

AMAZING DORTMUND.

ONE CITY. GREAT OPPORTUNITIES.

5TH EDITION 2020



AMAZING DORTMUND.

ONE CITY. GREAT OPPORTUNITIES.

CONTENTS

FOREWORD
TOURISM / LEISURE ONE CITY. MANY AIMS.
VETERINARY MEDICINE MEETS HUMAN MEDICINE
WESTFALENPARK DORTMUND CELEBRATES 60 YEARS
HALL OF FAME AT THE GERMAN FOOTBALL MUSEUM
HOUSING & ECOLOGY ONE CITY. LOTS OF ECOLOGY.
TINY HOUSES - BIG LIVING: "TINY HOUSES" IN DORTMUND
HAUS BODELSCHWINGH: ENCHANTED CASTLE. PURE ROMANCE.
FAIRTRADE CAPITAL DORTMUND
"GREEN IT": INFORMATION TECHNOLOGY. THINKING ECOLOGICALLY
EMISSION-FREE CITY CENTRE
THINGS ARE BUZZING AT SIGNAL IDUNA
ROADMAP FOR ONE OF WORLD'S LARGEST BOTANICAL GARDENS
INTER- CULTURAL DIVERSITY ONE CITY. MANY NATIONALITIES.
FAMILY-CENTRE IN THE NORDSTADT AWARDED GERMAN READING PRIZE
THE NINE TWIN TOWNS
SOLIDARITY IN OUR CIVIL SOCIETY





ONE CITY. LOTS OF KNOWLEDGE	4'
TU DORTMUND: ARTIFICIAL INTELLIGENCE MAKES CLOUDS DISAPPEAR	
FH DORTMUND: RESEARCH FOR CERN	5(
WORLD'S BEST GIN COMES FROM DORTMUND	53
SPORT ONE CITY. LOTS OF SPORT.	5:
GETTING YOUR ACT TOGETHER WITH BOXING	57
KÖNIG-HALLE GETS A MAKEOVER	
YOUSSOUFA MOUKOKO: EXCEPTIONAL TALENT - BUT NOT COMPLACENT	
TECHNOLOGY ONE CITY. LOTS OF TECHNOLOGY.	6:
NEW ROBOTS ENSURE RESCUE WORKERS' SAFETY	67
WORLD FIRST AT THE KLINIKUM: BRAIN SURGERY WITH LATEST 3D TECHNOLOGY	7(

CONTENTS

BUSINESS / SKILLED TRADES /		
LOGISTICS	ONE CITY. LOTS OF BUSINESS.	73
WILO AMONG MOST INNOVATIVE (COMPANIES IN GERMANY	7!
DORTMUND PORT: HOTSPOT FOR	THE DIGITAL SECTOR	78
DORTMUND AIRPORT: NEW PASSE	NGER RECORD	80
URBAN CENTRE		
A STATE OF THE PARTY OF THE PAR	ONE CITY. HIGH QUALITY OF LIFE	
	LLECT, RESEARCH, DISPLAY	
CLIMATE CHANGE DEMANDS NEW	STRATEGIES FOR EVERYDAY LIFE	88
CULTURE	ONE CITY. LOTS OF CULTURE.	8!
DORTMUND THEATRE: OPEN, DIVE	RSE, MULTILAYERED	
	EATRE	
	W NAME, NEW SPACE, NEW BONES	
DAY CARE PRIZE		98
PUBLISHING DETAILS		99

FOREWORD

Dear Citizens of Dortmund and Visitors to our City,

Dortmund has mastered structural change in an outstanding way. Thanks to a far-sighted strategy, our city, once dominated by coal, steel and beer, has succeeded in reinventing itself and its economy. Even if steel production in Dortmund is now history, steel continues to be part of our future. The second hot-dip galvanizing plant which ThyssenKrupp Steel is setting up at the Westfalenhütte site will see steel processing and finishing living on in Dortmund.

The new "amazing" Dortmund is exciting and surprisingly different. This is also where the Amazing Dortmund image campaign comes into play. We turn structural change into an experience to showcase the strengths of our city. And there are plenty of them! Many people still haven't heard that Dortmund is the "Most Digital City in Germany", or has been presented with the "German Sustainability Award" and the "German Urban Development Prize". In the city's "nordwärts" urban development project, municipal, business and community stakeholders are all working together in an exemplary fashion. In 2017, "nordwärts" won the "European Public Sector Award" for innovative administration. We have to admit that all of this fills us with pride.

And anyway, Dortmund is still one of the greenest large cities in Germany with 63 percent green space, and with conservation areas taking up ten percent. Dortmund is one of the largest university towns in the country and we are renowned for delivering excellence in research and teaching. Dortmund is a city of science boasting more than 53,000 students, and is one of the leading scientific locations in Germany as well. Whether it is artificial intelligence or drug discovery research – we do it all. And at the highest



possible level as well. The forward-looking steps taken over the last few decades, such as developing the Technology Park, the Westfalenhütte site or even the whole of the PHOENIX project area, have all helped to bring the city forward, convince investors and provide employment. Business is booming. With the more than 1,000 companies and their 15,000 employees in the digital sector, Dortmund is already the digital heart of the Ruhr Region and Westphalia. And this trend is continuing – at Dortmund Port, the largest inland canal harbour in Europe, a new digital campus is being created with another 5,000 workplaces.

Dortmund is a modern, dynamic and cosmopolitan metropolis. We have also been designated as an "Eco City" – awarded for our exemplary dedication in the field of electric mobility and climate protection. More than 603,000 people live here today. Not only do they appreciate Dortmund's modest house and apartment prices, they also enjoy a wealth of recreational and cultural opportunities.

Dortmund is an exciting up-and-coming city! The necessary processes are well under way and many projects have already been implemented – with courage, dedication, vision and success.

But find out for yourself, by reading this book. Dortmund is surprisingly different.

Best wishes

Ullrich Sierau

Lord Mayor of the City of Dortmund

Ula & Decen





"Dortmunders just get on with it. They pitch in, don't rest on their laurels and are very successful. The best example is the way they have turned a former industrial site into an urban lake. I am also looking forward to the reopening of the Nature Museum. Dortmund never ceases to amaze me."

> DIRK SCHAUFELBERGER CEO SPARKASSE DORTMUND

"The KONZERTHAUS DORTMUND is one of the most exciting venues of its kind in Europe. The best musicians from all over the world come here to perform. This is a magnificent attraction for Dortmund, and it has its roots in the Brückstrasse Quarter"







ONE CITY.

MANY AIMS.

ONIE CITV

DORTMUND IS THE LARGEST CITY IN ONE OF THE MOST DENSELY POPULATED REGIONS IN THE WORLD. THE CITY HAS INCREASED ITS POPULATION BY 20,000 IN THE LAST FIVE YEARS TO OVER 600,000. WITH ALMOST 25,000 PLACES THE BVB SOUTH STAND IN THE SIGNAL IDUNA PARK HAS BY FAR THE MOST STANDING ROOM IN EUROPE. | THE STORAGE WAREHOUSE OF THE FORMER UNION BREWERY ATTRACTS INTERNATIONAL ATTENTION AS THE DORTMUNDER U, A NEW CENTRE FOR ART AND CREATIVITY. AT 45 METRES HIGH, THE WORLD'S TALLEST CHRISTMAS TREE AT THE DORTMUND CHRISTMAS MARKET IS MADE UP OF 1,700 RED SPRUCE TREES AND 48,000 LIGHTS. | THE HANSA COKING PLANT (1928-1992) IS A GIANT WALK-THROUGH SCULPTURE OFFERING FASCINATING IN-SIGHTS INTO THE HISTORY OF HEAVY INDUSTRY. | THE LWL-COLLIERY MUSEUM ZECHE ZOLLERN IS A MONUMENT OF WORLD STANDING, ITS MACHINE HALL WAS THE FIRST OFFICIAL INDUSTRIAL HERITAGE SITE IN THE REPUBLIC. | THE PHOENIX LAKE'S WATER SURFACE COVERS 24 HECTARES AND IS BIG-GER THAN HAMBURG'S BINNEN-ALSTER. DORTMUND'S MOST POPULAR PLACES FOR EXCURSIONS, IN ADDITION TO THE GREEN OASES AT THE WESTFALENPARK, ROMBERGPARK, REVIERPARK WISCH-LINGEN AND FREDENBAUMPARK, INCLUDE PALACES, CASTLES AND COUNTRY MANSIONS. THE LATE ROMANESQUE CHURCH REINOLDIKIRCHE FORMS THE ARCHITECTURAL AND GEOGRAPHIC CENTRE OF THE CITY. 33 TOURIST INDUSTRY COMPANIES HAVE BEEN CERTIFIED AS WHEELCHAIR-ACCESSIBLE, MAKING DORTMUND THE FIRST LARGE CITY IN GERMANY TO BE AWARDED THE "TRAVEL FOR ALL" SEAL OF QUALITY. GERMANY'S OLDEST RHINOCEROUS LIVES IN DORTMUND ZOO: "NATALA" THE WHITE RHINOCEROUS IS AN AMAZING 50 YEARS OLD.





A suspected case of foreign body ingestion: Dr. Christine Osmann examines Nixe, a Californian sealion, with Dr. Bernhard Schaaf (centre) and Dr. Werner Meermeier from the Dortmund Klinikum hospital.

VETERINARY MEDICINE MEETS HUMAN MEDICINE

DORTMUND ZOO COLLABO-RATES SUCCESSFULLY WITH DORTMUND HOSPITALS

When Dr. Christine Osmann opens her office window, she's likely to see a kangaroo hopping by. The bandages on her desk are decorated with giraffe print. For 30 years, Dr. Osmann has been a vet at Dortmund Zoo, her surgery situated adjacent to the kangaroo enclosure. Her work is never boring. She takes care of 230 different species, and is responsible for over 1,500 potential patients.

Perhaps more surprising, when it comes to animal welfare, is that the veterinarian frequently collaborates with medical doctors, for example when specialized equipment or experience is needed for an unusual case. For a zoo-vet treating such a huge variety of species it's difficult to know the ins and outs of every case. She has to be familiar with the natural habits, diets and diseases of a multitude of exotic species. "But we often get unique cases, and then we have to come up with new solutions," Dr. Osmann explains.

That's why veterinarians from around the world exchange ideas and experiences at international conferences, where there are specialists for certain animal species and illnesses – Dr. Osmann, for example, is listed with the European Association of

Zoos as a veterinary advisor for giant anteaters and tamanduas. However, she can also turn to doctors from Dortmund hospitals for assistance with complicated cases, where further diagnostic analysis or specialist equipment is required. Dortmund has seen several successful partnerships between the zoo and local hospitals.

From the camel needing an eye operation, to the tapir with bronchitis, and the jaguar with a cracked canine tooth – Dr. Osmann has worked with ophthalmologists, dentists, paediatricians and orthopaedists. Even a gynaecologist sometimes shares his skills with the zoo: Among other things, Dr. Bernd Hanswille, consultant gynaecologist at the Dortmund Klinikum, performed an emergency caesarian section on Suma, the orangutan. Dr. Bernhard Schaaf, Director of the Clinic for Internal Medicine, Pulmology and Infectious Diseases at the hospital, and his colleague Dr. Werner Meermeier, also lent their services when Nixe, the sea lion, had to undergo a gastroscopy and colonoscopy. All of these dedicated doctors provide their assistance for free and outside of their hospital duty hours.

Just as children are often afraid of visiting the doctor, so are animals. It's no surprise then, that not all of Dr. Osmann's patients are friendly and cooperative.

In special cases we're able to support the zoo veterinarians with our expertise. And where we can help, we do! But the support is reciprocal, because we benefit from Dr. Osmann's knowledge and advice too – for example, when it comes to special infectious diseases that affect animals as well as humans. This really broadens our view of all the things in life."

DR. BERND HANSWILLE

However, she does sometimes experience touching moments, like the time a female monkey willingly handed over her sick baby for treatment because she instinctively knew that the vet could help.

A welcome visitor: Veterinarian Dr. Christine Osmann with Dr. Bernd Hanswille, consultant gynaecologist at the Dortmund Klinikum hospital.



RECREATION, DISCOVERY, ENJOYMENT

WESTFALENPARK DORTMUND CELEBRATES 60 YEARS



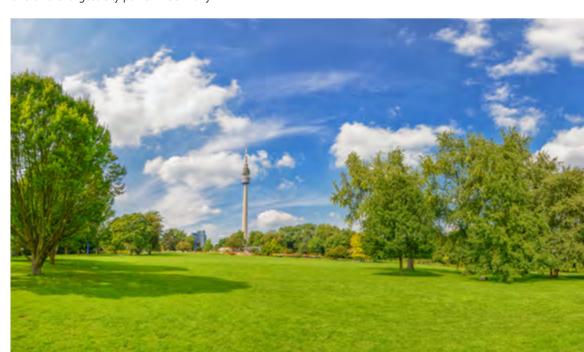
The Westfalenpark's distinctive emblem is the Florian TV tower. Built and inaugurated in 1959, Florian offers a breathtaking 360° vista from its observation deck across the whole of Dortmund. LED technology installed in summer 2019 lets the tower shimmer in a blaze of colours after dusk, giving it a new level of recognition far and wide.

Recreation, discovery, enjoyment – those were the primary objectives when Dortmund's Westfalenpark was opened for the National Garden Festival of 1959. And those objectives have been achieved: 60 years on, it's impossible to imagine Dortmund without the Westfalenpark as its green lung. Ideal not just for a family outing or a leisurely stroll, it also hosts annual events that attract visitors from across the region and beyond. Every summer young music fans from all over Germany descend on the park for the Juicy Beats Festival, while the twice-yearly festival of lights, Lichterfest and Winterleuchten, draw crowds from throughout the region.

Its roots go back to the 19th century, when the park was created on the site of the former Kaiser Wilhelm Hain, a garden that had been laid out and planted with rare exotic trees and shrubs in honour of the emperor shortly after his death. Covering only a tenth of the area of today's park, the gardens were extended for the National Garden Festival in 1959 to include a former landfill site, abandoned allotments and the Buschmühlenpark, which lent its name to the area surrounding today's Buschmühle pond. These days, the park covers 70 hectares, making it one of the largest city parks in Germany.

Its distinctive emblem is the Florian TV tower, which was also opened as an attraction for the National Garden Festival. Standing at just over 219 metres high, it was the tallest building in Germany at the time, while the revolving restaurant housed in the crow's nest at its top was the first of its kind. Florian remains a popular destination for outings, thanks to its observation deck where visitors can take in the panoramic views across Dortmund, towards the Ardey hills and the countryside beyond.

