

SAXONY-ANHALT

Inspiring Germany's future: part 2



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The spirit of innovation and forward planning

Dr. Reiner Haseloff, Minister President of Saxony-Anhalt, introduces a region that is central to the future economies of Germany and Europe

Home to 2.2 million people, Saxony-Anhalt has a reputation as a hub for innovative industries. How does it stand out from other German states?

Saxony-Anhalt lies at the heart of Germany and Europe. Because of that central location, it functions as an interface between the markets in Western and Eastern Europe. It also has well-developed infrastructure, including freeways, rail, waterways and Halle-Leipzig Airport, one of Europe's leading air-freight hubs. Saxony-Anhalt is a traditional industrial location, particularly for chemical and mechanical engineering. But companies in many other sectors have moved to the region, from automotive industry suppliers to manufacturers of renewable energy systems. In addition, we have a dense network of outstanding universities and research institutions.

What are your government's goals for the region's economy and how are international investors contributing to those?

It's important to us that sectors with a strong tradition here, such as the chemical and food industries, have good future prospects. But it's not simply a question of business as usual—these industries need to grow and develop. As a region, we make every effort to promote innovation: in the case of the chemical industry, this means, for example, putting emphasis on a circular economy and increased use of new fuels like green hydrogen. Therefore, in 2021 Saxony-Anhalt adopted a new hydrogen strategy with the aim of establishing a green-hydrogen economy in collaboration with businesses, suppliers and research institutions.

“The arrival of Intel will make us one of the world's most strategically important business locations.”

Dr. Reiner Haseloff, Minister President

On the other hand, we're bringing industries into the region that are not currently here or are under-represented. Our objectives are diversification plus increased independence for Germany and Europe, and the best illustration of this policy is Intel's plan to invest €17 billion on a gigafactory in our capital Magdeburg. It's one of the largest investment projects in Europe at the moment and will make Saxony-Anhalt the center of European chip production.

Alongside that, other investment projects are underway. For example, the Finnish company UPM is building a €550-million biorefinery that will manufacture chemicals from wood. Because of its favorable position at the heart of Europe, Saxony-Anhalt is also becoming a popular location for the logistics industry and Avnet, one of the leading suppliers of electronic compo-



Intel CEO Pat Gelsinger with Dr. Reiner Haseloff in Magdeburg

nents globally, is investing €225 million to set up its largest European logistics center here. A final illustration would be Linde's construction of the world's largest plant for green-hydrogen production, which is nearing completion.

With 60 percent of Saxony-Anhalt's energy coming from renewables, the state is rapidly transitioning away from fossil fuels. What opportunities does this present to investors?

Sustainability, environmental awareness and social responsibility have always played a special role in Saxony-Anhalt, and we're one of the leading German regions for wind and solar power. We will have completely phased out brown coal by 2038 and so the coal-mining area in the south of the state is undergoing huge structural change and modernization, which offers significant opportunities for innovative companies. To help the region manage this comprehensive transformation, it will receive up to €4.8 billion from the German government and the European Union is providing €364 million that can be used to establish or transform businesses.

How attractive is Saxony-Anhalt as a location for investment and business?

We welcome investors with open arms and our local government bodies work quickly and efficiently. These include the Investment and Marketing Corporation (IMG) Saxony-Anhalt, our highly agile economic development agency, plus I've also set up a special department in the state chancellery with responsibility for promoting and supporting large-scale investment projects.

Saxony-Anhalt is an up-and-coming region and the arrival of Intel will make us one of the world's most strategically important business locations. The region is a fantastic area for investment, with not only the right economic conditions but also a long, rich history and a vibrant cultural landscape. For example, Saxony-Anhalt is home to the Nebra Sky Disc, which is the world's oldest representation of the cosmos, as well as being the birthplace of Martin Luther and the Bauhaus movement—it has been giving people the freedom to develop and put new ideas into practice for centuries. This spirit of innovation and forward planning is still here today, which is why our regional motto is “moderndenken” or “think modern”. We would like to invite anyone who wants to be part of Saxony-Anhalt's booming economy to take up the opportunities that our region has to offer.



Dr. Reiner Haseloff
Minister President

Resilient and dynamic economy

Saxony-Anhalt's sustainable economic growth is supported by investments in innovation, digitalization and young businesses

In 2021, Saxony-Anhalt demonstrated the strength of its economy by recording a gross domestic product (GDP) of €67.1 billion, an uptick of 5.9 percent on the previous year.

Despite the ongoing backdrop of global challenges, the small federal state continues to post impressive results. “Our GDP grew by a further 4.5 percent in the first half of 2022 alone. That's stronger growth than the national German average and it's the fourth-best performance among the country's 16 states. Our economy has reached and exceeded its pre-COVID level, which shows its resilience and ability to pull itself out of crises,” states Sven Schulze, State Minister for Economic Affairs, Tourism, Agriculture and Forestry.

