

BERLIN to go

BUSINESS NEWS TO TAKE AWAY

B:\ARTIFICIAL INTELLIGENCE



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DEAR READER,

The future is being built in Berlin. In the field of artificial intelligence, the city already boasts 223 companies, over 4,900 employees and a turnover €0.5 billion, making it the place to be for AI in Germany.

However, the very technology that innovators and visionaries are reveling in is causing concern among skeptics and doomsday theorists, some of whom fear a scenario in which machines outperform human beings and ultimately take over the world. But no worries, you're not going to run in to an Ex Machina in the German capital, nor is Berlin's Plänterwald the new Westworld. And rest assured that AI is not able to either replace or outdo humans - at least not yet.

In fact, you might be surprised to find out just how often AI already contributes to making our everyday lives easier: for example, when we use facial recognition to unlock our smartphones or when Amazon suggests the latest book by our favorite author. Even the automatic chat of our mobile service provider is based on intelligent software.

AI also makes key contributions to such things as the reliable diagnosis of illnesses and the testing of self-driving cars. Many of these applications originated in startups in Berlin-Brandenburg; between 2012 and 2017, 48% of all AI startups in Germany chose to set up offices in the capital region. In addition, a number of these innovative applications are based on the work of over 60 scholars who carry out research in Berlin on AI-related subjects.

Artificial intelligence is a field with unlimited potential, and this issue of Berlin to go shines a spotlight on the cutting-edge products and services being generated for the future in Berlin.

I wish you a pleasant read!

Sincerely,



Dr. Stefan Franzke
CEO, Berlin Partner



CONTENTS



NEWS TO GO

Eye on Berlin 6
News from the capital

TITLE

Intro 8
At home in Berlin: AI

In search of streamlined intelligence 10
Dr. Ralf Herbrich researches what customers want for Amazon

What is artificial intelligence? 13
From sci-fi to everyday technology

Water for the digital mill 16

Basic research in data science from Berlin
Amazon

Ouch, ADA! 19
How an app could change healthcare

Savvy solutions from Berlin 20
These solutions are improving everyday life

PROSPECTS

A Berlin original 22
Collonil – shiny shoes since 1909

Bringing added value to Berlin 26
Berlin Partner presents its 2018 annual report

Pizza alone won't cut it 28
How companies attract developers

TEA TIME

London and Berlin 30
A conversation with Rajesh Agrawal, Dep. Mayor of London



RECOMMEN- DATIONS

Culture tips 32
Highlights on Berlin's
event calendar



BERLIN TO DO

Dates 34
Dates & Events

LEGAL NOTICE

BERLIN *to go*

BUSINESS NEWS TO TAKE AWAY

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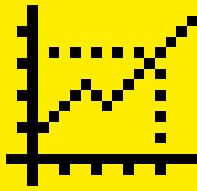


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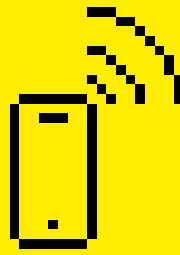
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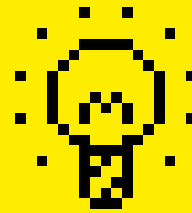
Strong Growth Anticipated

The latest economic report issued by Berlin's Senate Department for Economics, Energy and Public Enterprises shows that the capital is continuing its positive growth trajectory. As Economics Senator Ramona Pop noted, "The forces for growth in Berlin have maintained the upper hand. And this upward trend is being driven by a combination of the fast-growing service industries and the robust manufacturing industry. We expect to see a growth rate of roughly 2.7% for 2018. And, at the moment, in spite of international perils, we are forecasting 2.3% growth for 2019, which brings us in above the national average." According to the economic report, considerable momentum is coming from the service industries. In the information and communication sector alone, the number of employees subject to social security contributions increased by roughly 11%, which is more than two times higher than the rate nationwide.



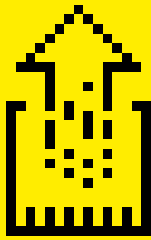
Urban 5G Model Region

Berlin's Senate Department for Economics, Energy and Public Enterprises and Deutsche Telekom came together for intensive discussions designed to identify measures that would allow them to jointly bring forward the expansion of the 5G mobile network as soon as possible. The measures will include the provision of public infrastructure, including support structures for base stations with low-power transmission, so-called "small cells." Findings from a joint project that tested out locations for LTE small cells – such as light poles, advertising clocks and BVG info pillars – will also be taken into consideration. Berlin is home to many innovative companies that would benefit from the opportunities associated with the early introduction of a 5G mobile network. For this reason, in the course of the expansion process, we will be prioritizing support for Berlin's "locations of future innovations" including the Adlershof, CHIC and FUBIC tech parks and the Siemens Innovation Campus. Additional event locations and transport routes will follow.



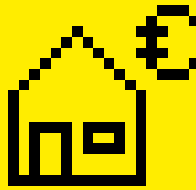
Robust Startup Dynamic

521 digital companies were founded in Berlin in 2017, which is 80 companies more than in the previous year. As reported by the IBB, this marks a whopping 18% increase in the number of new companies founded in the capital over the previous year. In 2017, Berlin saw as many digital companies founded as in Hamburg (224), Munich (153) and Frankfurt/Main (137) combined. These days, the founding of one out of every ten digital companies in Germany takes place in Berlin. With regard to the intensity of founding activities – that is, the number of companies founded per 10,000 employees – Berlin comes in at second place with 59 companies founded, following Cologne (81) in first place, but ahead of Frankfurt (47), Hamburg (41) and Munich (23). There are currently 9,696 companies active in the digital economy in Berlin; in total, they provide 88,206 jobs.



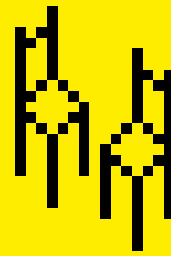
Expansions in the Field of AI

The British engine manufacturer Rolls-Royce is setting up an AI center at its location in the Brandenburg town of Dahlewitz near Berlin. Company sources say the project is part of a planned five-year, €113 million investment. They also expect the AI center to benefit from the surrounding Berlin-Brandenburg tech environment. Rolls-Royce has had a location in Dahlewitz for 25 years. Google is also expanding its operations in Berlin; as of January, 300 employees are working primarily in the field of AI at the company's new offices in the historic Gropius Ensemble, which forms part of the "Forum at Museum Island." At the official opening of the new site, Google CEO Sundar Pichai announced further investments in Germany as well as an expansion of the company's digital education services.



Climbing Construction Costs

Builders in Berlin and Brandenburg are now having to dig ever deeper into their pockets. In 2018, the cost of erecting new residential buildings in Berlin was on average 6.3% higher than in the previous year. In Brandenburg, construction costs increased by 5.8%. At the beginning of the year, the Berlin-Brandenburg Office of Statistics pointed out that prices in Berlin rose more than ever since the Wall came down. In Brandenburg, construction costs in 2018 increased by 5.8% compared to the previous year. This was the largest increase in eleven years. But it's not just the cost of new construction that's climbing; anyone using the services of a craftsman to paint a ceiling or put up some wallpaper had to pay a full 8% more than in the previous year in Berlin. In Brandenburg, the costs of such "cosmetic" repairs rose by 7.8%. The costs of road construction in Berlin increased by 11.5%; in Brandenburg, they rose by 9.5%.



Co-Working Space for Startups

The TU Berlin has opened its new EINS co-working space in a building on Ernst-Reuter-Platz 1. EINS is a unique innovation platform that stands for entrepreneurship, innovation, network and sustainability. The location is designed to service company founders, researchers and students and to serve as a location where entrepreneurship and tech-transfer projects that have potential for a threefold, sustainable impact – economic, social and ecological – can be carried out and transferred into practice. The 1,000 square-meter space has 80 workstations, a prototype workshop (Maker Space), office and seminar rooms as well as an event space for almost 200 people. EINS brings together researchers and scientific findings together with actors drawn from business, politics and civil society. Together, they will work across disciplines to provide entrepreneurial solutions to future challenges and generate added value for society.

ARTIFICIAL INTELLIGENCE IS AT HOME IN BERLIN

B:\ In Berlin-Brandenburg, a total of 223 AI companies with a turnover of just under € 0.5 billion have been identified as being active in the field of artificial intelligence (AI). This accounts for roughly 8% of total turnover in the region's software and data service industry.

B:\ Compared with other locations in Germany, Berlin-Brandenburg has emerged as a major location for AI. Since the mid-2000s, companies active in the field of AI have increasingly set up shop in the capital region.

B:\ AI companies employ 4,900 individuals, with 83% of these employees working for small and micro enterprises.

B:\ An estimated turnover of € 2 billion [in 2025, editor's note] generated by AI companies in Berlin-Brandenburg appears realistic. The growth of the sector's sales potential depends closely on international, national and regional frameworks.

