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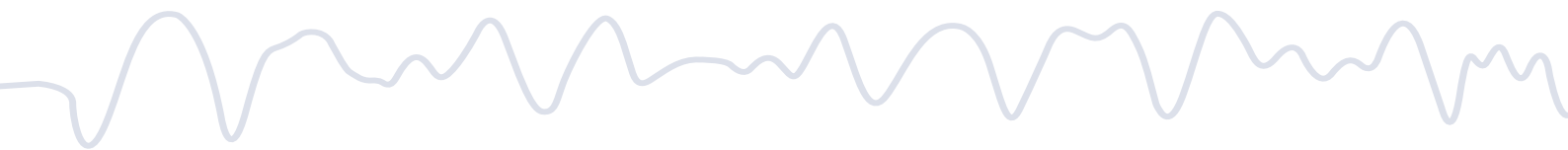
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North Rhine-Westphalia.

An innovative region in the heart of Europe.





Dear reader,

North Rhine-Westphalia has made a name for itself in many respects: as a premier innovation state, as one of Europe's major markets, as a powerful global player in industry, research and cultural life.

With its 18 million population, North Rhine-Westphalia is by far the most populous German state. Cologne, which boasts a world-famous Cathedral, is Germany's fourth largest city and, thanks to a population of 1 million or so, the biggest city in North Rhine-Westphalia, followed by Dortmund, Essen and the state capital, Düsseldorf. Altogether, North Rhine-Westphalia is home to more people than Greater London or Paris. People who generate almost one quarter of Germany's overall gross domestic product. People who live in a state that is making great strides in becoming a knowledge-based society.

For today, knowledge is the state's most vital raw material. North Rhine-Westphalia spares no effort to promote that raw material as it is the very basis of innovation, growth and 'future-proof' jobs. The following pages are designed to give you an outline of North Rhine-Westphalia as a centre for innovation, of its special strengths, and the reasons why it is always worth paying a visit, making an investment or enrolling as a student at one of the state's universities.

Enjoy reading this brochure.



Professor Dr. Andreas Pinkwart

Minister for Innovation, Science, Research and
Technology of the German State of North Rhine-Westphalia







**NORTH RHINE-
WESTPHALIA**



10 reasons
why North Rhine-Westphalia is a
leading location for innovation.

1 North Rhine-Westphalia can boast the largest concentration of academic and research facilities in Europe. More than 420.000 Germans and over 60.000 students from 175 countries are enrolled at the state's 67 institutions of higher education. They can choose among some 2.300 courses of study. Six of Germany's twelve largest universities are located in North Rhine-Westphalia. These include the universities in Cologne, Münster, Duisburg-Essen and Bochum, the Correspondence University in Hagen, and RWTH Aachen which has become a top-ranked elite university.

2 North Rhine-Westphalia's 67 universities and universities of applied sciences are complemented by over 100 non-university research institutions including as many as 12 Max Planck Institutes and 14 Fraunhofer Institutes. Two major centres of the Helmholtz Association are based in North Rhine-Westphalia: the Jülich Research Centre and the German Aerospace Centre. All those internationally renowned institutions provide outstanding opportunities for learning, teaching and doing research for people who are capable of achieving something great, such as Physics Nobel Prize winner, Peter Grünberg.

3 North Rhine-Westphalia's science and research community is excellently networked both nationally and internationally. For instance, the state's institutions of higher education are engaged in lively partnerships with universities in more than 100 countries all over the world. Co-operation projects range from subject-specific international exchanges of researchers and students to joint research projects and to the development of strategic alliances. The North Rhine-Westphalia government puts premium value on stepping up research co-operation especially with Japan, China, Israel, Russia, the USA and the Benelux countries.