The Westfalenpark is also home to the Rosarium, one of the largest and most important rose collections in the world. A stroll through this exquisite rose garden, ideally during the Rose Festival in early summer, is a delightful experience of rich scents and colours. A highlight for younger guests, on the other hand, is the miniature railway which runs through the park and even took President Theodor Heuss for a ride at the opening ceremony in 1959.



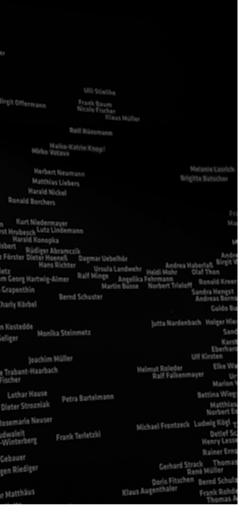


BALLHALLA IN DORTMUND

THE GERMAN FOOTBALL MUSEUM'S HALL OF FAME NOW HOSTS 29 FOOTBALLING LEGENDS

Dortmund presents a new place of football pilgrimage with the German Football Museum's HALL OF FAME. So far, 29 legends have been added to the Hall of Fame. At the grand opening in April 2019 German show business stars including Heino, Thomas Gottschalk and Mark Forster played one-two with the HALL OF FAME Men's First Eleven including Franz Beckenbauer, Lothar Matthäus, Günter Netzer and

Uwe Seeler. Netzer, himself a footballing institution, declared: "We are fully aware of the honour." Paul Breitner was quick to remind museum director and founding curator of the HALL OF FAME, Manuel Neukirchner, and his team of their responsibility: "It is the duty of the German Football Museum to preserve the quality and aura of the HALL OF FAME for decades and generations."



Puristic performance of lights and shadows: The projected portrait of Günter Netzer stands out on a wall of names of all the German national players, male and female, since 1908.

Neukirchner and his team accepted the assist, inducting the Women's First Eleven at an official awards ceremony in October 2019. Just 14 days after his election, the new DFB president, Fritz Keller, personally honoured the women's football legends Silvia Neid, Steffi Jones and Renate Lingor in Dortmund. Inka Grings took the opportunity to make TV history by scoring five goals out of six shots at the classic ZDF Goal Wall on the museum forecourt: three down, two up. Only eight men have ever managed it, the first being Günter Netzer 45 years ago, and the most recent Frank Rost and Frank Pagelsdorf – all of 20 years ago. A deserving snapshot in an appropriate setting.

In 2020, the first new additions, selected by a topclass jury of leading sports journalists from across the country, will be inducted to the Football Museum: Oliver Kahn, Wolfgang Overath, Jürgen Klinsmann and Helmut Schön are to be joined by the Beckenbauer of the East, Hans-Jürgen "Dixie" Dörner. The HALL OF FAME at the German Football Museum will continue to grow.

The women's First Eleven: the new DFB president, Fritz Keller, and DFB vice president, Hannelore Ratzeburg, in October 2019 honour (from left) Silvia Neid, Tina Theune, Silke Rottenberg, Renate Lingor, Steffi Jones, Inka Grings, Bettina Wiegmann and Nia Künzer.



"In 2019 the port of Dortmund celebrated it's 120th anniversary. Europes biggest canal port is packed full of groundbreaking ideas and projects. Whether it's a planned test course for autonomous barges, the redevelopment of the Speicherstraße quarter or new handling activities – we're well equipped to face the future."











"The city enjoys a nationwide reputation as a hub of digital capability. Dortmund ranks 9th on the Bitkom Smart Cities index of Germany's most advanced digital local economies. All 81 cities and towns with a population of 100,000 or more were assessed and rated. Dortmund's status among the top 10 stands out against the positions of other cities in the region. And the fact that the federal government chose Dortmund to host its 2019 Digital Summit in October underlines Dortmund's sustained economic transformation."

DR. JAN FRITZ RETTBERG
CHIEF INFORMATION/INNOVATION OFFICER (CIO) OF THE CITY OF DORTMUND



ONE CITY.

LOTS OF ECOLOGY.

ONE CITY

OPEN SPACES MAKE UP 70.7 PERCENT OF DORTMUND, MAKING IT ONE OF THE GREENEST CITIES IN EUROPE AND, AFTER HAMBURG, THE GREENEST CITY IN GERMANY | THERE ARE 150,000 TREES ALONG DORTMUND'S STREETS, IN PARKS AND OTHER OPEN SPACES. WITH ITS 3,000 VARIETIES, THE GERMAN ROSARIUM IN THE WESTFALENPARK IS ONE OF THE LARGEST ROSE COLLECTIONS IN THE WORLD. THE 26 CONSERVATION AREAS IN DORTMUND WITH 1,690 HECTARES MAKE UP TEN PERCENT OF THE SURFACE AREA. | THE NORTHERN CITY QUARTER IS PROUD TO HAVE THE LAR-GEST COMPLETE AREA OF OLD BUILDINGS IN THE RUHR REGION. | THE CITY OF DORTMUND IS A MEMBER OF THE CLIMATE ALLIANCE AND HAS CLOSE MUNICIPAL, NATIONAL AND INTERNATIONAL PARTNERSHIPS WITH 1,700 MUNICIPALITIES FROM 26 EUROPEAN COUNTRIES. WITH ITS MASTER-PLAN ENERGY TRANSITION AND ITS 214 MEASURES, THE CITY OF DORTMUND IS FACING UP TO THE CHALLENGES OF ENERGY TRANSITION WITH A HIGH LEVEL OF POLITICAL RESPONSIBILITY. MUND BECAME THE FIRST OFFICIAL FAIR TRADE TOWN IN THE RUHR REGION WHEN IT JOINED THE FAIRTRADE TOWNS CAMPAIGN IN 2009, A SCHEME THAT NOW INCLUDES SOME 2,000 COMMUNI-TIES IN 25 COUNTRIES, INCLUDING LONDON, ROME, BRUSSELS AND SAN FRANCISCO. ACCORDING TO THE INTERNATIONAL CITIES NETWORK ICLEI, THE PHOENIX SEE IS KNOWN AS AN EXEMPLAR OF URBAN DEVELOPMENT AROUND THE WORLD. | SINCE 2012, DORTMUND HAS BEEN A FOUNDING MEMBER OF THE "MUNICIPALITIES WITH BIOLOGICAL DIVERSITY" INITIATIVE. THE CITY RECEIVED THE SILVER AWARD FOR "GREEN CITY CLOSE TO NATURE" IN 2019 FOR ITS LONG-TERM COMMITMENT TO ECOLOGY. DORTMUND IS THE CITY WITH THE MOST SOLAR PANELLED ROOFS. THE CITY OF DORTMUND HAS THE DENSEST NETWORK OF E-MOBILITY CHARGERS IN PUBLIC SPACES IN GERMANY.





Less space, more freedom - with tiny houses

TINY HOMES - BIG LIVING

A WHOLE VILLAGE OF TINY HOUSES TO BE BUILT IN DORTMUND

Little things can make big things happen. Financial independence, a simplified lifestyle or a smaller carbon footprint – the reasons people choose to downsize the space they live in vary. The trend towards tiny houses is also high on the agenda in Dortmund. But fans of the movement will have to be patient for the three years or so

needed to settle political and planning permission issues. Work will then begin at the former sports ground of Emschertal Primary School in Dortmund on the construction of North Rhine-Westphalia's first tiny house community. Following Hanover, Dortmund is the second town in Germany to welcome tiny houses.

Demand is huge, according to Gerald Kampert, Project Manager at the local authority's Department of the Built Environment. Some 50 homes are planned alongside shared amenities for the site in the Dortmund district of Sölde. However, these micro dwellings are not to be confused with those 20sqm pint-sized homes on wheels or towable shepherd's huts. The new community in Sölde will consist of small detached homes ranging in size from 40 sqm to 100 sgm on plots of between 120 sgm and 150 sqm for sale under the slogan: Tiny homes - big living. Everything about these diminutive houses will be cheaper and more sustainable than conventional houses because they require fewer resources to build and maintain. The Tiny Village in Sölde will make a further contribution towards Dortmund's climate protection targets.

Whereas the average home in Dortmund currently allows 40 sqm of living space per person, this can be reduced to 25 sgm with a tiny house. Smaller living spaces also require less fuel for heating, another plus for the environment. "We believe there is greater quality of life to be gained from tiny living," explains Kampert. The future community is expected to appeal mainly to students and young professionals, but also to over 50s who currently own their own home and wish to downsize but do not want to move into an apartment block. Tiny homes also lend themselves to sharing, for example, in the form of building groups. Not only does this save space, it also brings additional advantages. Kampert: "Tiny houses don't mean you have to do without."



Gerald Kampert, Project Manager at the Department of the Built Environment, is an advocate of the tiny house movement: "Tiny houses don't mean you have to do without."



A significant contribution towards climate protection: fewer resources needed for construction and upkeep, and space is used more efficiently.







CAPITAL OF FAIRTRADE

DORTMUND RENEWS ITS FAIRTRADE STATUS

Germany is working hard on climate change and other closely related issues like sustainability and fair trade. Since 2013 the Ruhr Region has proudly held the title Fair Metropolis and, in late 2019, once again scooped the title for a further two years. And, as the Ruhr's largest city, Dortmund has played a pioneering role with fair trade at the top of its agenda for over a decade now. At the Signal Iduna Park in 2009 Dortmund became the third city in Germany to be designated a Fairtrade Town. As an active proponent for better living and working conditions for smallholder farmers in Africa, Asia and Latin America, Dortmund was even named German

Capital of Fairtrade back in 2003 and 2005. This ongoing commitment was rewarded in September 2019 when Mayor Ullrich Sierau was presented with an accolade at the Fair Friends trade show to mark the city's renewed Fairtrade status. Just a year earlier, the EU Commission had acknowledged Dortmund's achievements with a special prize for Education and Community Participation. What Dortmund offers in terms of fair trade, then, is quite impressive.

Four letters with a big impact: Fair. Four letters that allow you to square with your conscience – for yourself and for others. At the same time,



Clothing and textiles from all over the world are more popular than ever but often manufactured under very poor working conditions.

Anyone keen to know that their purchases have been produced fairly should look out for the Fairtrade label.

these four letters are helping to save a small piece of the world. If you want to know for sure that workers in India or Bangladesh have been paid a decent wage you should look out for fairly traded goods. Big changes start with small steps, and this is something we are keenly aware of in Dortmund. To promote sustainability at local level the city council has switched to a Fairtrade procurement policy for items ranging from the coffee served at City Hall to workwear for municipal staff. In addition, Dortmund's Fair Friends trade show has grown to become Germany's largest sustainability trade show.

Currently 280 restaurateurs and retailers in Dortmund sell Fairtrade products. Even Dortmund's very youngest are getting on board: Leading the way in 2015 was the daycare nursery Am Ostpark, followed by a further 14 daycare centres by 2017. Within the next year, another 12 had embraced the scheme. In 2013 the Widey primary school in the borough of Kirchlinde became a Fairtrade school. To put global fair trade on the local agenda, the Fairtrade Towns campaign connects stakeholders from politics, business and the general public. Dortmund is now one of more than 2,000 Fairtrade towns and cities worldwide, including leading world cities like London, Rome and San Francisco.

Mayor Ullrich Sierau accepts a certificate at the Fair Friends trade show in Dortmund: Dortmund is once again named Capital of Fairtrade – thanks, among other things, to fantastic support from the local steering group.





Christian Uhr, Council Leader for Human Resources and Organisation at the City of Dortmund, is on a mission to organise and utilise the city's infrastructure in as environmentally and resource-friendly a way as possible. For him green IT is more than an ecological trend, it's an established practice.

GREEN IT: INFORMATION TECHNOLOGY THINKING ECOLOGICALLY

SUSTAINABLE TECHNOLOGY HELPS CITY SAVE 35,000 TONNES OF CO₂

Green IT – in other words climate-friendly IT operations – is becoming an increasingly significant growth area in this era of climate change. This was highlighted in a resolution at Germany's recent Conference of Environment Ministers, where regional ministers gather to discuss environmental challenges and identify effective policy responses: "Digitalization offers great opportunities, but is also associated with high energy consumption and CO_2 emissions." This makes it all the more important that we intensify our current efforts to reduce the energy and resources consumed for ICT deployment.

The City of Dortmund is a pioneer in this field, having adopted the concept of green IT as a component of its climate protection strategy as early as 2011, one of the first local authorities to do so.

Now an established ecological approach, green IT has been applied to numerous projects and technology initiatives across the local authority. The Dortmund Systemhaus has set up a permanent planning office specifically for green IT. Christian Uhr, Council Leader for Human Resources and Organisation at the City of Dortmund, is optimistic: "We'll continue making every effort to ensure that our municipal IT infrastructure is environmentally and resource friendly. In Dortmund green IT is more than an ecological trend, it's an established everyday practice at the Dortmund Systemhaus."

The use cases for green IT are manifold: For example, automated energy management ensures that the power consumption of inactive devices is modified. Power consumption is also one of the main selection criteria when it comes to the procurement of IT equipment. By switching to virtual environments underutilized infrastructure components can be consolidated into a smaller number of more efficiently utilized devices (server virtualization). In addition,

server racks are fitted with special doors that optimize ventilation and prevent temperature fluctuations. With an estimated 35,000 tonnes of CO₂ already saved by 2017, this intervention has made a notable contribution towards climate protection so far.

In the long term, the authority is keen to build on these results and continue doing its part towards protecting resources and achieving the climate protection goals of the federal and regional governments. Another shift has been to make duplex printing standard – saving paper and further reducing CO₂ emissions. Potential efficiency gains from using innovative NUC mini PCs are also currently being looked into. These mini PCs are considerably more efficient than the standard desktop PCs currently used by the local authority. Efforts are also being made to increase the use of video and telephone conferencing, enabling users to communicate face-to-face in real time without being tied to a geographical area – with the added benefit of saving time and resources that would otherwise be spent travelling to and from meetings.

EMISSION-FREE CITY CENTRE

SUSTAINABLE MOBILITY FOR BETTER AIR

A combination of investment in infrastructure. effective organization, communication and incentives underpins Dortmund's strategy to promote environmentally friendly mobility in the city. To reduce air pollution in the city centre and to improve quality of life for the people who live and work there, the City of Dortmund will have introduced a number of measures by April 2022 that should encourage commuters and shoppers to cycle, walk, use public transport or switch to electric vehicles. When North-Rhine Westphalia's Ministry of Economic Affairs launched a drive to promote emission-free city centres, Dortmund successfully applied for funding to the tune of €6.4 million, becoming the first local authority to benefit under the initiative.