B:\ A total of 28% of German companies active in the field of AI are based in Berlin-Brandenburg. In fact, between 2012 and 2017, 48% of all AI startups in Germany were founded in the region.

B:\ The region's AI companies are known for their ability to use AI systems (weak AI) to provide other companies with solutions to clearly defined problems. The region's AI companies focus on creating knowledge-based expert systems and systems capable of understanding speech. It was not possible to identify practical applications of so-called strong AI either in the region or at the national level. It was also not possible to identify any research and development being carried out in strong AI in the region.

B:\ Roughly € 231 million in venture capital has gone towards AI companies in Berlin-Brandenburg. This marks a 45% share of German VC financing for AI companies, thus making the capital region a leading location for VC financing for AI. Those AI companies that have received the most VC financing are largely active in the fields of health, business intelligence, process management and robotics.



B:\ ARTIFICIAL INTELLIGENCE

B:\ From 2007 to 2017, it was possible to identify a total of 273 AI-related research projects in Berlin-Brandenburg that were supported by federal ministries with a total of € 117 million in funding.

B:\ Today, there are 50 to 65 professors teaching and carrying out research on AI-relevant subjects at universities, technical colleges and non-university research institutes in Berlin-Brandenburg. Research is being done in interdisciplinary networks in subjects ranging from speech recognition systems to collaborative robots.

Strong AI:

These are AI systems that have the same capabilities as human beings and even surpass them. Such systems display self-initiative, independent decision-making capabilities, creativity, the ability to react to unpredictable events, the ability to plan and learn and all combinations of the above. At the moment, strong AI exists only in theory.

Weak AI:

These are AI systems that support human beings in making decisions, while also automating repetitive activities and performing simple activities on their own. They supply solutions to concrete application problems, including learning capacities and the ability to replicate human skills in sub-areas. Today's AI systems operate solely in the realm of weak AI.

Source: Künstliche Intelligenz in Berlin und Brandenburg, Daniel Feser, Technologiestiftung Berlin, 2018



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IN PURSUIT OF INTELLIGENCE EFFICIENCY

Dr. Ralf Herbrich heads a research team at Amazon tasked with forecasting customer wishes

If you've ever noticed Alexa's uncanny ability to play the perfect music to fit your mood, or if you've ever been shopping for a reading lamp on Amazon and suddenly had your favorite author's latest book recommended to you, then it's highly likely you've come into contact with the work of Dr. Ralf Herbrich and associated international development teams.

Herbrich is a 44-year-old German with a doctorate in computer science from TU Berlin who - after studying at universities in Berlin and Cambridge and holding various positions at Microsoft and Facebook - is now director of Machine Learning at Amazon. As a globally renowned expert for artificial intelligence (AI), he is responsible for teaching computers how to see, hear and speak. He aims to achieve something that seemed impossible only a few years ago; the ability to predict the probability of future events.

MR HERBRICH, WHEN YOU COMPLETED YOUR DOCTORATE IN MACHINE LEARNING 20 YEARS AGO AT TU BERLIN, THE SUBJECT WAS STILL CONSIDERED OF SECONDARY IMPORTANCE. WHAT CAPTIVATED YOU ABOUT AI?

I carried out my university studies based on a vision of the future that didn't exist at the time. Back then, I had to dream up all the things that were going to happen. And now those things are actually becoming a reality. The greatest hurdle we faced 20 years ago was the limited processing power of computers; today, we have that power in unlimited supply thanks to the cloud. Amazon currently has thousands of researchers and developers working on AI all over the globe. Each one of them is a specialist in the field, which shows how popular and important AI is at Amazon. This is one of the key things I like about Amazon's DNA. It's the drive to invent and develop something new, something once considered impossible. This never stops fascinating me.

YOU ONCE SAID IN AN INTERVIEW: "THE EXCITING THING ABOUT MACHINE LEARNING IS THAT IT ALLOWS YOU TO APPLY SCIENCE DIRECTLY." HOW EXACTLY IS IT BEING APPLIED AT AMAZON TODAY?

Artificial intelligence and in particular machine learning are an integral part of many products and services at Amazon. In fact, it's probably easier to count the number of products and services that operate without artificial intelligence at Amazon than those that already use the technology. For example, machine learning allows us to generate precisely forecast the demand. Amazon has developed algorithms that can make predictions for the next season. This is a key factor in being able to order the right goods in the right amount in stock and to deliver them in time to customers.





The Krausenhöfe (Krausen Courtyards) are home to Amazon's Berlin development center

YOU ALSO HAVE A TEAM AT YOUR BERLIN OFFICES WORKING ON MACHINE TRANSLATIONS. WHAT EXACTLY IS GOING ON THERE?

A team of speech scientists has developed a system that makes it possible to translate product descriptions into many different languages automatically. This means that sellers on Amazon's "Marketplace" e-commerce platform can have their product descriptions automatically translated into the many different languages in Europe, thus offering them access to markets beyond their countries of origin. This generates new sales opportunities for companies and even greater choice for customers. It enables small and medium-sized companies to enter international markets with marginal or no additional effort. Machine translation also makes it possible for them to test the demand for certain products in foreign markets at no great expense. This translation service is a development that emerged from the Berlin machine learning team in cooperation with several Amazon teams in Europe and the United States. Each year, hundreds of millions of product pages on Amazon's Marketplace are translated with the service.

ENERGY-EFFICIENT ALGORITHMS ARE ANOTHER FUTURE-RELEVANT ISSUE. HOW ARE YOU TARGETING IT?

These days, we already have self-learning software that can defeat human beings at complex board games such as Chess and Go. But these algorithms still require one hundred or a thousand times more energy than humans do. I run marathons, so I'm well aware of the need to ration my energy, because I know it's going to run out at some point, probably at a very unfavorable moment. But these days, academic research into AI is not concentrating on the energy-efficiency of algorithms. However, the more industry applies such demand forecasts, the more important this aspect becomes as the costs of computer processing capacities

are going to play an increasingly important role in the future. Today, we human beings are still the most energy-efficient form of intelligence. It will be a while before computer processors become as efficient as the human brain. The largest challenge facing AI today is no longer the idea of becoming as precise as human beings with regard to perception and prediction; instead, the challenge is to be able to use as little energy as human beings in the process.

OVER 700 EMPLOYEES WORK AT AMAZON'S BERLIN DEVELOPMENT CENTER. AN IMPORTANT GLOBAL AMAZON MACHINE LEARNING TEAM ALSO WORKS FROM OFFICES IN THE GERMAN CAPITAL. WHAT MAKES BERLIN SUCH A GOOD PLACE TO DO BUSINESS?

Berlin has three key advantages: first, leading global scientists work at Berlin universities in the fields of machine learning and robotics. Second, the city has an incredibly vibrant startup scene that continues to attract leading minds from all over the world. And, finally, Berlin is truly international. I really like it and I see over and over again that my Amazon colleagues from all over the world like to work here.

IN WHAT WAYS DO YOU BENEFIT FROM YOUR PROXIMITY TO BERLIN UNIVERSITIES SUCH AS THE TU?

We cooperate with many research institutions, including several universities and institutes such as the Max Planck Society. For example, we joined with TU Berlin to create a model for post-docs in which they work four days with us and one day at the TU's Database Systems and Information Management Group under Prof. Volker Markl. The Amazon Scholar program offers a different model by allowing scientists to take a semester off to work on projects for Amazon. Our CEO Jeff Bezos is already setting a great example by working four days at Amazon and one day at the space company Blue Origin. So the model is obviously quite good.

Read the entire interview with Dr. Ralf Herbrich on www.ki-berlin.de where you'll also find additional articles and reports on the subject of artificial intelligence in Berlin.

WELCOME TO REALITY!

From science fiction to everyday technology

Text: Anja Jönsson

Question: What makes it possible for Siri, Alexa or Google Assistant to answer questions and solve tasks?

Answer: artificial intelligence (AI).

Anyone who spends time in the digital world interacts with it. And AI is a hot topic today. Most magazines, newspapers and science programs have covered the subject in recent months. AI is indeed fascinating, but it's also something many people are afraid of.

Although artificial intelligence is not necessarily anything new, it is most definitely experiencing a renaissance today, many decades after its first mention. People have been exploring AI since the beginning of electronic computing. In the 1950s, one of the most influential theoreticians in the early phase of computer development, British computer scientist Alan Turing, posed the question as to whether machines were capable of thought. Since then, the scientific field of AI has experienced a number of ups and downs. In the 1990s, scientists concentrated more on using AI for real-life problems. A milestone in AI research occurred when IBM's "Deep Blue" computer beat world champion Garri Kasparov at chess in 1997. On a side note, an average chess app on any smartphone these days would be able to beat "Deep Blue," which shows just how far the technology has come in

the meantime. But what is actually behind the recent waves of progress and popularity in AI? The development is being driven in part by massive amounts of data (global data volume grows at a rate of 50% per year); on the other hand, the rapidly growing computing power and capacity of computers along with significantly improved algorithms and approaches to machine learning are also playing an key role.