Through the close networking of science and business, we create the opportunity to bundle capacities in innovative fields.”

Sven Schulze, State Minister for Economic Affairs, Tourism, Agriculture and Forestry

Saxony-Anhalt also ranks as the top destination in Eastern Germany for inward investments, with a record 272 new projects worth €3.2 billion being attracted to the region in 2021, he adds: “Investment and settlement activity in Saxony-Anhalt have been unaffected by the crisis. We've seen particularly brisk investment in the areas of battery technology, new mobility, medical technology, biotechnology, pharmaceuticals, the bioeconomy, information and communication technology, the food industry, semiconductors and logistics.”

That list clearly illustrates how Saxony-Anhalt has built on its traditional global competitiveness in sectors like chemicals, engineering and the automotive industry to become a region for future technologies. And the state's government has provided the foundations for that transformation by promoting innovation through investments in infrastructure, research, entrepreneurial-

ism, digitalization and ensuring that 90 percent of its workforce receives professional or university education.

Notable catalysts of innovation are the region's Centers of Excellence for industry. Backed by state-of-the-art infrastructure, these act as clusters for key sectors and they include the region's five substantial chemical parks that make up the bulk of the famous Central German Chemical Triangle. At all 12 centers, multinational giants such as Akzo Nobel, Bayer, Dow, Shell and TotalEnergies work alongside young companies, universities and many of the state's 29 cutting-edge Fraunhofer, Leibniz, Max Planck, Helmholtz and other research institutes. “Within Saxony-Anhalt, clusters and networks have continuously developed into competence centers that are growth and employment engines. Through the close networking of science and business, we create the opportunity to bundle capacities in innovative fields and to mediate between theory and practice. The government supports this cooperation between companies, research and development (R&D) institutions, service providers and other relevant partners with cluster funding,” he reveals.

Another focus for the government is boosting the innovative potential of its small and medium-sized businesses through funding programs that are available for, among other things, R&D projects, loan guarantees, equity investments and digitalization. “Digitalization brings advantages and opportunities for our economy. The digital technologies being used by industries in Saxony-Anhalt are constantly being optimized, thereby increasing productivity. This enables regional economic growth, which has a positive effect on corporate growth and the labor market. Information technology has become a central competitive factor and an important driver of innovation in the region—it's permanently changing business models and facilitating new value-added processes, services and products for our economy,” the minister reveals.

Startup funding in particular plays an important role in the government's strategy for developing innovation in the region's economy, asserts Schulze: “Around €70 million is available from European Union and state funds for our start up measures, which include coaching, grants and loans for founders and their companies. There's been a shift in startup activity in Saxony-Anhalt within the last few years toward innovative, knowledge-based companies with growth potential, an upward trend corroborated by the German investment and development bank KfW's startup monitor. For us, this is confirmation that our measures to support and promote startups are bearing fruit.”



Sven Schulze
State Minister for Economic Affairs, Tourism, Agriculture and Forestry

The ideal environment for tomorrow's industries



25% of Europe's total population live within 500km of Saxony-Anhalt



60% of Saxony-Anhalt's energy already comes from green sources



2 general universities, 8 universities of applied sciences and 29 research institutes

A perfect ground for startups

Saxony-Anhalt has created the perfect conditions for tech-focused entrepreneurs in diverse industries to prosper

Startup activity in Saxony-Anhalt has gained significant momentum in recent years, with innovative companies emerging in numerous sectors that are rapidly attracting global interest from customers and investors.

“Traditionally, Saxony-Anhalt fosters excellent startups in mechanical engineering, information technology and life sciences, but more and more of our startups with business models based on environmental, health, sustainability, social and other issues are getting attention,” reveals Daniel Worch, managing director of Univations, a company owned by Martin Luther University Halle-Wittenberg that is tasked with supporting startups, managing innovation and accelerating knowledge transfer throughout the region.

Although Saxony-Anhalt’s startup ecosystem is not the largest in Germany, one major advantage for young companies is an extremely strong support network that connects all stakeholders. Economic development agency Investment and Marketing Corporation (IMG) Saxony-Anhalt is always on hand to assist international entrepreneurs wanting to move to the region or to link up global companies and investors with local innovators, for instance. Award-winning Univations is also a central cog of the ecosystem, Worch explains: “We’re a link between startups and investors, plus relevant partners from business and science. We work very closely with all chambers, authorities, universities,

“Traditionally, Saxony-Anhalt fosters excellent startups in mechanical engineering, information technology and life sciences.”

