions, have recognised that the ever-increasing massive amounts of data generated by the heavy industry such as the mining, construction and logistics sectors is still waiting to be properly collected, analysed and utilised in order to benefit from part of the multi-trillion-dollar digital transformation opportunity," says Silke Nüse, company spokesperson.

In all project phases, companies in the heavy industry generate a plethora of different data: These are generated by sensors embedded in the control systems of machines and systems, as well as by design and planning software or project management systems.

What is often missing is their systematic recording and analysis thereof. Data disappears into data silos or is lost over the life cycle of the machines. A single hydraulic excavator, for example, currently produces 250 MB of machine data per day. Utilising analysis and monitoring tools from talpasolutions, not only can the efficiency of such a high-tech machine be improved in the future, but the newly gained insights may also lead to innovative industry solutions.

The business model of talpasolutions is based on strategic partnerships with important companies in the heavy industry. This provides the experts with access to big data sources, industry expertise and installed machine inventories to develop solutions that help companies in different industries identify new revenue streams through the optimal use of data.

Career in the Ruhr Metropolis

Prof. Dr. Ahmet Toprak: From child of guest workers to university professor

Prof. Dr. Ahmet Toprak, born in a village in Central Anatolia, has a very special view of the Ruhr area. The path of his life and education led him from Turkey via Cologne, Bonn and Bavaria to Dortmund. He has experienced in different ways what arriving in Germany may mean.

About

Prof. Dr. Ahmet Toprak is a lecturer at Dortmund University of Applied Sciences and Arts in the Department of Applied Social Sciences and Education and was Dean of the Faculty from 2014 to 2020. As an author, he devotes himself to topics with an intercultural angle, for example intercultural conflict management or the situation of German-Turkish migrant families in Germany.

Mini fact

- The Ruhr Metropolis has developed its own promotional programme for the identification of talent. With the RuhrTalents programme, children from socio-economically disadvantaged families are specifically promoted.

After completing a few semesters of German Studies at the University of Bonn, Ahmet Toprak changed his course of study in 1993 and went to Regensburg to study for a degree in education. Between 1998 and 2007, he worked and completed his doctorate in Munich. His initial reaction when he was appointed professor at Dortmund University of Applied Sciences and Arts? “I was delighted! Not only did it open up an outstanding professional opportunity for me. The Ruhr area was quite familiar to me because of my years in the Rhineland. And the distance to my family living in Cologne seemed just right — not too close and not too far,” the 52-year-old recalls.

However, he was pleasantly surprised by how well the people in the Ruhr area actually accepted him. It is true that some initial encounters seem a little gruff at first. “But I actually made more friends in the first two years in Dortmund than in the 14 years in Bavaria,” he reports. And the gruffness usually turns out to be a somewhat heavy-handed cordiality, a very open and direct demeanour. Ahmet Toprak clearly sees his future in Dortmund: “You don’t just live in a city here, you live in a big metropolis. For example, if a certain dish tastes best to me at a Turkish restaurant in Essen, then I simply drive there.”

The Hitchhiker's Guide to the Ruhr Area

Robert Tonks: Retired, never-tiring European Affairs Officer

In the 1970s, Europeans did not yet know much about each other, there was little exchange at the municipal level.

Robert Tonks came to the Ruhr area in the mid-1970s. With the beginning of the town twinnings, his mother had regularly hosted assistant teachers from France and Germany in Wales. Fascinated by the sound of languages, Tonks set off after his A-levels: He traversed Europe, worked on the orchards around Avignon and finally settled in Duisburg. The at-the-time fledgling university exchange between Portsmouth and Duisburg had influenced his decision to pursue German Studies and Political Science here.

The fact that he stayed in Germany to this day was due to the central location, the opportunity to study and work at the same time and — last but not least — his first German girlfriend. And also due to the good conditions and the cordial welcome by the University of Duisburg.