Scientists have been exploring the subject of AI for decades, but that doesn't mean there is any clear or universally accepted definition of it. American mathematician Marvin Minsky is considered an AI pioneer, having co-founded the brand-new scientific discipline in 1956 with the words: "Artificial Intelligence is the science of making machines do things that would require intelligence if done by men." Minsky argued that the things a human brain accomplishes were not supernatural, and therefore that it must be possible to teach these things to machines.

"There is no universal definition of artificial intelligence," notes Claudia Pohl link, head of artificial intelligence and machine learning at Deutsche Telekom's Innovation Laboratories in Berlin. "We define AI as follows: The goal of research into artificial intelligence is to enable intelligent behavior in machines with the help of science. In that process, one of our key priorities is to point out that AI is designed to support people in their everyday lives, not replace them. AI is a very complex concept, and when they talk about AI, many people are actually talking about machine learning, which

is a subject area within AI.” Pohlink explains further: “Simply put, machine learning is a method of analyzing large amounts of data from which different types of knowledge are ‘artificially’ generated and learned. Groups are formed, images recognized and patterns identified. For example, after an initial learning process, AI is capable of differentiating cats from dogs on photos. Deep learning is a special form of machine learning, a process that goes even deeper, applies to larger amounts of data and makes use of neural networks.”

The neural networks Pohlink is talking about are modeled on the human brain and contain artificial neurons. These are built up in layers and linked to one another. The more layers and neurons there are, the larger the number of complex relationships that can be mapped and displayed. “Much like the human brain, AI has to constantly solve new tasks and respond to changing circumstances, and this requires continuously new information (data) so as to be able to work out models more precisely and develop alternative solutions,” notes Pohlink.

“In other words, AI is constantly trying to improve itself and increase the accuracy of its hits with regard to answers. A good example of this would be facial recognition; the larger the number of different images a neural network receives from a particular face as a basis for its learning,

the higher the likelihood that it will be able to filter that face out of a mass of other faces at a later date.”

The extent of AI’s abilities is very dependent on the quality and quantity of the data provided to it. This means that AI will become more intelligent and more capable of learning when it receives a larger amount of high-quality data. It also means that incomplete or inaccurate data will lead to insufficient results. This is the point at which algorithmic prejudices – often referred to as a “bias” – emerge. “This is where the danger arises that the data is biased,” notes Pohlink. “We have many examples of this in reality. Amazon, for example, tried to use AI to process CVs and garner recommendations as to which candidates were best for a job. They had to halt the experiment because the AI was suggesting primarily male candidates.”

Artificial intelligence is no longer a thing of the future; it’s already part of our everyday lives. This was confirmed in a recent study carried out by the U.S. software company Pega (“What Consumers Really Think About AI: A Global Study,” 2019), which asked 6,000 individuals across the globe whether they used a device containing artificial intelligence. The findings showed the ambivalent relationship of consumers to AI: 84% of respondents used AI (on the basis of specific devices or services containing AI components), such as virtual home assistants, intelligent chat bots and predictive product recommendations), but only one in three respondents was aware of the fact that AI was involved. And only one in two respondents knew that AI solutions make it possible for machines to learn new things. Even fewer respondents were aware of the fact that AI can also solve problems and understand languages. And yet it is precisely these abilities that represent AI’s fundamental characteristics.

Today, our everyday digital lives would be unthinkable without AI. Especially in the various apps and functions on our smartphones, many of them operate with the help of intelligent computer programs. For example, the latest iPhone now features facial recognition. In order to make it possible for users to unlock

the iPhone XS quickly, Apple developed face-ID technology; while scanning the face, the camera uses a point projector to project 30,000 image points onto the face of the user. These points serve as a type of map for the creation of a digital pattern. Even a new pair of glasses or a beard will not confuse the iPhone, seeing as the facial recognition function is constantly improving itself with the help of machine learning. Facebook and other apps also use AI to adapt as effectively as possible to the interests of their users. If anyone is wondering why they're always being shown their best friends' posts, AI is behind it. The abovementioned chat bots represent another important area of application for AI. These computer programs "converse" with users and answer questions. In the process, they rely on large databases that enable them to understand questions and provide appropriate answers.

The Pega survey also shows that 70% of respondents find AI to be troubling in one way or the other. A quarter of respondents even fear that machines will one day be able to take over the world. Companies should reflect on these consumer fears and take advantage of all opportunities to explain the benefits of AI to consumers in an understandable way.

The key starting points for these efforts are education and transparency. According to Pohlink, users should be informed in advance with regard to a number of things, including what happens to their data, what kind of knowledge AI can garner on the basis of collected user data and what this knowledge will ultimately be used for. Today, AI is used solely in a task-related manner, and Pohlink argues that this is why it is easier to overlook what AI is actually capable of achieving.

In fact, these days, the fields in which AI systems can be applied are vast: they include medicine, telecommunications, banking, insurance, financial services, legal services, the automotive industry, public administration – the list goes on. AI has long since arrived in all of these areas. And yet, there is still a palpable sense of apprehension. "Each new technology has its downside," notes Pohlink, who is aware of

the existing fears. "Stephen Hawking thought AI could become a terrible event in human history, and even Tesla head Elon Musk is critical of it." Of course, she continues, "I see it as our duty to make sure that certain ethical principles are observed in the development of AI." In this spirit, Deutsche Telekom – and other companies, as well – have developed a code of ethics for the handling of AI, the guiding principle of which is: AI systems should always be subject to the same laws that apply to humans.

No doubt, the further development of AI is unstoppable. But how can people unfamiliar with the rapid development come to a better understanding of it? Pohlink has an answer: "The easiest way to understand it is to compare it to the introduction of the computer into our everyday lives.

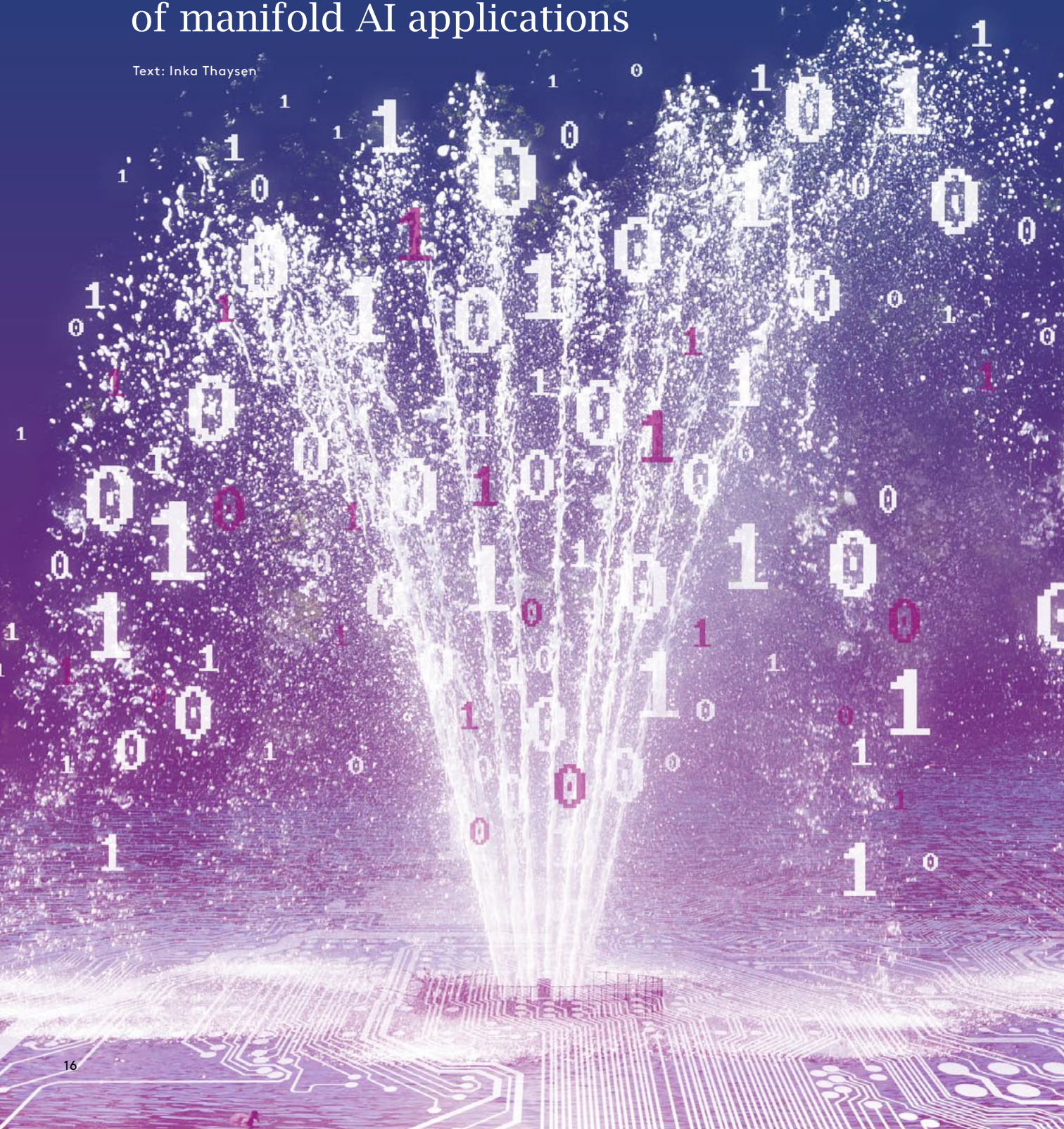
Some people were overwhelmed by this change. Others actively attended classes to be able to grasp and use the new technology."