INCENTIVES TO MAKE THE SWITCH

Crucial to the success of the whole funding project is a broad-based PR strategy, including a comprehensive communication and marketing campaign to encourage as many road users as possible to choose sustainable modes of transport and to reassure those who make the switch. The campaign will culminate in a "still-life" along sections of the city's inner ring road in autumn 2021. The event is inspired by the Still-Leben Ruhrschnellweg project of 2010 when an entire stretch of motorway through the



Ruhr was closed to motor vehicles for a day. The busy traffic on Dortmund's inner ring road will be replaced by rows of tables where people can sit down and relax, and by a mobility lane for cyclists, scooter-riders and skaters. The aim is to highlight the potential of this major thoroughfare as more than just a space for cars and trucks. Named Wall-Still-Leben 2020, the event will serve as a prelude to a broad discussion on the future development of the Dortmund ring road.

WIDER BIKE LANES ON SCHWA-NENWALL AND OSTWALL

Ultimately, the vision behind the three-year funding project is to establish an attractive and uninterrupted route that allows cyclists to navigate safely and effortlessly around the entire inner ring road. One of the first building projects will involve converting a section of the inner ring



More space for cyclists: The project's key objective is to establish an uninterrupted and easy-to-navigate connection all the way around the Dortmund inner ring road.

road between Schwanenwall and Ostwall into a bike lane. This phase is to be completed by 2022 and will close the last remaining gaps in the cycle network, fix any issues along the route and improve connections to the wider cycle path network adjoining the ring road. An emphasis will also be placed on enabling people to travel more easily and safely on foot. While the main traffic lanes of the inner ring road will remain in their current form, the peripheral areas are to undergo a makeover.

PRIORITY TO ELECTRO TAXIS

Underlining its commitment as one of the very first local authorities to promote electromobility, the City of Dortmund is to introduce a digital

vehicle recognition and display system that will give priority to electro taxis in the drop-off/pickup zone at the main entrance of the train station.

It is also developing a cost-efficient and sustainable urban traffic model for the "last mile" into the city centre that will enable emission-free management of delivery vehicles.

To encourage children to adopt environmentally responsible habits from an early age, the City of Dortmund is addressing the next phase of its award-winning concept for mobility management entitled So läuft das (This is how it works) directly at kids and young people, with the aim of awakening their interest in cycling, walking and travelling by bus and train. It is hoped that the campaign will ultimately lead to significant reductions in air pollution in the city centre and improved quality of life. Everyone is called upon to work together by choosing eco-friendly ways to get around.

www.emissionsfrei.dortmund.de



Cleaner air: Dortmund boasts the highest proportion of electric cars in the region.

THINGS ARE BUZZING AT SIGNAL IDUNA

WHY A BEEKEEPER IS NOW WORKING FOR DORTMUND'S LARGEST INSURANCE COMPANY

It all began with a lunch-time stroll. When Ralf Krumland, head of Facility Management, stumbled across a single flowering lavender plant buzzing with bumble bees and honeybees in the grounds of SIGNAL IDUNA's Hamburg headquarters, he had an epiphany. "We need more flowers," he thought to himself and came up with the idea of improving the ecology of the grounds at the company's offices in Hamburg and Dortmund.

He reached out to Dayane Kemmer Marquart, Sustainability Officer at SIGNAL IDUNA, and together they enlisted the help of NABU, the Nature and Biodiversity Conservation Union of Germany, whose Company Nature initiative shows companies how they can use natural landscaping to create a valuable habitat for plants and animals. They found a biologist who would design a concept to turn both sites into an eco-friendly haven. The two acres of gardens surrounding the Dortmund offices are enjoyed not just by staff but also by locals and walkers.

She began by taking an inventory; bats, foxes and hedgehogs accounted for the larger species of wild-life frequenting the grounds adjacent to Dortmund's busiest arterial road, the B1. There are insects too, but too few of them. However, that is about to change: eleven bee colonies have been introduced to the grounds at the Joseph Scherer site and now buzz contentedly around the gardens. Once a week, local beekeeper Ralf Riekenbrauck pops by to check on the hives and their busy occupants, which he estimates at around 400,000. The first honey crop



was highly successful: Riekenbrauck harvested 250kg of honey in the summer of 2019 which was eagerly snapped up by the company's staff and the profits donated to an environmental initiative.

However, this was just the beginning, for in late 2019 an area of soil was prepared for the creation of a wildflower meadow that will attract bees, butterflies, and other animals. Further measures are to be introduced throughout the course of 2020, including a retreat for nesting birds, a food garden for people and animals, a beetle bunker and a haven for hedgehogs. All this will bring the company closer to its stated goal of boosting biodiversity at the same time as providing staff with a work-time retreat for rest and recreation, plus a fruit and herb garden furnished with information panels that brings benefits for local residents.



Dr. Patrick Knopf, Director of the Botanic Garden, points out the oldest tree in the Rombergpark: a giant beech originating from 1804.

ROMBERGPARK: A UNIQUE PERSPECTIVE

ROADMAP FOR ONE OF THE WORLD'S LARGEST BOTANICAL GARDENS

A tree-top walkway, a research station and new glasshouses – the City of Dortmund is to invest over €14 million in the Rombergpark Botanic Garden. The programme will run for eight years and involves twelve projects to improve the infrastructure of the park while conserving nature and bringing new opportunities for adventure and discovery.

Covering an area of more than 68 hectares, the Rombergpark Botanic Garden counts among the largest in the world. Originally planted as an English-style landscape garden in 1822, it was designated a botanical garden in 1927 and has continually expanded its scientific collection ever since. Against the backdrop of an enchanting lake and sinuous paths that wind their way between mature trees a number of botanical highlights and rare plants from faraway countries await the visitor, not to mention a plethora of birds, rodents and insects that are a delight to observe in their natural habitat. So that visitors can continue to enjoy this exceptional park,

a number of improvements and new features are in the pipeline: The extension of the conservatories and the construction of a discovery station with collection and research facilities are two of the most important projects, but a newly planted exotic garden, the installation of an innovative signposting and guide system, and a raised walkway above the swamp cypress pond will also help to renew the fascination of the park.

TREE-TOP WALKWAY

At 1,200 metres long and a height of up to 18 metres, the tree-top walkway promises to bring unique views and inter-regional appeal. The planned walkway will take visitors through 18 activity stations, where they can learn about the different woodlands of the world, from Alaska to Patagonia, from a completely new perspective. Ultimately, it is hoped that collaboration with the adjacent zoo will lead to an extension of the walkway inside the zoo perimeter, past the birds of prey and camels and alongside the outdoor enclosure of the orangutans – a globally unique attraction.

"The city of Dortmund never ceases to draw me under its spell. This former melting pot for coal and steel has reached new shores in the labour market, having successfully reinvented itself as a modern hub for



services and tech. We're not through the upheaval yet by any means but, as a Dortmund native, I can tell you: This is a great place to live. Dortmund is a vibrant, ever-changing metropolis at the heart of the Ruhr. Modern, authentic, attractive."

HEIKE BETTERMANN
PRESIDENT OF THE DORTMUND EMPLOYMENT AGENCY



"Dortmund is an international city where people from around 160 nations like to live - this is real

internationality and sustainable development. The fact that Dortmund is on the right track is also reflected by the many enquiries that reach us from all over the world almost every day to present the Dortmund model of sustainable urban development as "best practice" to the world. This puts Dortmund on the global map and makes it increasingly difficult to imagine it any other way.)



ONE CITY.

MANY NATIONALITIES.

ONE CITY

EVER SINCE THE TIMES OF INDUSTRIALISATION, DORTMUND HAS BEEN A CITY OF MIGRATION, TODAY MORE THAN 200,000 INHABITANTS HAVE A MIGRATION BACKGROUND. AROUND 100,000 OF THEM ARE GERMANS ABOUT 160 MIGRANT ORGANISATIONS ARE ENGAGED IN SUPPORTING PEOPLE WITH A MIGRATION BACKGROUND SO THEY CAN PARTICIPATE IN SOCIAL. POLITICAL AND ECONOMIC LIFE HERE. IN 2008 DORTMUND SIGNED UP TO THE CHARTER OF DIVERSITY THE "NURSERIES" INTEGRATION PROJECT IN DORTMUND'S NORTHERN DISTRICTS WAS HONOURED WITH THE "SOCI-AL CITY 2016" PRIZE AS AN EXCELLENT EXAMPLE WITHIN GERMANY. VISITORS TO DORTMUND'S CITY AND STATE LIBRARY CAN BORROW MEDIA IN MORE THAN 111 LANGUAGES: NO OTHER LIBRARY IN GERMANY LENDS OUT BOOKS IN SO MANY LANGUAGES. THE AWARD-WINNING INTEGRATION NETWORK "LOCAL WELCOME" SEES DORTMUND FACING UP TO THE CHALLENGES OF IMMIGRATION AND PLAYING A PIONEERING ROLE IN GERMANY. | THE "INTEGREAT APP" WILL BE HELPING NEW RESIDENTS OF DORTMUND TO INTEGRATE. | COMMITTED MUSLIMS IN DORTMUND, WITH SUPPORT FROM THE FEDERAL OFFICE FOR CIVIC EDUCATION. HAVE SET UP THE FIRST ISLAM-ACADEMY IN SINCE 2019, DORTMUND HAS BEEN INVOLVED IN THE "CITIES AGAINST THE DEATH PENAL-TY" AND HAS DECLARED 30 NOVEMBER AS THE "CITIES FOR LIFE DAY - DAY AGAINST THE DEATH PENALTY".



PERFECT PLACE FOR EARLY YEARS LANGUAGE LEARNING

INSPIRING A GENERATION OF READERS
AND STORYTELLERS: FAMILY CENTRE
IN THE NORDSTADT DISTRICT AWARDED
GERMAN READING PRIZE



Theo and Clara (both 5) make themselves comfortable in a reading nook, the cosiest place to settle down with a good book. Literacy support is not an isolated project at the FABIDO Family Centre in Stollenstraße, it is integrated in the everyday life of the centre.

The group listens, spellbound, as Barbara Hajdaroski opens the book and begins to tell the story of the Very Hungry Caterpillar. After a few sentences she pauses. Time for questions. One of the girls would like to know what these hairy little creatures normally eat. The storyteller, mother of three-year-old Maryam, holds up flashcards of vegetables and leaves time to help the young learners memorize the words. She is one of several volunteer reading coaches at the FABIDO Family Centre in Stollenstraße. The involvement of volunteers like Barbara is just one of the reasons why the council-run daycare centre in the Nordstadt district was awarded the German Reading Prize in 2019, taking second place nationwide in the category "Outstanding language and literacy". "We support language learning in lots of different

ways," explains Director Gabriele Braß. Reading-books are always in popular demand, with a selection laid out on tables for kids to browse and retreat with into one of the special reading nooks. But the programme also includes plenty of singing and drama. Through fun and engaging activities, the centre seeks to expand the children's literacy skills, encouraging them to develop a feel for language before they start school. Wherever possible, the nursery teachers involve the girls and boys when smaller texts are needed for everyday situations.

With many of the children learning two or even more languages at once, a bilingual class has been set up. Several of the volunteers who are so creative and versatile with the children's literature are from



immigrant families themselves. The 150 children come from more than 30 different nations. Research shows that it's easier for children to learn German when they're making progress in their first language too, explains Gabriele Braß. Children's books at the centre are available in several languages.

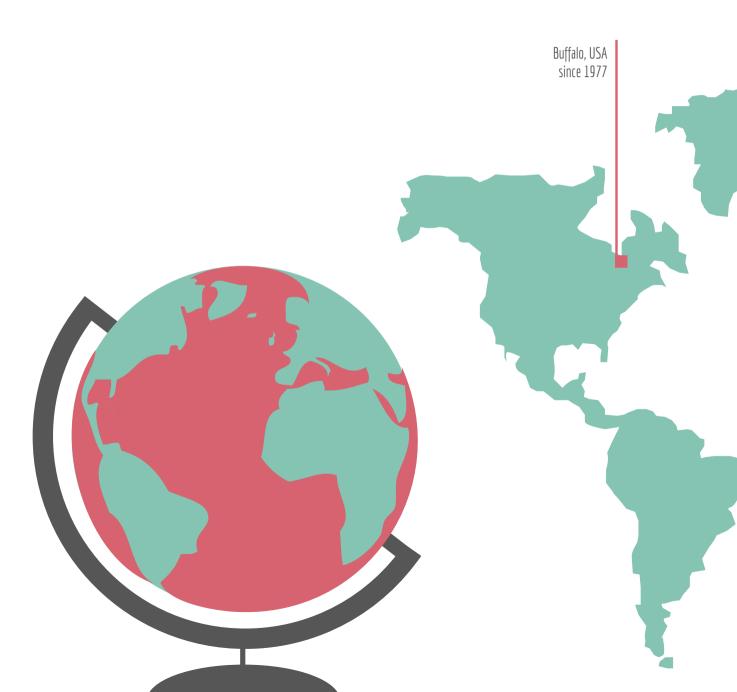
FABIDO Director Daniel Kunstleben is delighted at the success of the Family Centre at Stollenstraße: "Independent experts attest to the quality of work being done here in the district." According to him, educational facilities like this one compare well with the best of the rest.

FURTHER AWARDS:

In 2006 the primary school at Kleine Kielstraße was awarded the German Schools Prize, while the Dortmund Nurseries project was honoured as outstanding with the nationwide Social City Prize in 2016, and the INFamilie Hannibal and Brunnenstraße district network received the German Daycare Prize in 2019 in the category Network.

TWIN TOWN PARTNERSHIPS

DIE NEUN PARTNERSTÄDTE DORTMUNDS THE NINE TWIN TOWNS OF DORTMUND



OF DORTMUND



Since 2007, long-standing civil-society alliances, round tables and stakeholders, the City Council and all communal facilities and administrative bodies have come together in a joint battle for diversity, tolerance and democracy on the basis of the "Action Plan Against Right-Wing Extremism". Continued repressive pressure by the police is another essential factor. But all that is not enough. We want to drive right-wing extremism from our liveable and lovable city. We still need even more moral courage and democratic resistance.

HARTMUT ANDERS-HOEPGEN
THE LORD MAYOR'S SPECIAL REPRESENTATIVE FOR
DIVERSITY, TOLERANCE AND DEMOCRACY

WE ARE ALL DORTMUND

So far, 262 organisations and 156 individuals have joined the "Wir ALLE sind Dortmund" (We are ALL Dortmund) campaign. Its organisers would like many more residents, organisations, associations and federations to show their commitment to tolerance and diversity of opinion, against all forms of racism, anti-Semitism, Islamophobia and xenophobia.