Robert Tonks reports: "In the 1970s, Europeans did not know much about each other, there was little exchange at the municipal level. Over the years, many EU projects have promoted understanding and exchange and in this way reduced the lack of knowledge." The Maastricht Treaty provided an important boost.

In his opinion, the cities in the Ruhr area have contributed a lot with exchange programmes and a municipal economic foreign policy to the fact that people are today openly approaching one another. This welcoming culture has proven itself in particular since the wave of refugees in 2015. "The cities of the Ruhr Metropolis have taken intelligent measures to offer help and have managed to maintain social peace," he says.

Robert Tonks is active as a volunteer in the counselling of new arrivals. Whether it is about helping foreign scientists to find a place to live or guiding them through the jungle of applications by the German authorities, he is available upon request as a welcome guide.

About

Robert Tonks is one of several volunteer welcome guides who accompany new arrivals who want to work, invest or study in the Ruhr Metropolis. Before that, the graduate in social and political sciences worked as a teacher in adult education, a translator in the steel industry, an interpreter for the police, an examination officer for the London Chamber of Commerce in the new German states and finally as European Affairs Officer at the City of Duisburg.

www.welcome.ruhr

Mini fact

- There are now more than 205 international town twinning arrangements in the Ruhr Metropolis.
- Since the great refugee migration in 2015, we estimate that approximately 93,040 Syrians have been living in the Ruhr Metropolis.

Points of contact for new arrivals

- International Student Services/DAAD
- Dual Career Network Ruhr
- Research Academy Ruhr
- Central Office for the Immigration of Skilled Workers NRW
- Starter Centre for Start-ups and New Settlements
- Welcome Guides

Commitment to science and integration

Hasan Idrees: On the path to becoming a 'Leader for Syria'

Hasan Idrees was born in Syria and has been living in Germany for seven years. In 2015, an expert commission of the German Academic Exchange Service (DAAD) selected 221 scholarship recipients from 5,000 applicants for the "Leaders for Syria" programme. Hasan Idrees: "I am very grateful for this opportunity, studying in Syria was virtually impossible due to the war." After taking German courses in Marburg, Hasan Idrees began studying water technology at the Duisburg-Essen University and passed the master's programme with flying colours.

Moving to the Ruhr area — the best decision for Hasan Idrees: "I liked it here right away! A metropolis like this with small, medium-sized and large cities side by side is really cool." But he is also fascinated by the multicultural society in the Ruhr area:

"Every day I learn new things, not only about the Germans, but also through people of many other nations who live here."

The offers made by Duisburg-Essen University for students from abroad have been a great help to Hasan Idrees. He is particularly enthusiastic about the support he has received from the working group led by Prof. Dr. Stefan Panglisch.

Every day I learn new things, not only about the Germans, but also through people of many other nations who live here.

About

Hasan Idrees was born in Syria and works as a research assistant and doctoral student at the Department of Mechanical Process Engineering/Water Technology at Duisburg-Essen University. In addition, he runs blogs — some with partners — aimed at immigrants and is a volunteer mentor at the German-Syrian Research Society.

www.wieawo.de
www.hudhuda.com

And how does he experience living and working in the Ruhr Metropolis today? Hasan Idrees: "I can't imagine it any better than this. I am living in a beautiful area of Mülheim, within a few minutes' walk I can reach a nature reserve directly on the Ruhr. And I can get to the city centre just as quickly." It is important to Hasan Idrees to pass on some of his good experiences to others. At his university chair, he founded the university group "AquaSmarTech". It serves as a connecting link between teachers, the professional world and students and provides support for the start of studies, the search for internships and the transition into professional life. The International Office awarded him the 2021 DAAD Prize for his achievements and his societal engagement.

Resource-friendly innovations

The Ruhr Metropolis employs around 127,000 people and, in comparison to the rest of Germany, has an above-average number of start-ups in the field of the environmental economy and the circular economy. Programmes for the ecological restoration of quarters and water bodies, renewable energies, modern mobility concepts and ways for more climate-friendly business models within the context of circular value creation are on the agenda today in the former coal and steel region.