Pohlink speaks passionately about her area of expertise, and argues that AI seeks to support human beings – not replace them – in their daily lives. "The great thing about AI is that it can be used by anyone for anyone, because it learns to understand the needs and demands of each user. The best way for inexperienced users to relieve their apprehension is to simply welcome it into their lives in a playful manner. AI is designed to simplify our daily lives, so we can expect that its usability will soon become increasingly intuitive as well."

WATER FOR THE DIGITAL MILL

Data-based research is transforming Berlin into an engine for the development of manifold AI applications

Text: Inka Thaysen



The image of an underground canal system and that of a clinical server room could not be more different. Indeed, apart from sharing a monotonous background noise, the two have very little in common. So it's surprising that Professor Dr. Volker Markl drew precisely this comparison at a recent conference of international experts in an attempt to explain what it is that he does. Markl sees himself as a kind of plumber, describing his work in very vivid terms: "You need pipes, high-pressure pumps and treatment plants to be able to do great things with water, like building fountains and cooking delicious meals. It's my job to make sure everything runs smoothly with regard to the water supply."

Of course, the water in this analogy represents an entirely different raw material – one that is in high demand in our increasingly digitalized era, namely data! Markl is head of the Berlin Big Data Center (BBDC) and co-director of the Berlin Center for Machine Learning (BZML). These two Berlin institutions work closely together to examine the fundamentals of what is commonly described as artificial intelligence (AI). This term is not always the first choice in research circles, notes BZML spokesperson and BBDC co-director Prof. Dr. Klaus-Robert Müller, one of Markl's colleagues and himself an international thought leader in the field: "AI is a word designed to give the general public a vague notion of what we do," he says. As Müller notes, the foundation of AI is, in fact, machine learning and database management, and ultimately also mathematics and computer science.

Thanks to the close cooperation between the BBDC and BZML, Berlin now holds a truly leading position in Germany and also plays a pioneering role far beyond its borders. "All machines learn from data. Period," says Müller, emphasizing the universal potential of the work being done in the capital. The ultimate aim is to procure an adequate amount of this data resource, handle

it responsibly, manage its myriad of individual pieces and thus "feed" machines in such a way that they can analyze it in an optimal manner and bring connections to light. "This doesn't mean sitting in front of a computer all day in a quiet room," notes Markl, correcting the pre-conceived idea many have of his job. "In fact, it is a very communicative profession. It's varied and exciting and has plenty of room for ideas and visions. We launch projects, write scientific articles, assist in the emergence and growth of startups, cooperate with industry and generally get around a lot."

Markl and Müller, two multiple award-winning scientists, have already celebrated a number of successes, as their teams regularly function the engine for a number of popular developments. For example, the "Apache Flink" application used worldwide today owes its existence to Markl's research. This app links computers

to one another and manages their cooperation in the analysis of giant amounts of data. Müller's working group alone is responsible for the founding of 15 companies and the creation of 400 new jobs in the capital. Among other applications, his research

has made its way into the software used in image and speech recognition, in autonomous driving for the auto industry and in the field of medicine, where it has assisted in the analysis and forecasting of cancer cell development and used in brain-computer interfaces designed to help locked-in patients make their wishes known. "Centers of expertise are platforms through which we exchange knowledge with different disciplines," says Müller. "We are in constant dialogue with the business community and ultimately also with society. Indeed, we continually make an effort to help people understand what it is that we do exactly."

As Müller notes, the ultimate goal is to generate enthusiasm here in Berlin and make the opportunities understandable to all. It is thus also important to transport these ideas to the political realm. Last summer, Chancellor Angela

"Innovation cannot be planned"

Prof. Dr. Klaus-Robert Müller



Prof. Dr. Klaus-Robert Müller



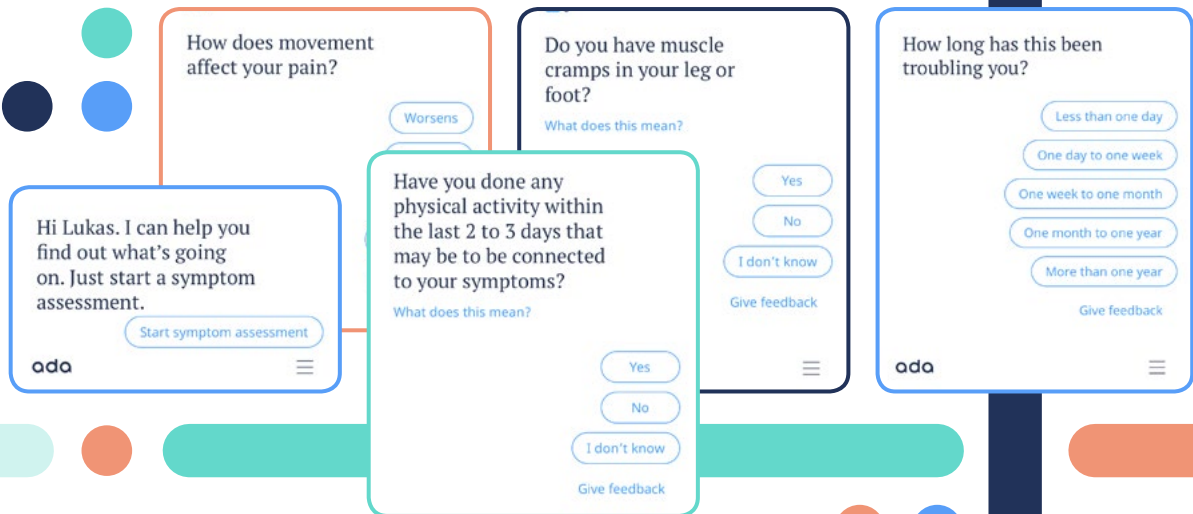
Prof. Dr. Volker Markl

Merkel organized a gathering of AI experts to which Müller and Markl were also invited. The core of the meeting focused on developing a national strategy that would bundle the potential advantages of digitalization. This factor is a key priority for the two Berlin-based scientists, because their location will only be able to flourish if it receives support from both the federal and state levels of government: “We already have the expertise in Berlin, but it must be secured for the long-term in a sustainable way,” notes Markl. He argues that the most important thing is that groups of specialists have time and space for open-ended cooperation, alongside steady and simultaneous funding, an attractive research environment and opportunities to foster young companies. “Most people take what they know and extrapolate that. But that’s not how innovation works! It cannot be planned,” underscores Müller. On the contrary, in the case of broad and ongoing work, sometimes the only thing you can hope for is something unexpected to happen; something that causes “the whole world to look different.” As Müller says, “This is basically our core business.”

At this point, it’s quite clear that there is tremendous big-data potential waiting to be discovered and canalized with the help of data-based research from Berlin. It’s also quite clear that this will involve a certain race with the competition. The United States and China have indeed taken the

lead in the industry. However, in the past several years, Germany – and especially Berlin – has set out on a veritable sprint. “I believe we’re doing pretty well,” says Markl modestly with regard to his own performance. Like Müller, he also emphasizes the growing climate of innovation with new companies and more capital.

Markl also points out that the infrastructure for founding companies has grown significantly. This is a sector that ends up re-inspiring itself over time, as first-generation role models, mentors and business angels pass on their knowledge and industry contacts to the next group of young innovators. Markl also emphasizes the work being done by Berlin’s universities to educate students in the field of big data, which provides students not only with a scientific basis but also with the necessary business acumen. In turn, this is great for recruiting: “There are three times as many fantastic people out there than jobs,” reports Müller. This is a true luxury considering the high market demand. Still, both funding and personnel resources are ultimately finite, he admits, a little tongue in cheek: “I myself want to be able to slow down at some point, become a wise old professor and tend to my roses.” Although the image of this “teacher of machines” in his rose garden is meant, again, more as a symbol, it nevertheless corresponds to the analogy mentioned above. Indeed, roses also need water to grow and unfold their full splendor.