"We want to show that we stand together in Dortmund," is the appeal of the Dialogkreis der Abrahamsreligionen and the City of Dortmund. Just send an e-mail to the MIA-DO-Kommunales Integrationszentrum Dortmund (Municipal Integration Centre Dortmund) at miadoki@dortmund.de to join the list of campaign supporters.

www.wirallesind.dortmund.de

THE APPEAL

"We are menaced by terror attacks and threats of violence. Hate slogans sow discord. There is also racism and racial fanaticism in Dortmund.

It is true: we are ALL different and our coexistence is not free of conflicts. But: as residents of Dortmund, we will not allow ourselves to be divided! Together we stand up for respect and tolerance, for the freedom of opinions, living together in a spirit of solidarity in an open and plural society. Whether we are Christians, Muslims, Jews or believe in a different religion or ideology, independent of origins and cultural backgrounds:

We will stand together against xenophobia, Islamophobia and anti-Semitism! Religious communities for peace and dialogue! Dortmund will continue to be open to the world and a tolerant city! Because: we are ALL Dortmund!"



www.wirallesind.Dortmund.de

DIALOGKREIS DER ABRAHAMSRELIGIONEN:

Evangelischer Kirchenkreis Dortmund | Jüdische Kultusgemeinde Groß-Dortmund Katholische Stadtkirche Dortmund | Rat muslimischer Gemeinden Dortmund



"Dortmund is one of the largest university cities in Germany. The University of Applied Sciences and Arts accompanies students throughout their studies to ensure they can develop their full potential. Our graduates are in great demand — and not just in this region."

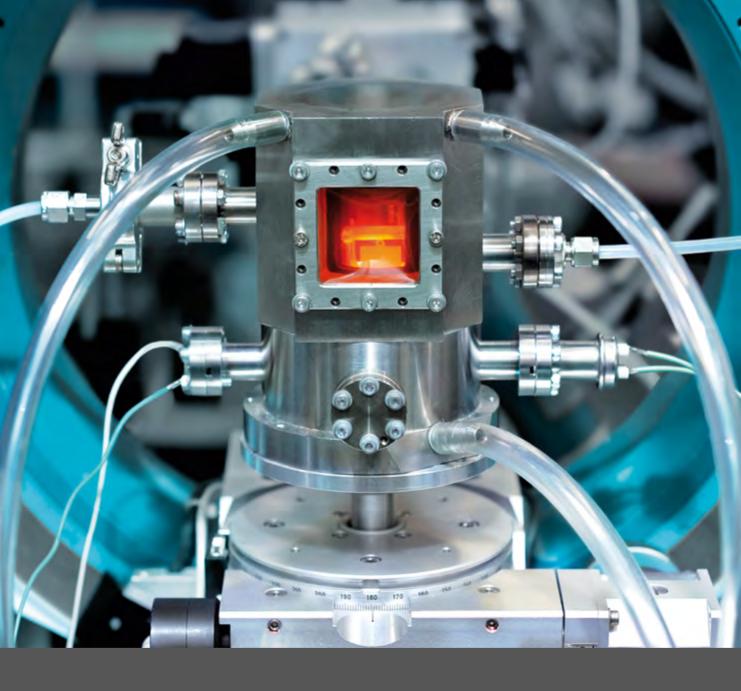
PROF. DR. WILHELM SCHWICK
DORTMUND UNIVERSITY OF APPLIED SCIENCES AND ARTS

City of Dortmund in 2013 triggered a special process: More than 100 stakeholders from the worlds of science, local government, business and culture have worked out a joint and binding programme for science and defined development targets for the City and research.

This programme is practically unique in Germany."

PROF. DR. DR. H. C. MANFRED PRENZEL EDUCATIONAL SCIENTIST AND RESEARCHER, HEAD OF THE SCIENCE COUNCIL UNTIL 2017





ONE CITY.

LOTS OF KNOWLEDGE.

ONE CITY

THE IMPERIAL ENGINEERING SCHOOL WAS FOUNDED 125 YEARS AGO AND WAS ONE OF THE PRE-DECESSORS OF TODAY'S UNIVERSITY OF APPLIED SCIENCES AND ARTS DORTMUND. | THE ORCHESTERZENTRUMINRW IN DORTMUND IS THE FIRST INTER-UNIVERSITY EDUCATIONAL ESTABLISH-MENT FOR FUTURE ORCHESTRA MUSICIANS AND MUSICIANS IN EUROPE. | DASA IS THE WORLD'S LARGEST INTERACTIVE EXHIBITION ABOUT THE WORLD OF WORK AND HAS HAD MORE THAN 4 MILLI-ON VISITORS SINCE ITS OPENING 26 YEARS AGO. WITH SEVEN UNIVERSITIES AND 19 RENOWNED NON-UNIVERSITY RESEARCH ESTABLISHMENTS, OUR CITY PROVIDES AN OUTSTANDING ENVIRONMENT FOR RESEARCH. THE APPROXIMATELY 53,000 STUDENTS AND 10,000 EMPLOYEES IN DORTMUND'S SCIENTIFIC INSTITUTES AND UNIVERSITIES ACCELERATE SOCIAL AND ECONOMIC CHANGE. | THE TU DORTMUND UNIVERSITY, WITH ITS DORTMUND ELECTRON ACCELERATOR (DELTA), HAS THE WORLD'S ONLY SYNCHROTRON LIGHT SOURCE FOR PARTICLE ACCELERATION WHICH IS OPERATED BY A UNI-VERSITY. THE FOOTBALL ROBOTS AT THE INSTITUTE FOR ROBOT RESEARCH AT THE TU DORTMUND UNIVERSITY REGULARLY END UP NEAR THE TOP IN WORLD CHAMPIONSHIPS. THE CHILDREN AND YOUTH TECHNOLOGY CENTRE KITZ.DO PROMOTES SCIENTIFIC EXPERIMENTATION FROM AN EAR-THE MASTERPLAN SCIENCE HAS 100 PRACTICAL AND VISIONARY MEASURES TO FOCUS DORTMUND'S IMAGE AS A CITY OF SCIENCE.





Sounds like magic, but it is in fact sophisticated technology: Raphael Fischer (r.) can make clouds "disappear" from satellite images. He is supported in his work by Dr. Nico Piatkowski and Prof. Katharina Morik.

ARTIFICIAL INTELLIGENCE MAKES CLOUDS DISAPPEAR

IT SPECIALISTS FROM THE TECHNICAL UNIVERSITY OF DORTMUND IMPROVE "CLOUDY" SATELLITE IMAGES USING A MODEL

Climate researchers use satellite data to gain insights into global warming, urbanisation or land use. Current technology delivers high-resolution images, but still has to contend with signal interference – especially from clouds.

This is where Raphael Fischer's work at the TU Dortmund comes into play: He uses machine learning to reconstruct the parts of the earth's surface that are hidden by clouds.

Machine Learning means that the system can carry out new tasks without having to be reprogrammed each time. This method is one of the key technologies in artificial intelligence and is used in Smart Home systems, for example.

The satellite pictures that the IT specialist worked with show a primarily agricultural region in France. That presented him with an extra challenge, as agricultural areas change with the seasons and the situation can be altered dramatically within a short space of time depending on planting or harvesting times. That is why Fischer could not simply calculate an average value between two cloudless images to predict what it would look like under the clouds. Instead he turned to machine learning: He created a model to represent how any region from the data set can change over time. To do this, he fed the model a rough idea of what the region might look like under the clouds. With the available data, the model then learned independently and moved away from the selected pre-sets.

Thanks to the model, Raphael Fischer is now able to predict, with a high degree of probability, what the earth's surface below will look like at any time under cloud cover. Fischer has been able to verify that the results are close to reality by simulating clouds for the model and comparing the reconstructions with the real images. And the model doesn't only work for the data available: "Thanks to machine learning, the technology can be used for various scenarios; with perhaps only a slight adjustment in default settings," explains Fischer. In this way, missing information can be reconstructed for a variety of times and locations. Possible fields of application range from other satellite data that records temperature, for example, to gene sequencing in bioinformatics and autonomous driving.

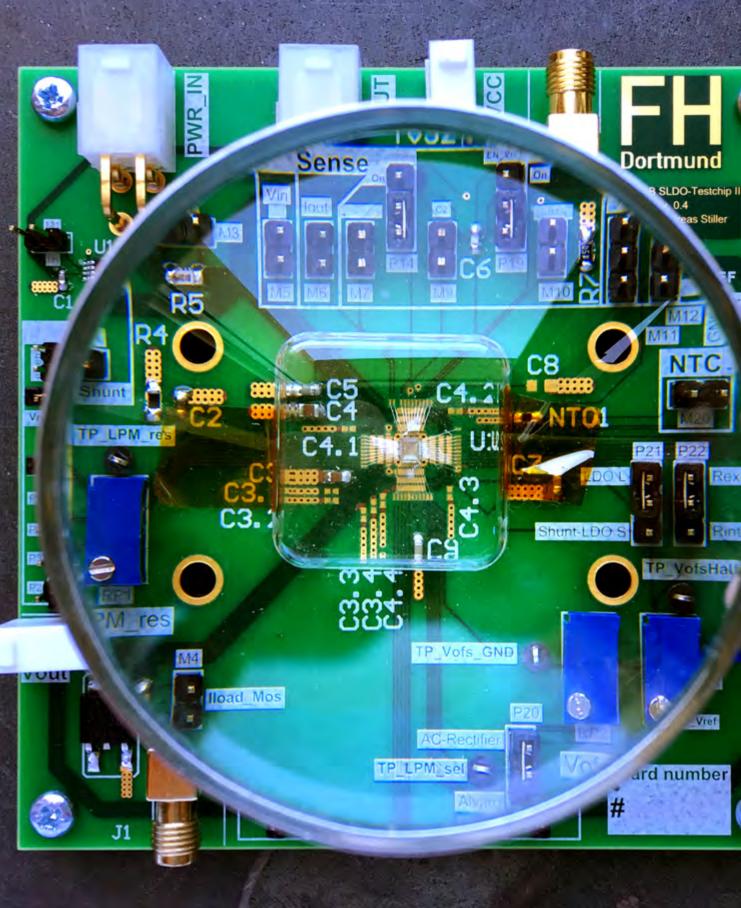
These satellite images come from the Sentinel 2 Mission and show a part of the earth that is covered by cloud



Using Fischer's model, the clouds can be made to "disappear". It is highly probable that the hidden section of the earth looks just like this.



Raphael Fischer studied computer science at the TU Dortmund and developed this method with Dr. Nico Piatkowski as part of his master's thesis. He is currently doing research at the Rhine-Ruhr Centre of Excellence for Machine Learning (ML2R), which is headed by his doctoral supervisor Prof. Katharina Morik from the TU Dortmund. Prof. Prof. Morik has held the chair for Artificial Intelligence at the Faculty of Computer Science since 1991. She also coordinates all six German centres of excellence for Artificial Intelligence on behalf of the German government.





Printed circuit board with the prototype of the pixel chip, which contains not only the pixel electronics but also the voltage regulator.

RESEARCH FOR CERN

PROF. DR. MICHAEL KARAGOUNIS: "UNDERSTANDING WHAT CONSTITUTES MATTER"

The University of Applied Sciences (FH) Dortmund has been accepted into the ATLAS research network of the European Nuclear Research Centre CERN. In an interview, Dr. Michael Karagounis, Professor of Electrical Engineering at the FH Dortmund, explains how he achieved this.

THE ADMISSION OF THE FH DORTMUND INTO THE ATLAS TEAM AT THE CERN SOUNDS IMPRESSIVE, EVEN FOR A LAYMAN. HOW SIGNIFICANT IS THIS DEVELOPMENT FOR YOU AS AN FXPERT?

I am delighted. In this collaboration we are working with some of the world's most renowned universities – such as Berkeley and Stanford. In total, scientists from 233 universities are working on one of the largest and most important experiments in particle physics today and FH Dortmund is the first university of applied sciences in this group.

WHAT DOES THE COLLABORATION LOOK LIKE IN CONCRETE TERMS?

We are working on two sub-projects for the experiment. The first is called Detector Control System. It is about monitoring the state of the pixel detector. The second is a voltage regulator, which is necessary to operate the detector modules connected in series.

WHY IS THIS IMPORTANT?

Because of an upgrade that is currently being carried out. Right now, there are a billion collisions per second. But the interesting events are very, very rare because most types have already been studied. So, the collision rate is being increased, and the LHC and detectors are being modified to handle higher rates. In the detectors, the individual pixels are reduced in size and their number is increased at the same time.



Prof. Dr. Michael Karagounis develops components for the world's most powerful particle accelerator at CERN at the University of Applied Sciences Dortmund.

WHAT DOES THIS HAVE TO DO WITH THE SERIES CONNECTION?

When devices are connected in parallel, the electricity consumption adds up – but not when they are connected in series. This means that the power losses remain the same, no matter how many devices are connected to it. This is an enormous advantage. For series connection, each module needs a voltage regulator that converts the current that arrives at the module into voltage – and we are designing this here at Dortmund University of Applied Sciences. There are two major experiments at LHC, ATLAS and CMS, and the regulator is also used in the CMS experiment.

WHAT DO THESE BIG EXPERIMENTS ACHIEVE?

This question is not so easy to answer. First of all, it's all about gaining knowledge. But there have already been a lot of spin-offs too. The experiments present technical challenges that the researchers have mastered, and these results can be applied to practical problems.

FOR FXAMPLE?

For example, the detectors for ionising radiation, which can be used in medicine for imaging procedures, such as X-rays or computer tomography.

WHAT ABOUT THE EXPERIMENTS THEMSELVES, ATLAS AND CMS?

The real purpose of these large-scale experiments is to understand what matter is made of, what holds the world together at its core. We need to know this!

THE ATLAS EXPERIMENT:

ATLAS, a particle detector in the Large Hadron Collider (LHC), is 46 metres long, 25 metres in diameter and weighs 7,000 tonnes. The ATLAS CERN Collaboration includes over 3,200 employees at 233 universities in 38 countries.

The ATLAS and CMS experiments are the most important and complex experiments carried out at the LHC in the European Nuclear Research Centre, CERN, near Geneva.

CHEERS!

THE WORLD'S BEST GIN COMES FROM DORTMUND

An old police training centre in the Dortmund suburb of Aplerbeck is bubbling with activity. This is where entrepreneur Uli Graf distils the hard stuff: Gin and vodka made in Germany. His secret? Good, local ingredients, pure artisan traditions combined with a great sense of design.