4 Moreover, North Rhine-Westphalia was one of the first German states to introduce modern study courses conferring Bachelor's or Master's degrees. This opens up brilliant opportunities for students from North Rhine-Westphalia everywhere in the world given that Bachelor's and Master's degrees are internationally recognised. Thanks to improved



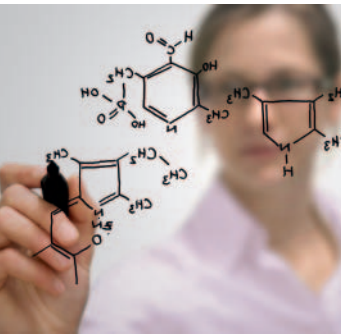
North Rhine-Westphalia supports well-directed scholarly exchange.

efficiency and greater realism of academic training, studying in North Rhine-Westphalia has become even more attractive to young talent from Germany and abroad. On top of that, there is our unique bursary programme which sponsors over 1.000 particularly talented students every year.

5 In North Rhine-Westphalia, the Innovation State, higher education and research have maximum room for manoeuvre and for shaping the future. The North Rhine-Westphalia government sets great store by fostering co-operation between the research and business communities. The “Science to Business” transfer strategy is designed to support the transfer of knowledge and technologies between these two sectors with a view to enabling research findings to be swiftly and successfully translated into advanced products, processes and services. That benefits small and medium-sized business and large firms alike.

6 North Rhine-Westphalia’s universities co-operate closely with numerous German companies and international groups on a wide range of research projects. Examples include the E.ON Energy Research Centre at RWTH Aachen, the Direct Manufacturing Research Centre (DMRC) at Paderborn University (involving Boeing, Evonik Industries and others) and the Interdisciplinary Centre for Advanced Materials Simulation (ICAMS) at Bochum Ruhr University (partnered by ThyssenKrupp AG, Bayer Material Science AG, Salzgitter AG and Robert Bosch GmbH).

7 Not only do universities’ research findings fall on fertile ground in North Rhine-Westphalia, but young experts, too, find ready acceptance after having completed their studies. For almost half of Germany’s firms with the highest turnover are based in our state, including Bayer, E.ON, ThyssenKrupp, RWE, Henkel, Lufthansa and a number of trading groups such as ALDI or METRO. At the same time, North Rhine-Westphalia’s industry is strongly characterised by small and medium-sized business. More than 700,000 SMEs offer excellent career prospects – and thus contribute their share towards increasing the innovative power of this state.



North Rhine-Westphalia's universities are hotbeds of innovation.

8 If North Rhine-Westphalia were an independent nation, it would rank 17th among the most powerful economies in the world. This is not least due to the state's attractiveness to international investors, firms and global players. Over 11.500 foreign companies have located their German or European headquarters in North Rhine-Westphalia, including groups such as 3M, BP, Ericsson, LG Electronics, QVC, Sony, Toyota, Vodafone, and SANY, the Chinese construction machinery producer. This impressively demonstrates that North Rhine-Westphalia is Germany's number one location for investment. On the other hand, nearly 20 per cent of all German export commodities are "Made in North Rhine-Westphalia".

9 North Rhine-Westphalia is networked with the whole world in manifold ways. As an international traffic hub, our state has no fewer than eight airports. From Düsseldorf, Cologne/Bonn, Essen/Mülheim, Dortmund, Münster/Osnabrück, Siegerland, Paderborn/Lippstadt and Weeze, all European metropolises can be reached within just three hours flying time. Furthermore, with Cologne, Düsseldorf, Essen and Dortmund, North Rhine-Westphalia tops the list of international trade fair venues. Over 60 international key fairs such as photokina, anuga, MEDICA, drupa, boot and 'E-World of energy & water' annually attract some 6 million people.

10 To students, researchers and business people from abroad who come to North Rhine-Westphalia, it is not only the research and industry infrastructures that matters. They can also enjoy one of Europe's most closely-set and lively cultural sceneries with no fewer than four UNESCO cultural heritage sites: the Cologne and Aachen Cathedrals, the castle Schloss Augustusburg and the Jagdschloss Falkenlust hunting lodge at Brühl near Bonn, and Zeche Zollverein, a disused colliery in Essen. In addition, there is a unique concentration of renowned theatres, museums and international cultural festivals which is unparalleled in Germany.