OUCH, ADA!

How an app could change healthcare

Text: Lukas Breitenbach

Ada is an AI-based health platform designed to help people better understand their health and determine the most appropriate next steps toward the right treatment. Ada must be a pretty smart app, right? It's time for two self-experiments.

I must have made a wrong move. At a recent press conference in – of all places – Berlin's Senate Department for Health, I suddenly felt a massive pain traveling from my neck down to my back. It was getting worse by the minute, until the point where I could no longer turn my head. It'll get better, I say to myself. But it didn't get better. Was it time to go to the doctor? For the first time ever, I turn to Ada.

On the app's homepage, it says that a symptom analyses is carried out using Ada every three seconds. Ada was founded in 2011 by doctors, scientists and software developers and launched worldwide in 2016. "Ada already speaks English, German, Spanish, and Portuguese and is learning more languages to reach even more people," the developers write. According to them, Ada draws on a knowledge base that comprises billions of symptom combinations and thousands of

diseases. After determining my symptoms, Ada offers me five possible causes (in the following order): 1) musculoskeletal neck pain, 2) degenerative disease of the cervical vertebrae, 3) acute cervical radicular pain, 4) craniomandibular dysfunction and 5) neck muscle tension. Wow, maybe I really should go to the doctor? A craniomandibular dysfunction is not something to be trifled with – I think.

Ada certainly doesn't do away with a trip to the doctor. Indeed, that's not her goal: "Ada helps people recognize the next steps to take in a safe and secure way, that is, to find the appropriate treatment and to manage their health. Ada is a personalized, AI-supported health helper – with a human touch." No doubt also with a hypochondriac touch ...

Last weekend, I tested Ada again. After a recent visit to a personal trainer, I woke up with unbelievably sore muscles. This time, Ada was sure: The pain in my thighs could only come from a "serious stiffness in the lower extremities." Or from a "pulled muscle or a torn muscle fiber of the quadriceps." If the trainer asks how I'm doing, I'll say it was a torn muscle fiber ...

SAVVY SOLUTIONS

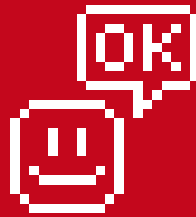
These solutions have what it takes:
They use their smarts – and artificial intelligence – to improve our everyday lives

Text: Christin Berges



USING AI TO FIND THE RIGHT TENANT

Housy is a housing portal that does away with those jam-packed apartment viewings and endless application documents. But it's not a portal for tenants looking to find the right apartment; instead, it's for landlords looking to find the right tenant. The company also developed a personal-assistant chatbot to support people looking for an apartment: with the help of artificial intelligence, M.A.R.T.A. performs search requests for users based on different criteria and a self-developed algorithm. Landlords receive a list of prospective tenants suitable to them, while tenants receive a list of apartments that fit their needs. M.A.R.T.A. provides Housy users a 24-hour service and is currently available via Facebook.



INTELLIGENT ANONYMIZATION

Data protection laws like the GDPR set limits to the ways in which camera images can be processed. Traditional "pixelation" is usually not an option, as it destroys so many of the data essential for applications such as self-driving cars, retail analytics and smart cities. This is why the startup Brighter AI Technologies developed an AI-based form of anonymization that generates artificial faces based on an individual's attributes. This makes it possible to carry out analyses – for example, with regard to demographic information, clothing style and line of vision – without exposing the person's actual identity. In recognition of their innovative approach based particularly on the development of artificial neural networks, Brighter AI was named "Europe's Hottest Startup" by NVIDIA.



DIGITAL PASSENGER

German Autolabs is developing Chris, a digital assistant for motorists that makes individual mobility and access to apps and services more comfortable and secure. Chris is smart and learns like a true passenger. The AI is currently being used in natural speech recognition, driver intent recognition as well as in dialogue modeling (speech/gestures). A number of additional components, such as the recognition of specific traffic situations, are also under development in an effort to further reduce drivers' cognitive burden. With the help of Chris, German Autolabs is building a vertical voice-AI software stack for the automotive industry that will also work in conjunction with language platforms such as Alexa and Google Assistant.

FROM BERLIN



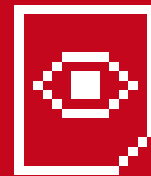
TRANSLATION OFFICE 2.0

Lengoo is a tech startup that develops AI-based translation networks that use neural networks to produce expert translations in over 400 language combinations. Although translation via neural networks is not a new field in AI research, only the availability of high-quality data and ever-increasing computing power make it possible to use these technologies today. The Berlin-based company was founded in 2012 in Karlsruhe by Philipp Koch-Büttner, Christopher Kränzler and Alexander Gigga. At the Deep Berlin Conference in November 2018, Lengoo came in second and took home the Jury's Choice Prize.



AI FORECASTS CUSTOMER MOODS

Parlamind provides AI-based customer service solutions that enable companies to respond to the questions and moods of their target groups. The AI used by this Berlin-based company understands messages sent in by customers on a semantic level and is thus able to determine the concerns and moods of customers as well as other information contained in the messages. This information allows the AI to enter into an independent dialogue with customers and carry out all the requisite related processes automatically. Cutting-edge research findings in the fields of computational linguistics and machine learning form the basis for the ongoing development of parlamind AI technology.



READING SOFTWARE

Acrolinx is equipped with a sophisticated linguistic engine and is the only software platform that "reads" content and helps authors improve upon it. Companies such as Adobe, Boeing, Google and Philips use the solutions generated by this Berlin-based company to create content that is engaging, entertaining and effective. A spin-off of the German Research Center for Artificial Intelligence, Acrolinx was founded by computer linguists working on complex challenges in the field of content creation and communication.



Frank Becker, Collonil's Managing Partner since 1998

**A BERLIN
ORIGINAL**

SHINY SHOES SINCE 1909

Collonil has a long and moving history in Berlin

Text: Christiane Flechtner

It is loud and pleasantly warm in the large production hall on Hermsdorfer Straße 70 in Wittenau. At the very front of the hall, Hasan Oturak is stirring a large pot of hot, rubbery liquid. Oturak is one of more than 120 employees who work at the site and, although he is not a chef, he is mixing ingredients involved in a very special and secret recipe. He adds a splash of yellow and – after comparing it with the color chart of up to 80 different colors – is finally satisfied with the color of the future shoe polish.

“The basic formula for shoe polish is actually very similar to the formula for skin cream,” explains Oturak. After all, the material one is caring for – namely, leather – is nothing but the skin of animals. Collonil uses high-quality raw materials

in this realm, including Aloe Vera, almond and jojoba oil. Combined with extensive know-how and state-of-the-art technologies, these are the characteristics that distinguish the company from the rest.

In its 14,000 square meter production hall, Collonil produces not only creams, but also so-called aerosols, those sprays with and without propellant gas. In the aerosol department, roughly 50,000 spray cans are produced in one single shift. One watches as a variety of cans, bottles and pots “meander” on assembly lines through individual factory departments and are ultimately filled, labeled, laminated, sealed and packed. Then they are sent out to the whole world. These tubes, cans and spray bottles contain the secret ingredient to Collonil’s success. They are the creams, sprays, lotions, foams, waxes and oils



Collonil shoe polish has been made in Berlin for more than 100 years. The secret formula is strictly confidential.

that help to make those pumps, moccasins and hiking boots worn by men, women and children in 93 countries more beautiful.

The history of Collonil is also the history of Berlin. The foundation for the company's success was laid in 1909 in two small rooms on Köpenicker Straße. After the business began to flourish rapidly, the three founders – Karl Esslen and the two Salzenbrodt brothers – expanded and took up new premises on Schlesische Straße 12. Yet another move followed in 1921, this time to Mühlenbeck, a town roughly five kilometers outside of Berlin to the north. After World War Two, the Salzenbrodt brothers decided to move to West Berlin, where the two entrepreneurs saw a better economic future for themselves. Esslen did not follow, which means that in 1952 Collonil became a pure family business under the name Salzenbrodt GmbH & Co KG.

Also in 1952, an expiring lease prompted the company to move one last time. Its new site was the 14,000 square meter factory in Wittenau, where the company has had its headquarters and production facility to this day. Frank Becker, a 58-year-old from in Bremerhaven, took over the reins at the company in the spring of 1998, when he became sole managing director of Salzenbrodt GmbH & Co. KG. Becker has been the company's managing partner since 2001.

“The formula for shoe polish is very similar to that for skin cream.”

Hasan Oturak

“In our 110-year company history, we've experienced several highs and a number of lows. We had to survive two world wars, a global economic crisis and even an expropriation,” says Becker, looking back. “Still, we were able to celebrate small and large successes throughout that time.”