A blueprint for other regions

The efficiency of energy, raw materials and materials is becoming an increasingly important competitive factor for companies in all sectors. On the one hand, the future lies in products and services that directly serve environmental protection, for example in green agricultural technologies or innovative systems for renewable energies. On the other hand, companies in the circular economy promise a healthy growth. In order to use resources more sparingly, they are converting their processes to holistic circular flows. The EU strategy of the circular economy shifts the focus from the product to the cycle of use. This strategy aims to keep both raw materials as well as products in technological use and thereby in the economic process for as long as possible.

The leading role of the Ruhr area in environmental economics results from its many years of experience in the successful management of environmental problems as well as the high density of research institutes, well-trained environmental specialists and the innovative companies located here. The logical consequence: Companies and research institutes are working intensively on converting conventional production methods to the circular use of resources.

A few examples: With the largest local and district heating network in Europe, the Metropole Ruhr possesses a good infrastructure for converting the supply Innovative energy grid solutions from the Ruhr Metropolis for the global market to alternative energy sources in a future-oriented manner. The energy potential of mine water — a contaminated waste from the mining era — is to be harnessed for a combined heating and cooling supply. The Emscher river restoration, which has led to green landscapes above ground and avoids wastewater flowing off untreated, now serves as a blueprint for other countries.

Mini fact

- The Ruhr Metropolis is the largest environmental economics region in North Rhine-Westphalia.
- With the greentech.ruhr initiative, BMR has founded the largest network of stakeholders in the region.
- Close cooperation between companies, research and start-ups

For more information, please click here:

Innovative energy grid solutions from the Ruhr Metropolis for the global market

Redox flow batteries are ideally suited for storing large amounts of renewable energy. However, up to now they have been too expensive for the mass market. Dortmund-based Volterion GmbH & Co. KG, a company of the Boysen Group, now wants to revolutionise the market for electricity storage systems with a low-cost variant. In 2021, the company received the Joseph von Fraunhofer Prize for its innovation. Volterion is producing and distributing redox flow battery components for battery manufacturers as well as complete systems for industrial applications. With the novel energy storage systems, renewably generated electricity from fluctuating energy sources can also be retrieved at night and during hours when there is little sunshine. Redox flow batteries are particularly promising because they are cycle-stable, non-flammable, recyclable, scalable and free of critical materials.

In order to be able to offer a solution suitable for the mass market, Volterion has completely redesigned the core component of a redox flow battery — the stack. The result: The new stack weighs 80 percent less, is only half the size and, most importantly, is significantly more cost-effective than conventional models — which considerably expands the range of possible applications. “We are working intensively with a system manufacturer from southern Germany on the market launch of a storage unit for private homes. In this way, we would like to make it possible for anyone to be able to temporarily store solar energy. In other projects, we use our storage units to stabilise the power grid, for example, or to reduce peak loads at industrial plants or at charging stations for electric vehicles,” explains Managing Director Thorsten Seipp. At the Ruhr location, Thorsten Seipp sees an extremely strong industrial base in the energy sector: “The short distances to the users provide the best opportunities to develop a business. In addition to the established industries, the start-up scene at the Ruhr has grown strongly in recent years and has become better networked. This is particularly helpful for young founders in the early phase.”