North Rhine-Westphalia is an international point of intersection linked up with the whole world.

Four forward-looking technologies at the focus of promotional activities in North Rhine-Westphalia

Strengthening top-level research is a key plank of the North Rhine-Westphalia government's policy on innovation. In this context, the Innovation Ministry focuses on four sectors which represent the way forward and which have a vast potential for innovation, growth and job creation.

Biotechnology

Biotechnology is a rapidly growing industry. Its products and processes in the health care, chemistry, food and environment sectors are of paramount importance. About 280 life sciences companies including 70 or so biotechnology firms are currently doing business in this sector. The latter now account for 40 per cent of the aggregate turnover achieved in this industry in Germany. Moreover, as a leading centre of chemical and pharmaceutical industry, North Rhine-Westphalia can boast Europe's most diversified research scenery. Around 40 universities and research facilities are doing groundbreaking work in the red, green and white biotechnology sectors, while, at the same time, some 60 technology centres focus on stepping up exchanges between science and industry.

Energy and environment-related research

North Rhine-Westphalia is Europe's leading energy region. Our state is home to Germany's largest energy companies which include E.ON, Ruhrgas, RWE and RAG. The energy sector in North Rhine-Westphalia employs about 250.000 people and accounts for approximately one-third of the electrical power generated in Germany. A secure, efficient and climate-sensitive supply of energy presupposes cutting-edge energy research of the highest international standard. In North Rhine-Westphalia, more than 20 universities and research institutions are addressing the complete range of energy issues of both the present and the future. Research priorities include power station technology, energy grids, storage of energy, solar-thermal energy, fuel cells and hydrogen as well as knowledge-based bio-economics.



North Rhine-Westphalia's energy industry employs some 250.000 people.

Medical research/medical engineering

With over 1 million employees, the medical and health care industry is one of the most powerful engines of growth and innovation in North Rhine-Westphalia. Our top-quality health care sector profits from excellence in research, provision of services and technology. Thanks to over 20 R&D facilities including seven faculties of medicine and six university clinics plus the Bochum-based network of clinics, North Rhine-Westphalia has a massive concentration of competence in this field. In addition to providing in-patient treatment to some 270.000 people annually, our state's medical faculties/university clinics - some of which cooperate closely with non-university research institutions - focus on research on ageing, inflammation, cardio-vascular diseases and cancer as well as on molecular biology, neurosciences and transplants.

Nanotechnology, microtechnology and innovative materials

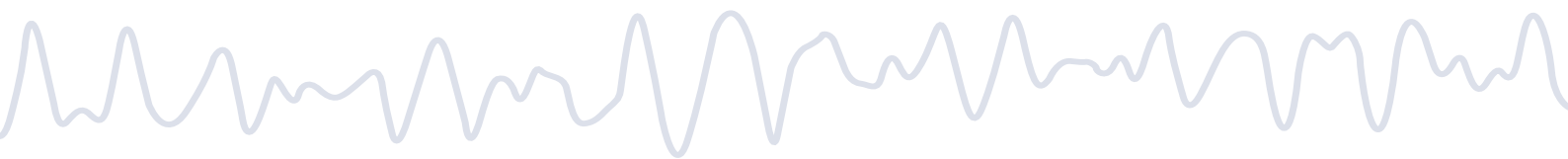
Increasingly smaller, increasingly more stable, increasingly more efficient: the innovations and ingenious solutions yielded by these three interlinked key technologies are now applied in virtually all advanced fields of technology and categories of products. In North Rhine-Westphalia, several hundred professors at 24 universities and countless top-scientists at non-university institutions are doing research on a range of subjects that extends from nanoanalytics to microfluidics, and from optoelectronics to systems engineering. The rapid rate of innovation and the increasing interconnection between science and industry are only two of many reasons why North Rhine-Westphalia plays a leading role globally in nano-, micro- and materials engineering.



Number one engine of innovation in North Rhine-Westphalia: the medical and health care sector.

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