Over the past two decades, Becker was able to maneuver the company onto a new growth course with a consistent strategy of internationalization and an expansion of the product range offered by the Collonil core brand. At the same time, the construction of a new 3,500 square meter Collonil logistics center in Mühlenbeck in 2013 and the addition of 24 new employees marked a clear commitment to the company's tradition in Berlin tradition.

Becker set new trends with shoe care products made of organic materials. He also broke new ground with regard to marketing, for example with the “Outdoor Active” product line, the “Collonil Car Care” line containing innovative special-care products for the auto sector, the “Aviation” line for cleaning leather seats in airplanes and premium leather care for the equestrian realm. Relatively new is the “Collonil Carbon” line, which is designed especially for the most popular shoes today, sneakers. “Our customers are the focus of all of our actions,” says Becker. “We develop and produce high-quality and custom-made products that recognize their needs and fulfill their wishes. This is our task and our motivation.”



Even after more than a century of doing business, one thing remains important to Collonil: its “made in Germany” quality. This attention to quality has long since allowed the company to establish itself internationally. Products of the Reinickendorf-based company are sold in 93 countries on all continents. Collonil also has companies in Austria, Denmark, France and the United Arab Emirates. In addition to its focus on the Gulf region, Collonil holds a leading position in Europe, Japan, Russia and South America. This kind of global activity is built on an openness within the company that allows it to adapt to different regions throughout the world.

Collonil also benefits from the “Berlin factor,” which refers to the allure the capital city holds for Collonil’s partners. “Looking forward, Collonil will focus on digital transformation in addition to positive export developments,” explains

Frank Becker. “Our continued path forward as a modern, innovative and digitalized company engaged in the manufacturing, retail and services industries is well-served by keeping our headquarters in Berlin,” concludes the managing partner.

Collonil

Founded	1909 in Berlin
Location	Berlin-Wittenau
Employees	120
Managing Partner	Frank Becker
Location Highlight	Products from the different decades are displayed in a small museum
More information	www.collonil.com



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Ihr Logenplatz





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BRINGING ADDED VALUE TO BERLIN'S ECONOMY

Continuing growth – Berlin Partner for Business and Technology presents its 2018 annual report

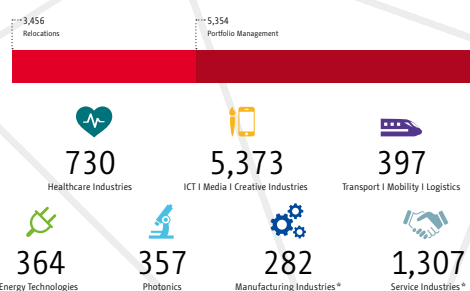
For the fifth consecutive year, Berlin's economy grew at a rate faster than the national average. The most recent calculations for 2018 show a rate of 2.7%. This positive trend is also reflected in the balance sheet for Berlin Partner for Business and Technology GmbH. Along the 323 projects completed with Berlin Partner support will generate some 8,810 new jobs. These companies aim to invest roughly €600 million in the Berlin area.

and the world. With startups in the capital city receiving a total of €2.64 billion in 247 rounds of financing in 2018, Berlin once again defended its title as Germany's startup capital. In 2018, more than every second euro was invested in Berlin companies and, at 113, even more companies

relocated to Berlin than the previous year. In addition, a record number of people – 589 – received their residence permit through Berlin's Business Immigration Service last year.

8,810
new jobs created

In a response to the figures delivered by Berlin Partner, Berlin's Senator for Economics, Energy and Public Enterprises Ramona Pop states: "These results speak for themselves: Both nationally and internationally, Berlin is known for being an attractive place to do business. The city offers a close-knit network of companies, incubators, research facilities and investors – creating an invaluable advantage for innovative projects. With Berlin Partner, we have an economic development agency that cultivates relations with all stakeholders, offers advisory services, fosters networks, initiates joint projects, and markets these advantages. Investors have considerable confidence in Berlin as a location. We must work together to insure this confidence continues." Berlin's success attracts talented individuals, entrepreneurs and investors from all four corners of Germany, Europe



"All this goes to show that Berlin enjoys a strong reputation internationally. Around the world, Berlin is known for its cosmopolitan attitude, high quality of life, creativity and the freedom it

offers. The activities we've undertaken globally since 2008 in cities like New York, Paris, Shanghai and Los Angeles have helped enhance Berlin's international reputation as a great place to live and as a forward-thinking business location bursting with opportunity. "The figures presented in our Annual Report are proof positive of the ongoing success achieved by entrepreneurs in Berlin," says Dr. Stefan Franzke, Berlin Partner CEO. Berlin continues to attract skilled labor from abroad. In fact, the number of residency permits issued through the Business Immigration Service (BIS) increased by 15% year-on-year for a total of 589 in 2018. And since having moved to its

offices in the Ludwig Erhard House in 2017, the BIS has registered more than 1,000 businesses. In 2017, it provided visa and residency support for managers and qualified specialists (including their families) at 318 companies, which is roughly 38% more than in 2016 (i.e., before the move).

This makes Berlin the capital of skilled labor in Germany. "Every week, nearly 900 new jobs are created in Berlin," says Bernd Becking, Managing Director of the Regional Directorate Berlin-Brandenburg for the German Federal Employment Agency. He expects an additional 45,000 jobs with social insurance benefits for 2019. In 2018, the number of those employed in the capital city increased by 53,000 to reach 1.51 million. Boasting a growth in employment of 3.7%, Berlin features the highest rate of any federal state in Germany, with Bavaria (2.5%) and Hessen (2.4%) following. For 2014 to 2018, the Regional Directorate recorded an increase in the number of employed to be at roughly 216,000, with 103,000 highly qualified individuals comprising the largest share (47.7%). For the same period, 36,102 new jobs were created through projects receiving support from Berlin Partner - which accounts for one-third of the total growth in employment.

This is yet another indication of how much projects receiving Berlin Partner support contribute to the positive trends seen in Berlin's economy. According to economists at the Investitionsbank

Berlin (IBB), nearly 3% of all private investment in Berlin can be attributed to investments made by companies that have received Berlin Partner support. The direct effects in terms of investment and employment this brings generate indirect and equally relevant effects on the economy as well.

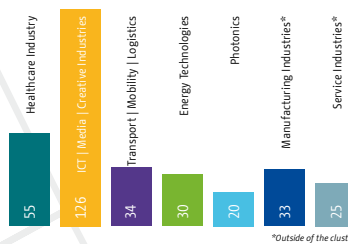
Drawing on a calculation model for the regional economy, economists at the IBB assessed the extent to which these investment and employment effects as well as third-party funds raised in association with Berlin-Partner projects will affect Berlin's overall economic performance in the medium term.

The IBB analysis reports that these efforts will increase Berlin's GDP by a total of €1.6 billion between 2018 and 2020, with an increase of roughly €700 million in the first year of investment alone. The 8,810 new jobs that will be created as a result of the investments made by companies receiving Berlin Partner support will, in turn, have an impact on upstream and downstream sectors as well. The construction and real estate sectors will benefit considerably, as the need for commercial space for incoming companies will grow, as will the demand for housing in the city thanks to the newly created jobs attracting larger numbers of people. And this trend will generate even

more jobs - particularly in those business-related areas requiring a larger employee pool such as the service sectors, manufacturing as well retail and public administration. As a result, an additional 4,000 jobs will be created.

323

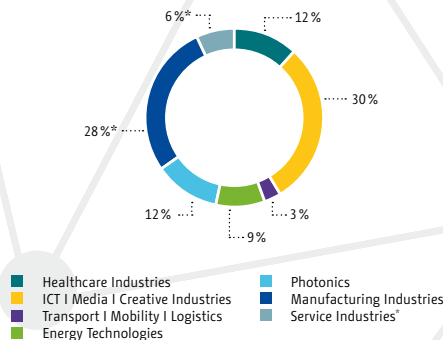
successfully completed projects



€599.8

million

in planned investments



PIZZA ALONE WON'T CUT IT

How companies are vying to attract developers

Text: Christin Berges

AI experts are in high demand in Berlin. Companies looking to win the battle for the best creative minds have to stand out from the crowd. Today, artificial intelligence offers one way forward in locating talent.