All of this creates excellence in the truest sense of the word: The entrepreneur, who originally comes from the textile industry, won the German Design Award and the Red Dot Award in 2018 for his purist design for his brand "Skiclub Kampen" and its range of spirits "North Sea Spirits". In August 2019 his gin was awarded the trophy for the best gin worldwide at the International Spirits Challenge 2019. As with his vodka, all ingredients come from Dortmund.

The bottles are stored and sold from the old police training centre in Aplerbeck and are created and distilled in the south of Dortmund in Dirk Dinsing's grain distillery. Dinsing, a farmer who also trained in commerce and industry, distils in copper kettles that are over 100 years old. The spirits pass through





The bottle is white, but the contents are "pure gold": Their "North Sea Gin" won a gold medal at the International Spirits Challenge 2019 and the trophy for the best gin worldwide.

a silver dust filter and are distilled five times. This produces an absolutely pure taste – completely free from the typical "spirit taste", which is often associated with lesser brands.

For the award-winning gin, Graf uses 18 local herbs - mainly juniper, lemon balm and marjoram. But, of course, some of his ingredients remain a secret. However, it is no secret that everything is meticulously produced by hand. Even the wheat for the "North Sea Vodka" is sown by farmer Dinsing himself, which he then harvests and distils before finally putting the cork in the bottle. All from one single source, using pure local ingredients and coupled with Graf's entrepreneurial skills. Graf was definitely on to a winner when he decided to create spirits from Dortmund. "North Sea Spirits" are now sold at over 350 locations throughout Germany, and the range has been expanded to include liqueurs and lemonades.

"Skiclub Kampen" managing director and Dortmund entrepreneur Uli Graf.



"We are the City of Knowledge Dortmund, that is the reality: artificial intelligence, cutting edge logistics and drug discovery research – all of that and much more is what we do in Dortmund – and at the highest possible level as well.

PROF. URSULA GATHER
PRINCIPAL OF THE TU DORTMUND AND
BEARER OF THE FEDERAL CROSS OF MERIT



Dortmund, our home town. It really is a joy to present the best and new aspects of this city which was so influenced by coal and steel in the past. It is not only our visitors who are surprised by how well structural change is working, even Dortmunders are impressed as they rediscover and experience the diverse history of the city during the many guided tours with meineHeimat.ruhr. And they are enthralled by how positively the continuing and sustainable process is changing our home town."



ONE CITY.
LOTS OF SPORT.

ONIE CITV

81,360 SPECTATORS FIT IN THE SIGNAL IDUNA PARK STADIUM, MORE PEOPLE GO TO WATCH FOOT-BALL AT BVB HOME GAMES THAN ANYWHERE ELSE IN EUROPE. | DORTMUND IS A FEDERAL PER-FORMANCE CENTRE FOR SPORT AND THE OLYMPIC TRAINING CENTRE FOR GERMANY'S ROWING EIGHT; AND THE ROWERS COLLECTED ALL OF THE EUROPEAN AND WORLD TITLES BETWEEN 2018 AND 2019. LORIMUND IS ALSO THE OLYMPIC TRAINING CENTRE FOR MANY OTHER SPORTS, E.G. FIGURE SKATING, ATHLETICS, SHOOTING OR SWIMMING. | ALMOST EVERY THIRD DORTMUNDER IS A MEMBER OF ONE OF THE 530 SPORTS CLUBS IN THE CITY. THERE ARE AROUND 800 SPORT FACILITIES IN DORTMUND. | MORE THAN 30 WORLD CHAMPIONSHIPS AND OVER 50 EUROPEAN CHAMPION-SHIPS HAVE BEEN BATTLED OUT IN THE WESTFALENHALLE - MOST RECENTLY THE EUROPEAN DARTS CHAMPIONSHIP IN 2018, DORTMUND IS ALSO AT THE FOREFRONT WITH SPORTS LIKE AMERICAN FOOTBALL AND BASEBALL. IN 2013 DORTMUND WAS THE LOCATION FOR THE 9TH WORLD BAD-MINTON CHAMPIONSHIPS FOR PEOPLE WITH DISABILITIES - THE PARA-BADMINTON WORLD CHAM-PIONSHIP. IN THE LEGENDARY GOLD HALL, ON 28 JULY 1962, THE DFB DECIDED TO FOUND THE BUNDESLIGA FOOTBALL LEAGUE. | THE SPARKASSE CHESS MEETING IS ONE OF THE MOST FAMOUS INTERNATIONAL CHESS TOURNAMENTS IN THE WORLD. THE FORMER HANSA COKING PLANT IS NOW HOME TO THE "KLETTERHALLE BERGWERK", THE LARGEST CLIMBING AND BOULDERING HALL IN EUROPE. DORTMUND LOVES ITS BVB. AROUND 5 MILLION PEOPLE IN 50 COUNTRIES PLAY SUBBUTEO AND TSL DORTMUND 61 WAS THE FIRST TABLE FOOTBALL CLUB TO BE FOUNDED IN THE FEDERAL REPUBLIC IN 2019, LG OLYMPIA DORTMUND WAS AWARDED WITH THE "GREEN RIBBON FOR EXEMPLARY TALENT FOSTERING". IN 2021 DORTMUND IS HOSTING THE JUNIOR EUROPEAN CHAMPIONSHIP IN WRESTLING. | THE WORLD'S BIGGEST E-BIKE FESTIVAL TAKES PLACE IN DORT-MUND EVERY YEAR IN APRIL.





Aram Abrahamyan (left) and Mohamed-Amin Abaraghoin during boxing training.

"GETTING YOUR ACT TOGETHER" WITH BOXING

THE DEUSEN DAM BOXING CLUB HELPS MEMBERS INSIDE AND OUTSIDE THE RING

For a good two hours a day, asylum seekers can lay aside the problems and worries that usually weigh them down. Although offering boxing training for refugees is not the only task Deusen Dam Boxing Club (BSV) has undertaken, it is one of the many that this young boxing club has successfully mastered since its foundation in early 2012.

"We have achieved a great deal in a short space of time," said club Chairperson Dr. Mark Altermann, summing up the club's outstanding achievements. And he adds: "At the beginning we didn't believe that we could." Within seven years the club has firmly established itself in the Dortmund boxing scene.

Of course, Dortmund's iconic trainer, Dimitri Kirnos, is also part of this self-styled "multi-cultural club". When a few enthusiastic boxers met in the western Dortmund suburb of Deusen at the beginning of 2012 to get the "BSV Deusen DAM" project off the ground and put their idea of "getting kids off the streets" into practice, their plans were still quite modest.

However, the competition watched the goings-on attentively as Dr. Altermann and Kirnos invited young people from the suburbs to a training session in a garage where a few boxing bags had been hung up by a good sports friend.

SPORT HELPS INTEGRATION

Word quickly got around in the scene about what the people of Deussen were doing. They had previously started a cooperation with the "Kurve kriegen" initiative ("Getting your act together"). Not an easy task: The initiative helps children and young people from socially deprived backgrounds who are suspected repeat offenders. Dr. Altermann describes his clientele as "boys who are difficult to handle", but who behave well during training. "Through boxing they learn discipline. They become more motivated and they find it easier to integrate. The boys feel this, and they show it."

The club currently has 62 members, including several asylum seekers. There are three to four training sessions a week and the membership fee is €10 or €12. Training takes place at the Revierpark ice rink in Wischlingen. When the new boxing centre in the newly renovated Körnig Hall is finished in 2020, the club's nomadic times will finally be over. But the uniqueness of the club will live on. The atmosphere is very friendly, it's almost like a family. "We meet and train together, but we also party together too," says Dr. Altermann.

HEAD COACH DIMITRI KIRNOS

The club is supported by several top trainers. Kirnos, who is clearly the head coach, looks after a small group geared towards professional and amateur boxing. "Maybe we will have a new Christina Hammer with us one day," grins the 84-year-old, who is still in great shape. Dmitriy Pirushkin, second in command, takes care of the rest, including the powerful and talented boxers Mohamed-Amin Abaraghoin, David Korangbeheshti and Aram Abrahamyan. They have won two NRW titles so far, boxed at the German Championship and at an international tournament in Kaliningrad in Russia. "I am basically the coach for everyone," says Pirushkin, a former amateur boxer from the Ukraine. Not an easy job, because the members range between six and 60 years old. Here, fathers train with their sons, we have some teachers and even a few former boxers who had gone off the rails. And there is a huge demand for club membership. Word has got around: Deusen Boxing Club is different.





NEW ERA FOR ATHLETICS IN DORTMUND

KÖRNIG-HALLE GETS A MAKE OVER

A new era is dawning in the Dortmund athletics scene. The Helmut-Körnig-Halle, opened in 1980 and since then the home of local athletics, will shine again in new splendour at the beginning of 2020: completely rebuilt and equipped with the latest technology. In the second building phase on the east side of the hall, a new building of approx. 1,440 m² of space will be erected and will include a boxing centre as well as seminar and office rooms. But first things first: With six permanent running tracks, Dortmund's Helmut-Körnig-Halle will once again sprint to the forefront of Germany's athletics halls. And the 200-meter-long plastic running track will be

one of the fastest tracks ever. New "best times" made in Dortmund are therefore guaranteed.

When the Helmut-Körnig-Halle was officially opened at the beginning of 1980 for the German Indoor Athletics Championships, it was the ultimate benchmark in German athletics. 39 years and ten German Indoor Championships later, the former jewel in the crown was getting on in years. In March 2019 the reconstruction began, at the beginning of 2020 the hall on Dortmund's Sports Mile on Strobelallee will be completed. The Dortmund Indoor Football City Championship and the PSD Bank Indoor Meeting will



The expansion of the Helmut-Körnig Hall includes additional offices and trainer rooms as well as a large event space. A fittingly impressive foyer will also be added on to the east of the building. In addition, the boxers, who previously had a temporary training facility in the basement of the hall, will now have full-fledged training rooms.

stands. "The capacity has been maintained and even increased slightly. When everything is finished, there will be 3,000 seats, 50 more than before. When needed, a fourth stand with 300 additional seats is even possible," explains Friedrich Dieck, Head of Sports Facilities at Olympiastützpunkt (Olympic Centre) Westfalen GmbH.

The worn floor covering in the spectator areas has been replaced by modern flooring. The seats are still green, but most new seats have a higher backrest. The lighting system and the aging sound system have been completely renewed. On the other hand, the most important things are not so easily recognisable: The training track will be equipped with measuring points for intermediate times. "Coaches will be able to measure speed for sprints, as well as run-up times for pole vaulting and long jump," says Dieck, who is enthusiastic about the latest technology.

Dieck continues: "We wanted to maintain an atrium character in the hall that is open on three sides, combined with the large circuit. The top priority was, of course, to add two more running tracks to the existing four circuits. We now have six permanent tracks; Leipzig can only offer this on a temporary basis. This brings us ahead of the field once again."

be the first events to be held in the new hall. In February 2021, the German Athletics Association (DLV) will then host its German Indoor Championships in Dortmund. "The DLV would only accept applications once the construction work had been completed. That's why it was a little too late for 2020", explains André Knoche, Sports Director of Dortmund Sports and Leisure Facilities.

When everything is finished, at least 7.1 million Euros will have been invested, 20 percent of which will be borne by the City of Dortmund for the first stage of the expansion. Inside the hall, no stone was left unturned: Here 18 centimetres of reinforced concrete were poured in several sections, two new long jump pits were excavated, numerous floor tanks for power and network cables were installed and the throwing area was redesigned. On the east side, meterthick foundations had to be laid for the new



Week after week, Youssoufa Moukoko impresses again and again. He has already moved up to the BVB under 19s.

EXCEPTIONALY TALENTED -BUT NOT COMPLACENT

YOUSSOUFA MOUKOKO, RISING STAR OF THE BVB, LIKES TRAINING BEST

Boy wonder, exceptional talent, goal-getter, highly gifted: Whatever his fans call him, all of them are united in their admiration for Youssoufa Moukoko, the German-Cameroonian, who came to Dortmund from Hamburg club, St. Pauli, at the age of eleven and is perhaps BVB's greatest young talent. He is fast, enormously dangerous in terms of goals and technically well-versed. And in a few years' time he may well follow in the footsteps of BVB professionals Jadon Sancho or Paco Alcácer.

Of course, other top European clubs such as Paris St. Germain or FC Barcelona have also kept an eye on the Dortmund prodigy. For his 16th birthday on 20 November 2019, he even received a jersey as a gift from his idol Lionel Messi. But their efforts are in vain: On 1 July 2019, BVB awarded the centre forward a sponsorship contract that runs until 2022.

He is still a teenager – and yet already a minor star. Sporting goods giant Nike is said to have awarded Moukoko, who already played for the German U16 national team at the age of twelve, a contract worth millions. Moukoko signs autographs and takes selfies. The hype is huge. Another reason why BVB normally shield him from the public. And yet the 1.72 m tall centre forward is still down to earth. Insiders describe him as a well-established young player who trains hard and has no airs and graces. Most recently, former BVB professional and coach for the U18 national team, Christian Wörns, praised him: Moukoko is a "player with a difference".

Week after week, Youssoufa Moukoko impresses again and again. As a ten-year-old, he scored 23 goals in 13 matches in the U15 regional league for FC St. Pauli. For the BVB U17 he scored 83 goals in two seasons. The next step



Together with his teammates: Insiders describe him as a well-established young player who trains seriously and has no airs and graces.

came in the summer of 2019, when Moukoko, at the age of 15, moved up into the Borussia U19s, with coach Michael Skibbe. "I'll first have to find my way," commented the young player, modestly. "I know the guys on the team, but I don't have their power yet." Nevertheless, he scored half a dozen goals at his U19 Bundesliga premier in Wuppertal. Moukoko also played a decisive role in his UEFA Youth League debut against FC Barcelona in mid-September, in his team's 2-1 victory.

"I have been living in Dortmund for 25 years and have published several books about the city. I am now

working on the next one – and am still finding plenty of stories worth telling and new aspects. During my research I still encounter lots of surprises. Dortmund just never gets boring."