Aluminium from Germany, sustainably produced

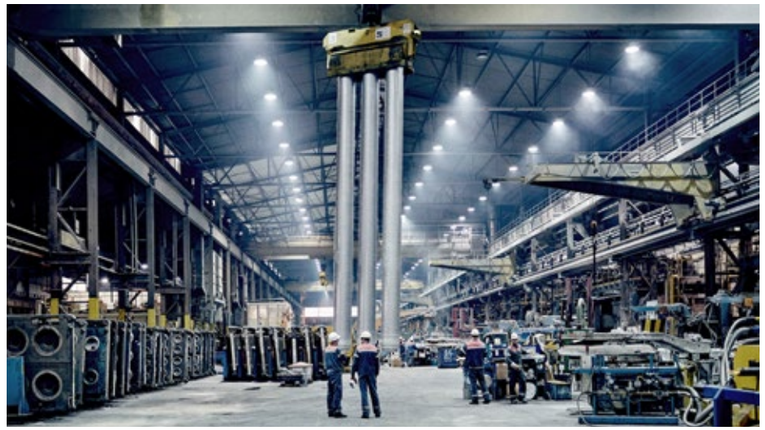


Image 1 Scrap aluminium is sent for recycling

Image 2 Carousel for pouring off aluminium

TRIMET Aluminium SE develops, produces, casts and distributes modern light metal products made of aluminium. With the material, the company ensures that cars become more economical, aeroplanes lighter, wind turbines and power plants more efficient, buildings more modern and packaging more ecological.

The materials specialist operates production smelters, recycling plants, foundries as well as state-of-the-art research and development laboratories. TRIMET is a reliable partner to its customers and a dependable employer to its approx. 2,400 employees. The owner-operated family business attaches great importance to apprenticing its junior staff itself. Every year TRIMET offers around 50 young people training in technical and commercial professions and opens up long-term perspectives for them.

The manufacturing of aluminium uses electricity as a raw material. The energy-intensive production can integrate fluctuating amounts of electricity from wind power and photovoltaic systems and contributes to keeping the power grid stable. With the expansion of renewable energies, the CO_2 footprint of aluminium will continue to decrease. TRIMET has developed an innovative process with which the electricity demand of the aluminium smelters can be flexibly adapted to the generation-output of renewable energies and thus better integrate green electricity into the existing grid.

At the same time, the company is working on avoiding direct CO_2 emissions. TRIMET wants to produce aluminium in a climate-neutral manner by 2045.

With recycled aluminium, TRIMET offers a resource-friendly material. The resmelting of used aluminium requires only five percent of the energy needed for primary production. Together with its customers, the company has established closed material loops that return scrap to production, where it allows for high-quality products with an improved climate footprint. In this so-called closed-loop recycling, TRIMET turns over more than 270,000 tonnes of recycled aluminium every year. The integration of recycled metal is also a focus of the TRIMET research laboratory in materials development. Aluminium alloys, for example, can consist of up to 95 percent recyclate.

Trend-setting: Water management and AI

Three questions for the Managing Director of Okeanos, Dr. Henning Oppel

Your company combines expertise from the water management industry with expertise in information technology — how are which products created?
Okeanos is developing software for the water management and environmental industries. For this, we combine classical physics-based modelling approaches with AI-based models and can thereby interlink known systemic relationships with unknown and complex processes. Heavy rainfall forecasts for urban areas would be one example: In principle, we know the physics behind it, but the heavy rain cells are so small and fast that we reach our limits here in the physically based forecasting. Especially above the urban space, the interactions between the cell and the city are so multifaceted and chaotic that we can only make progress here by using AI.

Your heavy rain project "25square" took first place in the InnovationCall of Business Metropole Ruhr. Could you briefly explain 25square?
"25square" used two fundamental innovations for the urban monitoring of heavy rainfall: forecasting with the help of AI and the use of IoT measurement technology.

So far, precipitation has been measured with extremely accurate and therefore costly and maintenance-intensive devices. These measurements are important for climatology, but due to the costs, the measurement network cannot be as dense as would be necessary for the detection and forecasting of heavy rainfall. With "25square", we have developed a low-cost IoT sensor that closes precisely this gap.

Why is the environmental industry of particular importance in the Ruhr Metropolis?
That may have to do with our past, the former dominance of heavy industry and the environmental problems that came with it. In any case, the Ruhr area is the ideal location for us. The large water management associations, the State Agency for Nature, Environment and Consumer Protection in North Rhine-Westphalia, and also organisations such as the BMR are doing a good job of networking within the region.