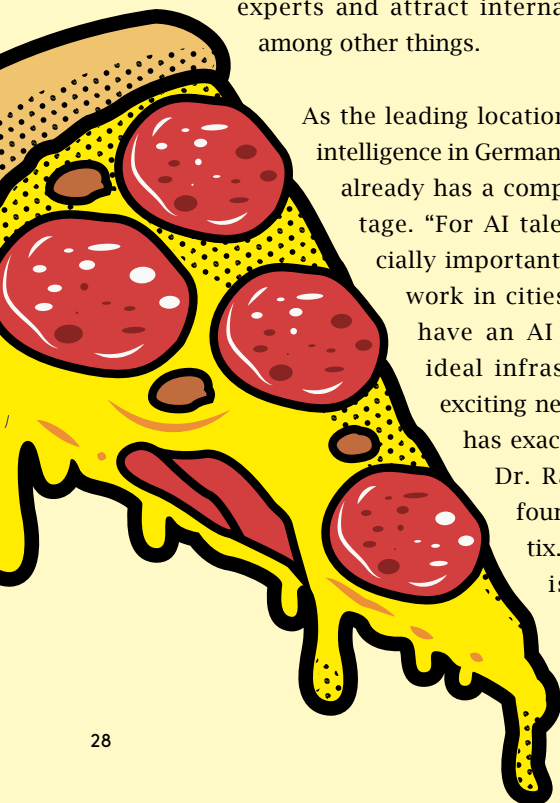
According to the IBB, more than 47,000 jobs were created in Berlin's digital economy over the past ten years. Indeed, the city is thirsty for skilled workers. And Berlin offers IT experts from all over the world a wealth of opportunities to become active in specialty areas. Developers and database managers for AI systems, AI specialists, data scientists, business analysts and IT trainers are at the top of HR managers' wish list. And industry insiders never seem to tire of pointing out the importance of the German federal government's recently adopted AI strategy, which defines important steps to train experts and attract international talent, among other things.

As the leading location for artificial intelligence in Germany today, Berlin already has a competitive advantage. "For AI talent, it is especially important to be able to work in cities that already have an AI hub with an ideal infrastructure and exciting networks. Berlin has exactly that," says Dr. Rasmus Rothe, founder of Merantix. His company is active particularly in the health-care and

automotive sectors, and his international team of 40 scientists, engineers and entrepreneurs excels at moving AI from the research to the market phase and then translating it into disruptive business models. For example, MX Healthcare developed self-learning software that evaluates radiological images in a partly automated manner.

Every growing company is on a constant lookout for the right experts. At Merantix, the most attractive features for AI specialists usually come about as a result of the proximity between science and industry: "At our company, talented professionals have the opportunity to develop companies that disrupt existing markets, without however losing the connection to research. For many machine learning experts, this combination is especially exciting." Yet another key point is that employees are encouraged to pursue their curiosity and passion for a wide variety of subjects. "At Merantix, each new talent has the opportunity to first get to know all ventures before they focus on one subject," emphasizes the company's founder. "We believe that a diversity of subjects is essential to attract and keep talented individuals."

Yet another important step on the path to finding the perfect employees is to be aware of the advantages a company can offer potential candidates and to apply them in the search for talent. An especially important support mechanism in the recruiting process is provided by a community for developers called WeAreDevelopers. Their service is geared, however, not primarily toward companies looking for staff; instead, they focus on the needs of developers themselves, which makes it clear the extent to which the





Merantix founder
Dr. Rasmus Rothe

shortage of skilled workers has reversed the roles of applicants and employers. “On our platform, not only do developers define what they bring to the table, but also what they want from a potential employer,” says founder Sead Ahmetovic,

who launched WeAreDevelopers together with Benjamin Ruschin and Thomas Pamminer. After that, a so-called “matching” phase, developers receive a list of the best employers and jobs. Contact is only made if and when the developers show an interest in a job. Prior to that, the developers remain anonymous.

In the matching phase, WeAreDevelopers – of course – relies on AI. A “matching score” is calculated based on more than 200 parameters that include, among others, salary range, work location and a series of soft skills. Talent managers accompany the process and ensure quality assurance for every match. “AI helps us read between the lines and make connections between employers and talents that are not immediately recognizable at first glance for a human being,” says Ahmetovic. However, the human factor should not be underestimated, and Ahmetovic argues that human beings can still evaluate cultural and creative aspects better than a machine. “It is important to us that developers and employers suit each other, that there is a so-called cultural fit; this is no less important than the hard skills.”

Entrepreneurs are either lucky enough to be approached by WeAreDevelopers directly and involved in the matching phase, or they can sign themselves up at www.wearedevelopers.com/talents. If the company fits the catalogue of criteria, WeAreDevelopers will take it on. The catalogue also includes parameters such as efficient recruiting processes, international orientation, salary schemes, additional benefits, location, work environment, tech stack and current projects and products. The evaluation usually takes no more than two days.



WeAreDevelopers
co-founder Sead Ahmetovic

Employers with the best chances among talent are especially those who are authentic and address the needs of the developers. “Already in the recruiting process, companies should show that they work efficiently and speak at eye-level with

developers. A job interview is not a one-way street, it has to be mutually beneficial,” advises Sead Ahmetovic. Today, salary is not the only crucial factor; the overall work environment is also key. In order to raise awareness for their work among developers, companies need to get involved in the developer community and support it by being present on-site at conferences and meet-ups. “They have to position themselves as developer-friendly, and this is a process in which many stakeholders are involved. These days, you’re not going to attract skilled workers with pizza alone, no matter how good it is.”

The largest developers’ conference in the world will take place in Germany for the first time in 2019: the WeAreDevelopers World Congress is moving from Vienna to Berlin. International tech leaders will discuss the latest and most relevant issues for the future of IT under the title “People – Code – Future” on June 6 and 7, 2019 in the CityCube. The congress will focus on five different thematic areas that describe the typical “lifecycle” of a developer: Constructing Worlds, Controlling Complexity, Applying Disruption, Unchaining Engineering and Coding Society. This means there will be something for developers in all phases, seniority levels and areas of expertise. In addition to lectures by experts, WAD will attract numerous internet pioneers and legends from the developers’ scene, including John Romero, Brenda Romero, Hakon Wium Lie, Rasmus Lerdorf, Andreas Antonopoulos and many others.

<https://events.wearedevelopers.com>

TEA TIME



Lukas Breitenbach in conversation with Rajesh Agrawal, Deputy Mayor of London

MR. MAYOR, WELCOME TO BERLIN! WHY BERLIN, WHY NOW?

Thank you. It's a pleasure to be in Berlin again! I'm in Berlin this week to meet with business leaders, entrepreneurs and local politicians to demonstrate that London remains open to German business, talent and investment. We have a strong trade and investment relationship with Germany and it's vitally important that we continue to work closely with likeminded European cities that share our values. To coincide with my visit, I am delighted to announce a new city-to-city partnership with Berlin Partner and I will be attending the official opening of our new office in Berlin. Both these things demonstrate our desire to work together and build even stronger business links between London and Berlin.

WHAT ARE YOUR EXPECTATIONS FOR THE LONDON OFFICE IN BERLIN?

We see lots of opportunities for businesses across both regions and our new office will help companies maximise the great business environments our two cities have to offer.

Our Berlin office will be our very first London hub in Germany and we're really excited

to be able to provide on the ground support to Berlin companies who are interesting in expanding or setting up in London. Our team in Berlin will also be able to provide local knowledge and advice for London-based companies looking to use Berlin as a launchpad into the German market. As well as helping international businesses setup in London, we also run the Mayor's International Business Programme, an initiative to help London companies export or expand globally. We've seen a lot of appetite from London companies to expand into Germany and have recently run trade missions to Berlin, Hamburg and Frankfurt. We hope to host many more trade missions to Germany and our new office will help to make these even better for the companies involved.

LONDON AND BERLIN ARE COMPETING FOR THE TITLE STARTUP CAPITAL OF EUROPE. HOW DOES THIS AFFECT THE RELATIONSHIP BETWEEN THE TWO CITIES?

With shared strengths for creativity, technology and innovation, it's no surprise to see that London and Berlin have emerged as two of Europe's leading start-up hubs. We want to see both London and Berlin continue to thrive



and our main objective is to encourage greater collaboration rather than competition. As two of Europe's top business hubs we have a joint responsibility to lead by example and promote everything that's great about Europe's fast-growing tech sector and creative industries. Because if London prospers so does Berlin.

HOW WILL BERLIN AND LONDON WORK TOGETHER AS PARTNERS IN THE FUTURE?

We already have a strong working relationship with the city of Berlin but we see lots of opportunities for future partnerships.

Our city-to-city agreement signed today will help us to share knowledge and expertise in fast developing areas where we share mutual strengths such as big data, fintech and Internet of Things. We also see a strong opportunity for us to work together on best practices for the use of technology to solve common urban challenges.

By creating even closer links between our two economic development agencies, London & Partners and Berlin Partner, we can make it even easier for scale up companies to do business across both cities.

Rajesh Agrawal

Rajesh Agrawal was appointed Deputy Mayor for Economics by the Mayor of London, Sadiq Khan, in June 2016. Born in India, Rajesh moved to London in 2001. As an entrepreneur, he founded two fintech companies. He is passionate about promoting entrepreneurship and creating opportunities for young people. Rajesh Agrawal is also the CEO of London & Partners.