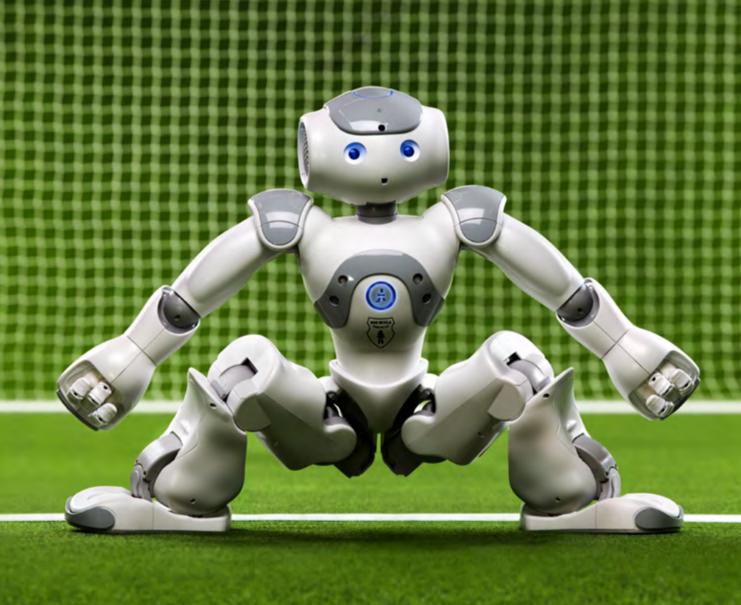
KATRIN PINETZKI
AUTHOR
IN MARCH 2020 HER NEW BOOK WILL BE PUBLISHED BY KLARTEXT
"DORTMUND FÜR KLUGSCHEISSER. POPULÄRE IRRTÜMER UND ANDERE WAHRHEITEN"



"It's going to be a great adventure.

KLAUS SENKEL

MECHANICAL ENGINEERING TECHNICIAN
TALKING ABOUT THE JOURNEY INTO THE PAST IN THE NEW TRAINING MINE AT ZECHE ZOLLERN

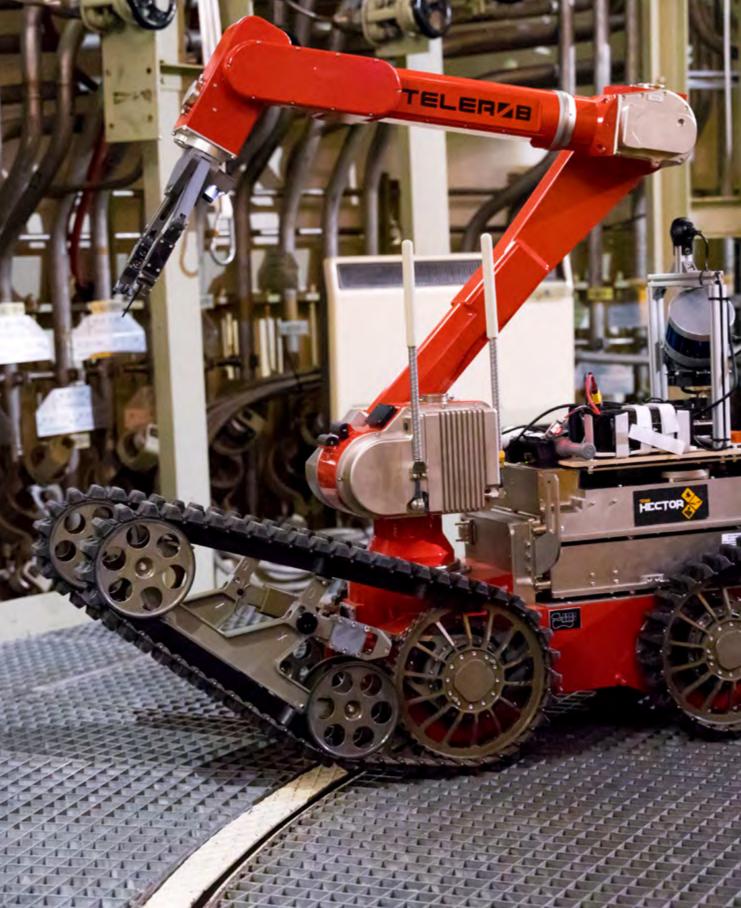


ONE CITY.

LOTS OF TECHNOLOGY.

THE CITY

THE "LEBENDIGE STADT" FOUNDATION AWARDED DORTMUND AS THE "MOST DIGITAL CITY" IN EURO-PE. VIENNA ALSO RECEIVED AN AWARD: THE DORTMUND COMPANY SCIENCE.D. VISIONS DEVELOPED THE SOFTWARE WHICH ENABLED GANDALF TO FLY OVER MIDDLE EARTH IN THE LORD OF THE RINGS FILM. | WITH AROUND 300 COMPANIES AND OVER 10,000 STAFF, THE TECHNOLOGIEPARK IS ONE OF THE MOST SUCCESSFUL IN EUROPE. MORE THAN 90,000 PEOPLE WORK IN THE FIELDS OF IT, LOGIS-TICS AND LIFE-SCIENCE IN DORTMUND. THE FRAUNHOFER INSTITUTE FOR MATERIAL FLOW AND LO-GISITCS IN DORTMUND IS CARRYING OUT THE WORLD'S LARGEST INVESTIGATION INTO THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN LOGISTICS. | THE WORLD FINAL OF THE WORLD ROBOT OLYMPIAD (WRO); THE INTERNATIONAL ROBOT COMPETITION FOR CHILDREN AND YOUNG PEOPLE, IS COMING TO GERMANY FOR THE FIRST TIME IN 2021. THE CITY OF DORTMUND IS THE VENUE FOR THE OVER 3.000 INTERNATIONAL GUESTS, CHIDREN AND YOUNG PEOPLE FROM AROUND 80 COUNTRIES. DORTMUND IS ONE OF THE MOST IMPORTANT CLUSTERS FOR MICRO AND NANOTECHNOLOGY IN EUROPE. | AT OPENDATA.DORTMUND COMPANIES AND CITIZENS CAN ACCESS MUNICIPAL DATA. | THE ALLIANZ SMART CITY UNITES 136 PARTNERS FROM MUNICIPAL ADMINISTRATION. BUSINESS. SCIENCE AND CIVIL SOCIETY. DORTMUND IS REPLACING 25,000 STREET LAMPS AND 10,000 STREET LAMP MASTS WITH FUTURE-PROOF AND ENERGY-SAVING LED TECHNOLOGY. | THE NOX-BLOCK PROJECT IS CREATING INTELLIGENT CHARGING STRUCTURES FOR ELECTRIC CARS, RIGHT WHERE THEY ARE NEEDED. DORT-MUND HAS BEEN AWARDED WITH THE "IT-WILLY 2019" PRIZE FOR DIGITAL PROCESSES - THE OSCAR FOR IT PROFESSIONALS. WITH MORE THAN 1,000 DIGITAL-COMPANIES AND MORE THAN 14,000 EM-PLOYEES IN THE SECTOR. DORTMUND IS ALREADY THE DIGITAL HEART OF THE METROPOLE RUHR AND WESTPHALIA.





NEW ROBOTS ENSURE THE SAFETY OF RESCUE WORKERS

Year after year, numerous rescue workers around the world are injured or killed – despite reliable protective clothing, good training and sophisticated operational protocols. To protect rescue workers and save lives, robot systems are being developed on the Phoenix-West site in a project that is unique in Germany.

What makes the German Rescue-Robotics Centre (Deutsches Rettungsrobotik-Zentrum DRZ) stand out is that researchers, manufacturing companies

and fire brigade experts work hand in hand. So far, the development of such robots is still in its infancy, but it is now being pushed forward at full speed. "The goal of the DRZ is to develop autonomous rescue robots and to set up a robotics task force that operates both nationally and internationally," explains Hauke Speth, coordinator of the research centre. The Municipal Fire Chief explains the special challenge for the research centre: "In contrast to industrial use, emergency situations require robots that can adapt to changing environments time and again".



In a project that is unique in Germany, researchers are developing new types of robots to be deployed in particularly dangerous situations.

The German Federal Ministry of Education and Research is providing twelve million euros for an initial period of four years to support the development of the centre. The aim is to operate the facility on a long-term basis. Currently, around 80 experts from 13 specialist organisations are involved.

Using science for fire protection and rescue: The city of Dortmund and the fire brigade already set a clear course when they founded the Institute for Fire and Rescue Technology (IFR).

The DRZ is now turning its attention to the future potential of robot technology.

We also need systems that can perform their tasks even in dangerous situations. How robustly such robots have to be equipped to withstand heat and smoke, for example, and to what extent machine learning can advance the technology are questions that the teams at the centre of excellence are dealing with. According to Speth, they are also testing the use of drones, for example to take pictures and monitor the situation.

Four main scenarios form the basis for the work at the facility: fire, collapse and burial, detection of hazardous substances and flooding. In order to make research as realistic as possible, a LivingLab, where real life situations are created, is also being set up. This laboratory will include a hall for experiments of around 5,000 square metres in size and an outdoor area of around 10,000 square metres.



Hauke Speth is Municipal Fire Chief and coordinator of the research centre



A new dimension in brain surgery: the Orbeye high-tech microscope, which is being used for the first time in North Rhine-Westphalia in the neurosurgery department at Dortmund Klinikum, enables precise operations on the brain.

GROUND-BREAKING DEVELOPMENT IN MEDICINE: BRAIN SURGERY USING THE LATEST 3D TECHNOLOGY

The Clinic for Neurosurgery at Dortmund Klinikum has succeeded in performing an operation that is unique worldwide: The physicians treated a cavernoma – a vascular malformation – in the brain using a new exoscope called "Orbeye".

This is a high-tech surgical microscope which allows surgeons to see anatomical details in the brain in 3D and display them at four times the resolution (4K) of normal high-definition images. This makes the images exceptionally



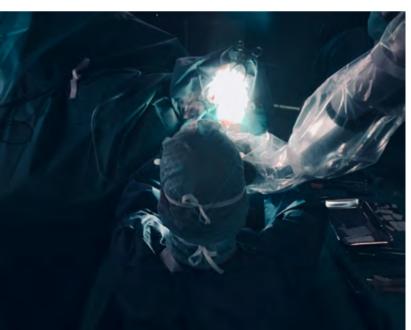
sharp and offers unique depth of field. "Using this technology, we can recognise even the tiniest tissue borders, blood vessels and injuries and treat them safely," says Professor Oliver Müller, Director of the Clinic for Neurosurgery at Dortmund Klinikum.

The special feature of brain surgery: In minimally invasive operations on other regions of the body, surgeons insert cameras and surgical instruments through several incisions, thus gaining access to the area ("keyhole surgery"). However, in brain surgery only one access point is possible due to the fragile structure of the tissue. Nevertheless, all necessary functions, i.e. both "looking in" and "working", must be facilitated. As neurosurgeons work in the smallest of spaces in a highly complex part of the human body, this places extraordinary demands on optical support systems.

The Orbeye is a microscope mounted on an arm that can be swivelled in all directions and wat-

ches over the operating area from outside. The microscope transmits its images, including the movements of the surgical instruments, to large monitors, giving the surgeons a perfect view. "In addition to the conventional fluorescent images of brain tissue in infrared and blue light, the Orbeye allows us to distinguish particular venous vascular malformations precisely from healthy brain tissue using special technology. A narrow frequency band of wavelengths consisting of green and blue light is used here, which highlights the smallest venous structures down to a depth of two millimetres," says Professor Müller. "This technology opens up a whole new dimension in surgery, offering our patients even better care."

The hospital treats all tumour diseases of the central and peripheral nervous system and adjacent structures, vascular diseases of the brain and spinal cord, degenerative diseases of the spinal column as well as all types of injuries to the brain, spinal cord and nerves.



In brain surgery, only one access point is possible due to the fragile tissue structure. Nevertheless, all the necessary functions must be optimally accessible. This is where the new 3D technology comes in.



Dortmund receiving the "Most Digital City" award from the "Lebendige Stadt" Foundation is the logical consequence of outstanding cooperation between all levels of society. It comes down to the fact that the companies in this IHK-region are actively involved in the transformation.

Continuing to develop the city as a location for logistics is key. Digitalization is fuelling the future. And the IHK is right at the forefront of this movement."

STEFAN SCHREIBER CEO OF IHK DORTMUND



"The Ruhr Region has the potential to be the smartest conurbation in Europe. Dortmund has been home to Wilo since it was founded in 1872. With our completely new WiloPark premises covering an area as big as 26 football

pitches, we show how strong our historically grown connections are to the city and the people who live here. We are simultaneously investing in both our own and Dortmund's future.

OLIVER HERMES
PRESIDENT AND CEO OF WILO SE



ONE CITY.

LOTS OF BUSINESS.

ONE CITY

THE BUNDESBANK IS CONSTRUCTING GERMANY'S BIGGEST MONEY BIN IN DORTMUND. FOR THE PRESTIGIOUS APPLE STORES ARE PRODUCED IN A DORTMUND SUBURB HELLWEG IS ONE OF THE MOST FAVOURITE SHOPPING STREETS IN GERMANY. TOGETHER WITH THE DSW21 THE CITY IS DEVELOPING A 50,000 M2 SITE AT EUROPE'S LARGEST INLAND HARBOUR: 5,000 JOBS TO BE CREATED ON THIS DIGITAL CAMPUS | THE WORLD'S LARGEST HYDRAULIC EXCAVATORS ARE BUILT IN DORTMUND AT CATERPILLAR. | AROUND 13,000 PARTICIPANTS HAVE TAKEN PART SO FAR IN THE 40 STARTZGROW FOUNDERS COMPETETIONS IN DORTMUND. TOURISM IN DORTMUND GENERATED 1.46 BILLION EUROS – A SIGNIFICANT ECONOMIC FACTOR FOR THE CITY. THE STORAGE SPACE IN IKEA'S EUROPEAN CENTRAL DISTRIBUTION CENTRE IN DORTMUND IS THREE TIMES AS BIG AS THE VATICAN. IN 2017 THE NUMBER OF OVERNIGHT STAYS IN DORTMUND INCREASED AGAIN SHOPPING-METROPOLE: WITH ITS CATCHMENT AREA OF 1.5 MILLION PEOPLE AND A SALES OF OVER 770 MILLION EUROS, DORTMUND'S CITY CENTRE IS ONE OF THE MOST SIGNI-FICANT LOCATIONS FOR RETAIL. FROM 2023, THE SOUTHERN SECTION OF THE DORTMUND-EMS CANAL WILL BE EXTENDED FOR LARGE MOTORISED CARGO BARGES AT A COST OF 150 MILLION EU-ROS. | ACCORDING TO ONLINE ESTATE AGENCY PORTAL "IMMOWELT", DORTMUND IS THE CHEAPEST LARGE CITY FOR PROPERTY WITH A MEAN SQUARE METRE PRICE OF 1,800 EUROS. | THE CITY OF DORTMUND. AS ONE OF THE LARGEST EMPLOYERS IN THE REGION. HAS FOUNDED ITS OWN EDUCATION AND SKILLS CENTRE. THYSSENKRUPP STEEL IS BUILDING A NEW HOT-DIP COATING PLANT FOR 250 MILLION EUROS. FROM 2021 THIS WILL MAKE THE WESTFALENHÜTTE SITE ONE OF THE TOP TECHNO-LOGY LOCATIONS IN THE WORLD.