Daniel Worch, Managing Director, Univations

institutes, science parks, business angels and other capital providers.” Among its projects that are backed by state and European-Union funding, Univations’ HIER.we go! online portal is a comprehensive information source for startups. Another of its crucial initiatives is InvestForum, through which it has provided 300 startups with free coaching and workshops, while its investor matching services have brokered €70 million in funding for the investment-ready firms it has mentored.

A second benefit is well-established local sources of public and private funding, such as the state-owned Investment Bank Saxony-Anhalt and Mittelständische Beteiligungsgesellschaft Sachsen-Anhalt, whose shareholders are banks, insurance firms, chambers and business associations. The most prominent source is IBG Beteiligungsgesellschaft Sachsen-Anhalt, a state-owned venture capitalist with investment funds worth over \$160 million that currently has around 50 tech-based companies in its portfolio. Since 2015, its funds have been overseen by the experienced German VC fund manager bmp Ventures. “We started investing in tech startups in 1997 and have a track record of over 250 investments, 100 exits and 20 initial public offerings. We’re hands-on VC



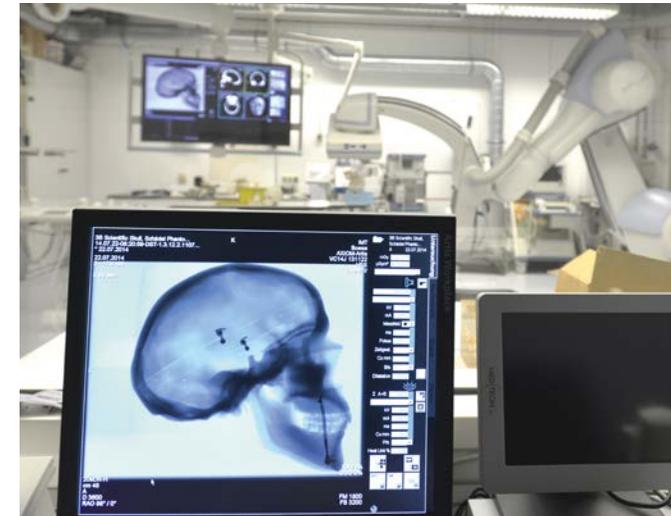
Europe’s Solar Valley is seeing a startup boom

managers focused on motivated entrepreneurs that want to build up companies in high-growth markets,” says bmp’s managing partner, Jan Alberti.

In terms of IBG’s funds specifically, bmp’s goal is to invest in innovative, scalable ideas with unique selling points in sectors that reflect Saxony-Anhalt’s economic priorities, such as digital solutions, industrial technologies, life and material sciences, cleantech and mobility, he states: “In many cases, we’re the first institutional investor in our portfolio companies and we ensure financing for at least two years, either alone as lead investor or with co-investors. Typically, we invest over several financing rounds.”

Just a few examples of the locally founded startups that are thriving in IBG’s portfolio are Paxly, an e-procurement platform for cardboard that has transformed the German packaging market; Baby Sweets, an online shop for unusual baby clothes and accessories; pure-systems that has developed world-leading software for production-line management; and Twinner, a company with a unique system for generating 3D digital twins of cars. As well as IBG, Twinner’s investors include the Japanese industrial and automotive conglomerate Sojitz Corporation, while its most recent Series B funding round raised a further €40 million. Those investors and international clients like BMW, VW and Renault believe it can become a global standard for the online selling and leasing of used vehicles. “Twiner provides the most advanced image-capturing technology and inspection system for the remarketing process,” enthuses Gilles Meriadec, business director of Renault’s Factory VO in France, which is using the technology to digitalize up to 45,000 used vehicles a year before refurbishing and reselling them.

As well as supporting businesses founded in the region, “bmp invests IBG funds in outstanding startups that aim to have a footprint in Saxony-Anhalt. Due to our approach, we’ve attracted several great startups to the state,” asserts Alberti. An illustration of this is Solar Materials, which has joined the region’s expanding circular economy to pilot and scale up its recycling technologies that economically recover all raw materials from obsolete solar panels. Two others are Conceptboard, whose online whiteboard for digital collaboration is now used by more than 2 million people in 100 countries, and Coman Software that spun off from a Berlin-based company with the help of \$1.2 million in funding from IBG. Today, Coman’s process-management software for plant construction in the automotive, mechanical engineering, construction and other industries is an essential tool for global companies like Siemens, Daimler and BMW.