London & Partners

London & Partners is the official advertising agency of the Mayor of London. Its goal is to foster London's image worldwide and position it as the best city in the world – to invest, work, study and visit on holiday. In addition, the team also looks for creative ways to promote London and communicate the messages of the mayor to an international audience. London & Partners is a not-for-profit public-private partnership. www.londonandpartners.com

CULTURE TIPS



FROM ARTS AND CRAFTS TO BAUHAUS

To put an end to the myths and platitudes associated with the concept of “Bauhaus”- this is the stated goal of a new exhibition at the Bröhan Museum. In celebration of the 100th anniversary of the founding of the Bauhaus School, the exhibition “From Arts and Crafts to the Bauhaus. Art and Design – A New Unity!” impressively showcases the Bauhaus’ development based on 300 exhibition pieces: from paintings and furniture to ceramics and graphic designs. There will also be a comprehensive accompanying program, including such things as free public tours, up until May 5, 2019.

www.broehan-museum.de

THEATERTREFFEN DER JUGEND

The Theatertreffen der Jugend is a gathering of youth theater productions that sees itself as a place for learning and strengthening individual forms of expression. Launched way back in 1980, this year will once again see remarkable productions presented by young ensembles, all of them winners of a nationwide competition. During the eight-day festival from May 24th to June 1st, the youth theater groups will present their shows at the Haus der Berliner Festspiele alongside a diverse support program.

www.berlinerfestspiele.de/de/theatertreffen-der-jugend/start.html



BLUE MAN NEWS

The team behind the Blue Man Group at Potsdamer Platz is gearing up to make the connection between audiences and the Blue Men even more intense and full of surprises. Their latest program will merge music, comedy, art and science into an original mix that will nevertheless remain true to the group’s now 15-year run in Berlin. “From now on, as soon as they enter the Stage Bluemax Theater, visitors will experience an even more intense blurring of the boundaries between stage and audience space,” the organizers promise.

www.stage-entertainment.de/musicals-shows/berlin/blue-man-group/show/blue-man-group-berlin.html

RENAISSANCE MASTERS

Many consider it to be one of the most fruitful artistic friendships of the Renaissance era: the relationship between Andrea Mantegna (1431 - 1506) and Giovanni Bellini (1435 - 1516). This new special exhibition organized by Berlin's Gemäldegalerie and London's National Gallery in cooperation with the British Museum brings the works of both artists together for the first time to showcase in detail their mutual influence: Mantegna showed Bellini the world of antique art, while Bellini influenced Mantegna with his soft, idiosyncratic painting style. Visitors can expect to see new constellations and exciting juxtapositions involving roughly 100 works. At the Gemäldegalerie until June 30, 2019.

www.smb.museum/ausstellungen/detail/mantegna-und-bellini.html



PICASSO'S LATE WORK

Potsdam's Museum Barberini is already anticipating a surge of visitors: until June 16, it is presenting an exhibition titled "Picasso. The Late Work. From the Collection of Jacqueline Picasso" featuring 132 pieces that have only rarely been shown in public, including many that will be on display in Germany for the first time. All the loans are drawn from the collection of Jacqueline Picasso, the artist's second and last wife. In the past two decades of his life, Picasso produced more portraits of his wife Jacqueline than of any other model. The works show just how innovative Picasso remained until the end of his life.

www.museum-barberini.com/ausstellungen



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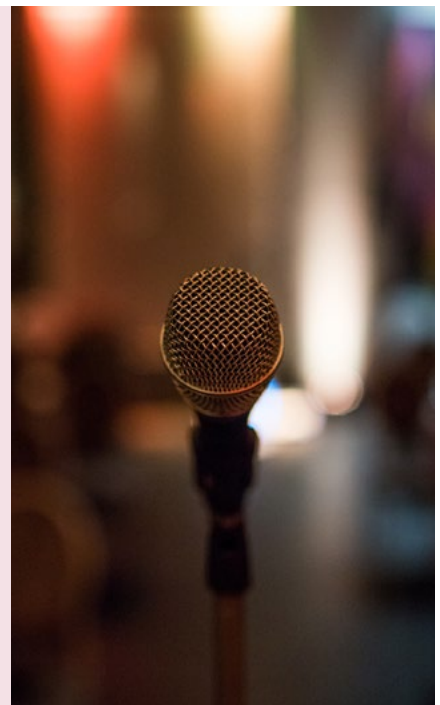
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No seat reservation required – free admission.

WWW.ELLINGTON-HOTEL.COM/EVENTCALENDAR



DATES & EVENTS

April

7 April

BERLIN HALF MARATHON

The Berlin Half Marathon marks the beginning of the season for runners, walkers, inline skater, wheelchair riders and handcyclists. www.generali-berliner-halbmarathon.de

8 April, T-Labs

AI MONDAY

AI Monday is a network event series designed to share knowledge about artificial intelligence and inspire organizations to gather their own AI experience. Each event offers opportunities for networking, two to three presentations followed by Q&A sessions as well as an AI demonstration.

<https://ai-monday.berlin>

8-14 April, Kulturbrauerei

GAMESWEEKBERLIN

The games industry meets technology meets culture: What used to be the International Games Week Berlin is now called "Gamesweekberlin." This seven-day international happening brings together industry reps and games enthusiasts in a variety of gaming, business and development events. www.gamesweekberlin.com

9-11 April, Berlin Exhibition Grounds

DMEA – CONNECTING DIGITAL HEALTH

conHIT is now DMEA: The opportunities provided by digital transformation are becoming increasingly interesting to the fields of nursing, private and hospital-based medical practices and the overall healthcare industry. These are the target groups being addressed by the DMEA with its tradeshow, congress, academy and dialogues. The DMEA program also features a focus on current themes, such as artificial intelligence and blockchain. www.dmea.de

10 & 11 April, Station Berlin

THE BIG.DATA.AI SUMMIT 2019

The Big-Data.AI Summit 2019 (#BAS19) is Europe's leading summit for artificial intelligence and big data. It is also the meeting place for 5,000 like-minded experts and practitioners interested in immersing themselves in the big data and AI revolution. Visitors can look forward to more than 100 presentations, workshops and keynotes. www.big-data.ai

May

15 May

LONG NIGHT OF INDUSTRY

The Long Night of Industry is a unique nationwide event concept whereby companies give potential employees, students and other interested individuals a behind-the-scenes look at their operations. www.lange-nacht-der-industrie.de

6-8 May, Station Berlin

RE:PUBLICA

re:publica
The thirteenth edition of the re:publica conference will once again be held alongside the MEDIA CONVENTION in Berlin and bring together a diverse group of representatives of today's digital society. There will be discussions, debates, arguments and issues examined in depth more than ever before.

7 & 8 May

JOBWUNDER – THE CAREER FAIR

It's the new career fair organized by TU Berlin. Companies, scientific institutions and startups will provide insights into their working environments and offer an opportunity for job interviews on over 500m² of exhibition space. Multifaceted events are in the works: CV checks, individual coaching sessions, company presentations, expert lectures and special consulting services. www.jobwunder-karrieremesse.de

13-19 May

ASIA PACIFIC WEEK BERLIN

The APW 2019 will concentrate on innovations relating to startups and their ecosystems. In an exchange between startups, industry and SMEs, the most important themes relating to the fourth industrial revolution will be discussed in order to develop joint projects and partnerships between Europe and the Asian-Pacific region. www.apwberlin.de

16 May, Telekom Capital Offices

RISE OF AI CONFERENCE

For the past five years, the annual Rise of AI Conference has gathered 800 AI experts, decision makers, opinion leaders and game changers to discuss the effects of artificial intelligence on society, politics and the economy. www.riseof.ai

20 May

AI MONDAY

AI Monday is a network event series designed to share knowledge about artificial intelligence and inspire organizations to gather their own AI experience. Each event offers opportunities for networking, two to three presentations followed Q&A sessions as well as an AI demonstration. www.ai-monday.berlin

25 May, Olympiastadion

DFB CUP FINAL

A major highlight of the soccer season is the DFB Cup Final held each year in Berlin's Olympiastadion. A total of 64 teams will have tried over the course of five rounds to make it to this final match. The winner of the DFB Cup Final qualifies for the UEFA European League.

25 May, Tempelhof Airport

BERLIN E-PRIX: FORMULA-E-RACE

This top race in the full electric motorsport series known as "Formel E (Berlin E-Prix)" will once again be held in Berlin in 2019. The official "FIA Formula E Championship" consists of 12 races carried out in ten different major cities worldwide.

www.fiaformulae.com

June

6 & 7 June, CityCube Berlin

WeAreDevelopers WORLD CONGRESS

The WeAreDevelopers World Congress was launched in April 2015 by Benjamin Ruschin, Sead Ahmetovic, Thomas Pamminger and Markus Wagner as the largest developers' conference in Europe. It gathers together globally leading tech companies and brings international tech leaders to the stage.

events.wearedevelopers.com



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10 Jahre Volleyball in Berlin

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