WILO AMONG THE MOST INNOVATIVE COMPANIES IN GERMANY

IN THE TOP 100 IN THE CATEGORY "INNOVATIVE PROCESSES AND ORGANISATION"

The technology specialist WILO SE has risen to take its place among the best in the 26th year of the Top 100 innovation competition. The award was presented in Frankfurt's Jahrhunderthalle by mentors Ranga Yogeshwar and Prof. Dr. Nikolaus Franke, scientific director of the competition. Oliver Hermes, CEO of the Wilo Group and President of the Executive Board, is delighted about the award: "Since its foundation, Wilo has established itself as an innovation leader in the pump industry. New technologies and innovative solutions are an essential part of our company history. That is why, to receive this renowned Top 100 seal of approval in the category 'Innovative Processes and Organisation' honours the achievements of our staff in a very special way."

Since 1872, Wilo has been supplying people around the globe with innovative pumps and smart high-tech system solutions. "We have developed from being a component manufacturer to become a solution provider and have also taken advantage of the opportunities offered by digital transformation to do so", says Hermes. Wilo's mission goes beyond the product to include consulting, development, commissioning and maintenance at the highest level. For example, Wilo "smartifies" its products with digital features

or equips them with solar modules so that they can be operated independently of fossil fuels. "We see ourselves as a digital pioneer in the pump industry and thus remain true to our innovative strength and enthusiasm," explains Hermes.



Thanks to its numerous innovations and open corporate culture, the Dortmund pump manufacturer has developed significantly in recent years and gone from hidden champion to a very visible champion. Any member of staff can contribute new ideas for development: "This active innovation and suggestion system driven by the staff has already produced numerous improvements", says Georg Weber, Wilo Chief Technology Officer. "And creative innovations are not limited to the product portfolio. Process-related improvements in work processes are just as important as the topics 'sustainability' or 'social responsibility'." That is why Georg Weber also sees the award of the Top 100 seal as recognition of the achievements of all 7,800 Wilo employees worldwide.



From left to right: Georg Weber (CTO WILO SE), Ranga Yogeshwar, Dr. Jörg Praczyk (Senior Vice President Research & Development WILO SE) at the presentation of the Top 100 award in Frankfurt.

WILO SE is building "Wilo Park" on Nortkirchenstrasse in Dortmund – this state-of-the-art facility will be the company's most modern factory to date. The investment of €300 million is the largest ever industrial investment in NRW. This is what the finished park will look like.





DORTMUND PORT: DORTMUNDER HAFEN HOTSPOT FOR THE DIGITAL SECTOR

With 760 companies and almost 25,000 employees in the logistics sector, Dortmund is one of the most important logistics centres in Germany. Through the use of modern technologies, especially from the IT sector, the logistics industry in Dortmund is developing in a special way and taking advantage of the proximity of Dortmund Technical University, the University of Applied Sciences and renowned research institutes. This is why Dortmund Port District is emerging as a new hotspot for the digital industry. The unique atmosphere here is attracting

young entrepreneurs from the digital sector to create start-ups and up to 5,000 new jobs could be created here in the next few years. In all its planning, conversion and new construction work, the city is making sure that the developments fit in with the industrial use of Dortmund Port. After all, with thousands of jobs on offer, it is the largest canal port in Europe.

The "e-port-dortmund" offers a very special opportunity for young companies:



As can be seen here, the Dortmunder Hafen has enormous growth potential with the atmosphere and flair to attract entrepreneurs.

Not only can entrepreneurs drop anchor here; they are also offered an attractive environment. Centrally located and close to the planned Digital Campus at Dortmund Port, this historic red brick building on Mallinckrodtstraße, offers flexible office space, network services, consulting services and a strong partner network. The energy of young entrepreneurs should further promote Dortmund Port as a logistics location and at the same time contribute to the creation of additional jobs.

And that's not all: Opposite the historic Old Port Authority building, the Dortmund media company Lensing plans to open "Lensing Media Port" to expand its digital agency business and a start-up campus is to be set up in an old red brick warehouse building nearby. A little further away,

"Heimathafen" (home port), an educational centre with outdoor catering, will find a home. In no time at all, the promenade here will be lined with bars and restaurants and the area will be Dortmund's new place to be seen.

A number of studios have already settled in the new harbour quarter, attracted by its exciting flair. The quarter also wants to offer spaces for current trends such as coworking and create venues that can be used for concerts, parties and discussions. At the Akademie für Digitalität und Theater (Academy for Digitality and Theatre), a model project is being developed in the immediate vicinity that explores the theatre landscape in the light of the digital age.





Offering many destinations in Eastern Europe, Dortmund airport serves the mobility needs of the region. Many residents with Eastern European roots use the connections to visit friends and families abroad.

Victoria Popp comes from Berlin and studies singing in Hanover. She was flying to Vienna for singing rehearsals on the record-breaking day, 13 November 2019, and uses Dortmund Airport for her travels because of the excellent range of destinations and reasonable prices. Congratulations from airport CEO, Udo Mager (centre) and Guido Miletic, Head of Marketing & Sales (left).

Victoria Popp was the 2,331,027th passenger at Dortmund Airport in 2019, a new passenger record for Dortmund Airport. More passengers are using Dortmund Airport than ever before. The previous record from 2008 was broken on Wednesday, 13 November.



"The year is not over yet, but it is already clear that 2019 will be the year with the highest number of passengers in the airport's history. We are very proud that we have been able to set a new passenger record despite turbulent times in the air travel business," said Udo Mager happily.

The airport boss thanked everyone who worked for this success: "This year's growth has only been possible thanks to the good cooperation with our system partners such as the Federal Police, local government and the customs authorities. We would also like to express our sincere thanks to all our employees who have worked hard and with great enthusiasm to achieve this new record year". And Dortmund Airport is still on the upswing. Dort-

mund Airport is number three in North Rhine-Westphalia, after Düsseldorf and Cologne/Bonn. In 2018, the airport was already showing strong growth with almost 2.2 million passengers. In 2019 it reached the 2.5 million passengers mark.

Not only have the passenger numbers increased: Dortmund Airport is also one of the fastest growing commercial airports in Germany, with 21% growth in the first half of 2019. This is due to the addition of new destinations, as well as frequency increases and a good load factor: Three new destinations were added in 2019, Palanga in Lithuania, Ohrid in Northern Macedonia and the island of Usedom.

Guido Miletic, Head of Marketing & Sales, explains the reasons for the record number of passengers: "The enormous growth this year and the associated high passenger numbers are due to new connections, frequency increases as well as the route and airline selection." In 2018 and 2019 a total of 14 new destinations were introduced. This is the airlines' response to the strong demand in the region. A new airline, Lauda, has already announced that it will be flying from Dortmund in 2020.

Dortmund Airport is one of the world's leading airports in terms of punctuality and even ranks first in a Germany-wide comparison. In addition, the airport has recently overcome two important hurdles for its future development, by being classified as a very important airport in the state of NRW and getting the stamp of approval from the EU for its concept for future development. The airport has succeeded in reducing its operating result, which is relevant for the EU, to minus €1.9 million. This brings the airport significantly closer to its goal of achieving a balanced EU operating result by the end of 2023.

In order to enable larger aircraft, such as WIZZ AIR'S A321NEO, to land in the future, Dortmund Airport is planning to relocate the eastern landing threshold to allow full use of the existing runway, which is over 2,000 metres long.

"The Ruhr Region is amazing, it's so much greener than people think. And even Dortmund is full of surprises. Meeting Mr Sierau was great fun. How could it be



otherwise with two local patriots like us? I'm really looking forward to discovering more hidden gems in the city when we start shooting at new 'crime scene' locations, for the next season of Tatort."

JÖRG HARTMANN ACTOR AND "DORTMUND POLICE COMMISSIONER" IN THE GERMAN CULT TV SERIES TATORT ENJOYING A DELICIOUS BEER WITH LORD MAYOR ULLRICH SIERAU AT PHOENIX-WEST



"The proportion of bicycle traffic on Dortmund's roads is to double to 20% by 2030. By 2022, the funding for bicycle traffic will be increased to an initial six million euros, four times the current amount."

LUDGER WILDE
HEAD OF PLANNING FOR THE CITY OF DORTMUND
ON DORTMUND'S AMBITIOUS GOAL TO BECOME THE COPENHAGEN OF WESTPHALIA



ONE CITY.
HIGH QUALITY OF LIFE.

THE PATH ROUND THE PHOENIX LAKE IS 3.2 KILO-MORE THAN HALF OF DORTMUND IS GREEN. METRES LONG AND ONE OF THE LATEST AND LARGEST ATTRACTIONS IN THE REGION. KREUZ-, KLINIK-, KAISERSTRASSEN- AND SAARLAND-STRASSEN-QUARTERS, THE CITY PROVIDES LIVELY AND TRENDY QUARTERS FOR STUDENTS AND FAMILIES. | LIVING AND GOING OUT GET A WHOLE NEW MEANING IN AND AROUND THE DORTMUNDER U. | DORTMUND FOSTERS MOBILITY AND PUBLIC TRNSPORT FOR ITS CITIZENS WITH 440 NEW BICYCLE PARKING SPACES AND TEN CHAR-GER STATIONS FOR BIKES AND PEDELECS AT THE MAIN RAILWAY STATION. | THE WESTFALENPARK WAS GERMANY'S FIRST PARK OF THIS SIZE TO HAVE PUBLIC WIFI. UP TO 4,000 PEOPLE CAN USE MOBILE INTERNET THROUGHOUT THE WHOLE PARK AT ANY TIME. | DORTMUND HAS THE LARGEST NATIVE AMERICAN TENT IN THE WORLD: THE BIG TIPI. | DORTMUND'S 12 SENIOR CITIZEN OFFICES COOPERATE WITH MORE THAN 800 NETWORK PARTNERS THROUGHOUT THE CITY TO PROVIDE AND SET UP SUITABLE HELP FOR SENIOR CITIZENS QUICKLY. THE PROJECT OF THE DECADE - "NORD-WÄRTS" – IS UNEARTHING UNEXPECTED TREASURES IN DORTMUND'S NORTHERN DISTRICT. FAMILY PROJECT HAS OFFICES IN ALL 12 DORTMUND DISTRICTS TO ACCOMPANY FAMILIES FROM WHEN CHILDREN ARE BORN UNTIL THEY START WORK. THE 800 M2 SKATE PARK IN THE DIETRICH-KEUNING HAUS IS A UNIQUE INDOOR FACILITY IN THE REGION. SINCE 2009, THE SENIOR CITIZENS' DANCE THEATER AT THE DORTMUND BALLET HAS PROMOTED AND DEVELOPED CREATIVE EXPRESSI-ON FOR SENIOR CITIZENS. SINCE 2016 DORTMUND HAS BEEN LOOKING INTO THE IMPACTS OF AN AGING SOCIETY IN A DEMOGRAPHY WORKSHOP AND IT IS THUS A MODEL MUNICIPALITY IN THE STATE.





Whether it is to celebrate the anniversary of Bauhaus or to present the works of renowned master builders, Dortmund's Baukunstarchiv NRW on Ostwall is an outstanding location for architecture exhibitions and has attracted great visitor interest since it was opened in November 2018. At the same time, this historic building houses a unique collection of documents and papers from the estates of influential North

Prof. Dr. Wolfgang Sonne, scientific director of the Baukunstarchiv NRW, emphasises: "Architecture is not only actual buildings, but also includes the media, such as plans, drawings,

Rhine-Westphalian architects and engineers,

united here under one roof.

photographs and models, with which these buildings are created and which also aid the spreading of new architectural ideas. We want to collect, research and present this cultural asset to the public".

The archive has an academic cooperation with the Technical University of Dortmund. It sees its work as important, additional support for the city authorities in the preservation of listed buildings, which normally concerns itself with the protection of the buildings themselves. Documents and records from the fields of urban planning, civil engineering and architecture offer the opportunity to trace planning processes and to convey the work and thought processes of

architects to future generations, emphasises Markus Lehrmann, General Manager of the North Rhine-Westphalia Chamber of Architects and Managing Director of the new institute.

The archive project was jointly initiated by the NRW Chamber of Architects, the NRW Chamber of Engineers and Builders, the Foundation of German Architects and the NRW Association for the Promotion of the Architecture Archive. Rooms in the Museum am Ostwall, which had been vacated due to its move to the U-Tower, provided the perfect location for the archive.

The building, which was erected towards the end of the 19th century as the headquarters of the State Mining Inspectorate, was badly damaged in the Second World War and was rebuilt as a modern art museum. It was newly renovated to accommodate the architecture archive and the impressive glass roof of the atrium was replaced.

The refurbishment was made possible in part by urban development funding from the state of North Rhine-Westphalia, while the City of Dortmund, as the owner, provides the building rent-free. Visitors now encounter an impressive building with exciting exhibits: In the first year there were a dozen special exhibitions, over 100 events and more than 15,000 visitors.





Heavy rainfall has already repeatedly led to major traffic routes becoming impassable.

FOR NEW STRATEGIES FOR EVERYDAY LIFE IN THE DISTRICTS

Record breaking temperatures, long periods of drought or sudden heavy rainfall: extreme weather conditions as a consequence of climate change have long since become part and parcel of our daily lives and constantly present us with new challenges. Dortmund and Cologne are the two cities participating in a model project to develop new solutions for dealing with these changing (living) conditions.

The "iResilience" project, which is funded by the Federal Ministry of Education and Research under the umbrella initiative Zukunftsstadt (City of the Future), is coordinated by the Social Research Centre at the Technical University of Dortmund. The other partners involved from the world of science and research are: the "nordwärts" (northwards)

coordination office, the City of Dortmund's Urban Water Authority, the Institute for Energy Systems, Energy Efficiency and Energy Economics at TU Dortmund, the Research Institute for Water and Waste Management at RWTH Aachen University, the Hafen City University of Hamburg, the Department of Architecture and Landscape and Dr. Pecher AG in Erkrath. In addition, citizens, companies, politicians and governments are working together with hydraulic engineers, landscape architects and social scientists to develop new ways and strategies to combat the effects of climate change. It is precisely the cooperation between local authorities and research institutes that makes these projects stand out.