Sustainable solutions for the steel industry

ZINQ — in German, this stands for circularity, innovation, sustainability and quality. The roots of the big player in the field of hot-dip galvanising for steel go back to 1889. In 1961, Robert Voigt took over the parent plant in Gelsenkirchen. As one of the pioneers of modern piece galvanising, he was convinced that hot-dip galvanising was the most significant method of protecting steel from corrosion using zinc. The family-operated group of companies is now in its fourth generation of following this vision: with 1,800 employees, 80 apprentices and 25 experts in the field of research and development at 50 locations in Germany, the Benelux countries, France and Poland. Every year, 650,000 tonnes of steel pass through the manufacturing facilities at the locations.

Dr. Birgitt Bendiek has accompanied the development of integrated management systems at ZINQ Group since 2005 and was appointed to the management board in 2012. Since 2014, the Doctor of Metallurgical Engineering has also been the managing director of ZINQ Technologie GmbH, which is responsible for research & development activities and business development within the ZINQ Group.

The ZINQ Group holds 53 patents. One particular innovation makes it possible to galvanise steel parts using extremely low resource consumption. ZINQ has developed a process that reduces the layer thickness by 80 percent while maintaining the same performance compared to conventional methods. No other company in the industry worldwide can offer an alloy comparable to microZINQ. ZINQ is licensing the patented know-how to steel processing companies — for example from the automotive industry. But we also encounter galvanised steel components in many other areas: on lanterns, bridges, agricultural machinery, fences, or even wind turbines.

Galvanising protects components from corrosion for up to 100 years. This makes the process, which is actually very energy-intensive, much more sustainable than a paint coating, for example. “Sustainability and low resource consumption have been central concerns of our company from the very beginning,” explains Dr. Birgitt Bendiek. This philosophy is reflected in many areas of the company beyond the reduced consumption of resources: The ZINQ surfaces and all the materials that are processed are cradle-to-cradle certified.

Sustainability and low resource consumption have been central concerns of our company from the very beginning.

The company is also trying to substitute natural gas as the main energy source in order to switch to green hydrogen in the mid-term. Dr. Birgitt Bendiek: “Sustainability in the product and in the process — that pays off from an economic perspective and we also feel it is our social responsibility.”

The location in the middle of the Ruhr Metropolis and thus also at the heart of Europe is ideal for ZINQ from a logistics point of view. But the Ruhr Metropolis also has a lot to offer to employees who work at the company headquarters and the apprentices who come to Gelsenkirchen from all company locations several times a year for central training units. Dr. Birgitt Bendiek: “This does not only apply to the leisure sector, but also for vocational and further training, the dense higher education landscape presents a giant bouquet of opportunities.”

At ZINQ, apprentices, skilled workers and academics can shape their future. The industrial vocational training programme designed and recognised by ZINQ to become a process mechanic for coating technology — specialising in hot-dip galvanising, which is unique in Germany, also makes it possible to become a manager without having passed the A-levels school-leaving exam. Young people from the first vocational training programme are by now working as plant managers or in upper management all over Germany. The exceptional expertise is in demand.

Business Metropole Ruhr GmbH (BMR) develops and markets the Ruhr Metropolis as a business location. It bundles the economic interests of the 53 cities in the region. The objective of the work of BMR is to increase the competitiveness of the Ruhr area.

The projects and services of the BMR are oriented towards the fields of expertise Structural Policy Issues & Subsidies, Growth Markets, Space & Investor Services, Internationalisation & Location Marketing as well as Innovation & Knowledge Transfer.

Please feel free to contact us personally.
business.ruhr

You can find more information about the services of BMR here:

Imprint

Publisher

Business Metropole Ruhr GmbH
Am Thyssenhaus 1–3
45128 Essen
Germany

METROPOLE RUHR BUSINESS

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Design

Oktober Kommunikationsdesign GmbH
Willy-Brandt-Platz 5–7
44787 Bochum
Germany

Text

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