Two pilot areas in Dortmund were selected for the research project: the area around Schuetzenstrasse in the Nordstadt and Jungferntal in Huckarde. In concrete terms, the aim is to find out what consequences heavy rain has for houses, streets and squares, or the extent to which heat and drought affect people, in order to develop proposals for the respective neighbourhoods. The spectrum of prevention measures against the consequences of heavy rain ranges from unsealing areas to the creation of additional green spaces and seepage systems. For high temperatures, shaded paths can be provided, or additional shaded areas created – based on examples in southern counties. Another important topic is to highlight the need for a supply of drinking water in public spaces, especially for elderly people. The project partners plan to use digital solutions to support communication in the neighbourhood, by adapting existing app solutions for example, to make them usable for the topic of climate resilience.



ONE CITY.
LOTS OF CULTURE.

THE CITY

THE KONZERTHAUS DORTMUND IS INCLUDED IN THE ECHO LIST OF THE 21 MOST OUTSTANDING EURO-PEAN CONCERT HALLS AND IS THE ONLY CLASSICAL CONCERT HALL TO OFFER POP-CONCERT SUBSCRIP-TIONS AS WELL. MUSICIANS SEE THE WESTFALENHALLE AS "THE BEST PLACE IN THE WORLD TO CELE-BRATE MUSIC". | ACCORDING TO THE NEW YORK JAZZ MAGAZINE DOWNBEAT, THE DOMICIL IS ONE OF THE "100 BEST JAZZ CLUBS" IN THE WORLD. WITH CHOREOGRAPHER XIN PENG WANG, DORTMUND'S BALLET NOW RANKS AMONG THE WORLD'S BEST. | EVERY YEAR THE JUICY BEATS FESTIVAL TRANS-FORMS THE WESTFALENPARK DORTMUND INTO A GIGANTIC FESTIVAL SITE FOR POP, RAP, ELECTRO, IN-DIE, ALTERNATIVE, REGGAE AND URBAN BEATS – THE LAST ONE HAD 50,000 VISITORS. | DORTMUND THEATER IS ONE OF THE LARGEST THEATRE CENTRES IN GERMANY. | THE FZW IN THE UNION QUARTER IS, IN ADDITION TO THE MOLOTOV IN HAMBURG AND THE BERGHAIN IN BERLIN, RECOGNIZED AS ONE OF THE BEST THREE IN THE REPUBLIC. | WITH MORE THAN 180 ARTISTS ON 123 DAYS FROM THE END OF JUNE TO THE MIDDLE OF OCTOBER, RUHRHOCHDEUTSCH IS THE COMEDY AND CABARET SCENE'S LAR-GEST FESTIVAL IN GERMANY. | THE CITY AND STATE LIBRARY IS GERMANY'S LEADING PROVIDER OF TRAINING FOR (ONLINE-) LITERATURE-RESEARCH. | EXTREME SPECIALIZATION IS THE TRADEMARK OF THE ORCHESTRA CENTRE NRW. IN HIS FIRST SEASON AS DIRECTOR OF THE DORTMUND OPERA, HERIBERT GERMESHAUSEN ACHIEVED THE SECOND HIGHEST AUDIENCE NUMBERS OF THE LAST DECA-DE WITH 87,703 VISITORS. | 272 CREATIVE PROJECTS AT SCHOOLS IN THE ARNSBERG GOVERNMENT DISTRICT SUPPORTED BY FUNDS FROM THE STATE "CULTURE AND SCHOOL" PROGRAMME. DORTMUND LEADS THE WAY WITH 50 PROJECTS. VOCAL MUSIC CENTRE NRW AND MUSIC FESTIVAL KLANGVOKAL UNITED AT THE "INSTITUTE FOR VOCAL MUSIC" SINCE 1 JANUARY 2020.





DORTMUND'S SCHAUSPIELHAUS THEATRE: OPEN, DIVERSE, MULTI-LAYERED

JULIA WISSERT IS THE NEW THEATRE DIRECTOR AT THE SCHAUSPIELHAUS

Director and theatre maker Julia Wissert is successor to Dortmund's current Schauspielhaus director Kay Voges. Voges will still be maintaining links to Dortmund in his role as the founding director of the "Academy for Digitality and Theatre" which he initiated. Wissert's deputy and chief dramaturg will be Sabine Reich. Together with the ensemble, artists and citizens, the new team aims to turn the theatre

into an open, diverse and multi-layered location which will provide space for multiple activities and forms of art where questions of diversity and the openness of our society are discussed and negotiated. Wissert explains: "We want to make theatre for the city, to tell stories and search out aesthetics that have not been so well represented on the stage so far. We want to discover what people want from their theatre,

Bettina Lieder ("Die Parallelwelt", "Ich, Europa", "Tartuffe", "Hedda Gabler" - stage photo) has been awarded this year's Audience and Critics' Prize for the 2018/19 season as best actress. The "Dortmunders for their Theatre" friends association collects votes from audiences online and in a ballot box at the theatre.

to find out what they think is missing, and to make the theatre a space of their own." She has been following her predecessor's work with great admiration for a long time, Wissert tells us: "The Schauspiel Dortmund is a highly regarded theatre with a sensational ensemble of international renown and a reputation for exciting experiments. I am so pleased that the topic of digitality will continue at the theatre through the close links to the Academy and that we can put a focus on other topics."

With Julia Wissert, we can expect to see a paradigm shift, says Cultural Affairs Officer Jörg Studemann: "She has a distinctive programme and approach to topics which are currently of enormous significance in theatre and society."

JULIA WISSERT

Born in Freiburg, she has worked at the Maxim Gorki Theater Berlin, at the Theater Luzern, Schauspielhaus Bochum, and at the National-theater Brünn. She studied Performance and Directing in London and Salzburg. Through her work on many international projects, committees and juries, she has gained extensive experience in the field of diversification and cultural education. Her stage work is characterised by strong images, musicality and a high degree of physicality.

SABINE REICH

Dramaturg Sabine Reich has worked at the Burgtheater Vienna, at the Schauspiel Essen and at the Schauspielhaus Bochum. She has also developed multiple art projects.



Julia Wissert wants to discover what people want from their theatre, to find out what they think is missing, and to make the theatre a space of their own.





ACADEMY FOR DIGITALITY AND THEATRE

INTERFACE BETWEEN THE PERFORMING ARTS AND THE LATEST TECHNOLOGIES

The Academy for Digitality and Theatre is certainly unique in Germany and probably also worldwide. It is dedicated to the challenges, opportunities and perspectives of the digital age for theatre. Kay Voges, director of Dortmund's Schauspielhaus Theatre, initiated the Academy (he will move to the Vienna Volkstheater in 2020) and the City of Dortmund, the State of North Rhine-Westphalia and the Federal Cultural Foundation support it with millions of euros in funding.

In the stresses and strains of everyday theatre life there is neither the time nor the space to address such fundamental questions about the future, explains Tobias Ehinger, Managing Director of Dortmund's Schauspiel Theatre. However, digitalisation is increasingly penetrating society and has long since reached the theatre scene.

The use of digital technology for tasks as wide ranging as management or stage operations or the networking of venues, opens up new possibilities and formats, explains theatre director Marcus Lobbes, and artistic director of the Academy. At the same time, this has also altered professions and job descriptions in the world of theatre. Moreover, the theatre is precisely the place where change processes are reflected upon and meaning is created. "We examine the op-

portunities for the performing arts in the digital age and research what it means today to be an artist at the interface between the performing arts and the latest technologies."

The Academy provides a special opportunity to deal with digital change in dialogue with experts from a wide range of disciplines and professions, free from the pressures of staging a production. Research and dialogue will also be carried out on topics such as artificial intelligence or the use of robots.

At present, the Academy, which offers workshops, forums and seminars, is still housed in the theatre's old carpentry workshop and equipped with state-of-the-art digital technology. It is planned to move to a new Digital Campus building at Dortmund harbour in spring 2022, a milestone in the city's digitalisation strategy. The first of 54 scholarships to support research projects at the interface between theatre and digitality have already begun.

NATURE MUSEUM DORTMUND

NEW NAME, NEW ROOMS, NEW BONES

There is a lot going on in the former Museum of Natural History of the city of Dortmund. After five years of renovation, work is now underway to arrange the exhibits in the newly refurbished museum. The new concept for the museum is to present the exhibits in a holistic way: With the focus on the natural communities of animals and their living environments in present and past Dortmund. The new name Naturmuseum (Nature Museum) Dortmund is the result of a competition launched to find out how the public would like their museum to be called.

For the relaunch the museum has also taken on another "mammoth" task: With the generous support of the Sparkasse Bank, Dortmund, the Nature Museum will now be able to publicly exhibit an original skeleton of a female woolly mammoth, which is unique in Germany. The mammoth has already "moved in" to the second floor of the museum and was carefully reconstructed by the Dutch mammoth expert Dick Mol. The skeleton measures an impressive 2.45 meters and is a central eye-catcher in the new permanent exhibition.

The marks of numerous barnacles on the bones give an indication of the unusual location of the find: the bones were recovered by trawler nets in the North Sea off the coast of the Dutch province of Zuid-Holland. The sea there is now about 20 to 30 meters deep. However, 30,000 to 40,000 years ago it was dry land where woolly rhinoceroses, saiga antelopes and wild horses lived. The approximately 200 different bones of the mammoth cow on display come from the same number of individual animals. In the





Impressive: This reconstruction of an Iguanodon dinosaur is over five meters high.

Understanding nature means understanding something about the basis of our past, present and future. >>



reconstruction process, fossil bones of a suitable size, age and sex were matched to form a whole. When the exhibition opens in the summer of 2020, there will be many other new exhibits to marvel at alongside the mammoth skeleton. A historical model of an iguanodon dinosaur standing over five meters tall, a 2.8-ton petrified tree trunk and the largest piece of coal taken from deep down under Dortmund will also provide

plenty of "wow!" moments. In the atrium of the museum, the connection between past and present is most clearly visible: Here, a vertical garden is already growing on a large wall, while petrified tree slices hang opposite – they represent the fields of biology and geology, which in turn form the two aspects of the new, holistic Nature Museum of Dortmund.

DORTMUND CELEBRATES GERMAN DAY CARE PRIZE

FIRST PRIZE FOR LOCAL COMMUNITY ALLIANCE BETWEEN FABIDO DAY CARE CENTRE BORNSTRASSE AND "NETWORK INFAMILY HANNIBAL AND BRUNNENSTRASSE DISTRICT"

A great result for a strong community: In the category "Community Alliance for Early Education in 2019" in the German Day Care Awards, the FABIDO Day Care Centre, Bornstrasse and the "Network INFamilie Hannibal and Brunnenstrasse District" in Dortmund won first prize among over 1,600 applicants for their community alliance initiative. The German Day Care Awards honour people throughout Germany who work hard to ensure that the youngest members of our society are given the best possible start in life.

WHAT THE JURY SAID:

- This alliance works with great dedication in a difficult social environment and radiates hope.
- Numerous institutions and stakeholders are closely involved in the Alliance. The work is carried out in a respectful and resourceoriented manner based on mutual respect and appreciation.
- The Alliance takes their responsibility for all children and families in the district very seriously. It offers versatile and innovative support services.

As an example, the jury highlighted the "bridge project". Here, children who have not been awarded a place in a day care centre are nevertheless looked after. The members of the alliance look beyond the boundaries of their own institutions and act as one.



WWW.DORTMUND-ÜBERRASCHT-DICH.DE

PUBLISHING DETAILS

Issued by:

City of Dortmund, The Lord Mayor

Concept:

Thomas Kampmann, Staff Section "Trade Mark Dortmund"

Layout/technical implementation:

Lisa Roßmann, Dortmund-Agency

Editorial Office:

Thomas Kampmann (editor-in-chief), Lena de Boer & Ute Piotrowksi (Staff Section "Trade Mark Dortmund"), Peter Kehl, Theo Körner

Bildnachweis:

p. 8: Pascal Amos Rest (bottom picture), p. 9: Christian Lamker, p. 11: Marcel Stawinoga, P. 12: Zoo Dortmund, p. 13: Katharina Kavermann, p. 14: Stephan Schütze, p. 15: Roland Gorecki, p. 16+17: Deutsches Fußballmuseum, p. 18: Jürgen Appelhans (top picture), TU Dortmund (bottom picture), p. 19: Benito Barajas, p. 21: Lewin di Giovine, p. 22+23: Martina Hengesbach, p. 24+25: Hans Blossey, p. 26: Silvia Kriens, p. 27: Anja Cord, p. 28: Roland Gorecki, p 30: Projektteam Emissionsfreie Innenstadt, p. 31: Roland Gorecki, p. 32: Benjamin Peters, p. 33: Andreas Buck/ BILD, p. 34: Agentur für Arbeit (top picture), privat (bottom picture), p. 35: Dirk Jungholt, p. 37+38: Thomas Kampmann, p. 40 +41: Anja Sacher (Grafik), p. 44: Volker Wiciok (top picture), Facesbyfrank (bottom picture), p. 45: Jürgen Huhn (TU Dortmund), p. 47: André Helbig/shotshop. com, p. 48: Oliver Schaper/TU Dortmund, p. 49: Contains Copernicus Sentinel-2 data 2016 processed at level 2A by CNES for THEIA Land data centre (top), Raphael Fischer/TU Dortmund (bottom), p. 50: Tillmann Abegg, p. 52: FH Dortmund, p. 53: Skiclub Kampen (top), Anja Cord (bottom), p. 54: Lutz Kampert (top picture), Alexander Fischer (bottom picture), p. 55: Peter Brenneken, p. 57: Thomas Kampmann, p. 58+59: BSV Deusen DAM, p. 60: t|b architekten, p. 62+63: Peter Ludewig, p. 64: Gaye Suse Kromer (top picture), Stephan Schütze (bottom picture), p. 65: Benito Barajas, p. 67-69: Feuerwehr Dortmund, p. 70+71: Klinikum Dortmund, p. 72: Bussenius & Reinicke (top picture), Sebastian Vollmert (bottom picture), p. 73: Hans Blossey, p. 75-77: WILO SE Dortmund, p. 78+79: geschossen.com – designbüro, p. 80: Hans Jürgen Landes, p. 82: Willi Weber (top picture), Roland Gorecki (bottom picture), p. 83: Stefan Ziese, p. 85-87: Anja Cord, p. 88: Alexander Völkel, p. 89: Archiv Westfalenhallen Dortmund, p. 91+92: Birgit Hupfeld, p. 93: Ingo Höhn, p. 94: Birgit Hupfeld, p. 96+97: Roland Gorecki

Dortmunder U: © Fliegende Bilder, A. Winkelmann, Dortmund

Communication concept:

CP/COMPARTNER, Agentur für Kommunikation GmbH, Essen

Printer: Dortmund-Agency **Status:** 5th Edition, January 2020