Saxony-Anhalt is a hotspot for medical technologies

A further factor driving the region’s success as a base for entrepreneurs is its geographical position. “Saxony-Anhalt is very centrally located in the middle of Germany: Berlin can be reached in about an hour, Munich in three and Frankfurt in 2.5, while Halle-Leipzig Airport is a European flight hub. Saxony-Anhalt also stands for good childcare, a high standard of leisure activities and a comparatively low cost of living,” Alberti comments. In addition, notes Worch, “The state contains the perfect infrastructure for startups. There are inexpensive and very well-equipped work spaces and, in contrast to some startup hotspots, you can find qualified employees at a suitable price.” Those elements have helped enable the quick expansion of businesses like Tesvolt, which began life in a Saxony-Anhalt garage, became a global leader in energy storage after building Europe’s first gigafactory for commercial battery storage systems and is now moving into hydrogen projects. According to Simon Schandert, one of its founders: “You have to be somewhere where you have the best chance of solving problems and where you have access to good conditions. Saxony-Anhalt is a highly promising choice for company location projects.”

Many of the region’s startups were founded by people who studied or worked at its first-class universities and research institutes, and they retain close connections with them as they grow. For instance, medtech firm Surag, which has created a plug-and-play sensing system that is revolutionizing key-hole surgery, came out of Otto von Guericke University Magdeburg and still works from its campus. Also in the health arena is PerioTrap Pharmaceuticals, a spin-off from the Fraunhofer Institute for Cell Therapy and Immunology Halle, that is developing innovative treatments for periodontitis. And another example is Neotiv, which raised €10 million in November 2022 in a pre-Series A financing round led by Capricorn Partners, High-Tech Gründerfonds and IBG to accelerate its digital platform for early Alzheimer’s screening. For Neotiv’s CEO and co-founder Chris Rehse: “Being located in Saxony-Anhalt is a unique opportunity. World-renowned research centers like the German Centre for Neurodegenerative Diseases and the Institute of Cognitive Neurology and Dementia Research offer us a vital environment for transferring groundbreaking science into products that have high value.”

The region also boasts a wide range of industrial parks and clusters of excellence that provide startups with services and space, Alberti says: “Saxony-Anhalt has many excellent clusters in various fields of technology. An innovation hub for medtech has been formed in Magdeburg, for example, while Bitterfeld-Wolfen Chemical Park has emerged as a cluster for chemistry

Saxony-Anhalt: 6 key advantages for establishing and growing innovative businesses



A strong support network of business, science and financial partners



Well-established public and private sources of capital and research funding



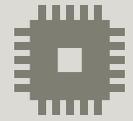
Quick and easy access to markets and suppliers **throughout Europe and beyond**



Competitive costs for living, work spaces and hiring highly **qualified local employees**



Close proximity to world-class and collaborative universities and research institutes



Clusters of excellence for a range of technologies that help **accelerate business growth**

and cleantech startups. In life sciences, the Weinberg Campus, as the largest science park in central Germany, stands for its excellent infrastructure and an accelerator that supports early-stage companies.”

Saxony-Anhalt is home to a number of impressive general and industry-specific accelerators, with Weinberg’s being focused on health, medicine, chemistry, the bioeconomy, energy and recycling. One recent graduate of its accelerator is Marco Götz, co-founder of matrihealth that is making natural wound dressings from elastin: “I was particularly impressed by how many small, highly innovative companies and startups there are at the campus, alongside the large institutes and research facilities. This generates an exciting, motivating atmosphere.”

Probably the best place to uncover the next generation of Saxony-Anhalt innovators is the annual InvestForum Pitch Day, where startups and founding projects present their concepts to global investors. “It gives investors the opportunity to recognize the great potential of our startup scene, establish contacts and sound out potential business relationships,” says Sven Schulze, State Minister for Economic Affairs, Tourism, Agriculture and Forestry. “Saxony-Anhalt will continue to create startup-friendly conditions and to drive startups forward.”

Universities: One step ahead

A rich research ecosystem that includes eight universities of applied sciences and two world-class general universities drives innovation forward

“We’re a location for future-oriented teaching, international research, an interface for successful knowledge and technology transfer to regional companies, an incubator for spin offs, and a development engine for the state and beyond,” says Prof. Dr. Jens Strackeljan, rector of Otto von Guericke University Magdeburg (OVGU).

That description aptly sums up not just his university, but all of Saxony-Anhalt’s higher education institutes, which generate over 10,000 new graduates every year, while also partnering with businesses, the region’s 29 globally renowned research institutes and each other on practical research related to the local economy’s sectors of expertise.

One illustration of this is Saxony-Anhalt’s unique Competence Network for Applied and Transfer-oriented Research, through which Harz, Merseburg, Anhalt and Magdeburg-Stendal Universities of Applied Science work together on growing research capacities and exchanging knowledge with companies in their specialist areas of expertise that include automation, information and communication technologies, sustainable processes, life and environmental sciences, engineering, industrial design and health.

Another vital innovation partner for the economy is the state’s biggest university, Martin Luther University Halle-Wittenberg (MLU), that supplies academic excellence across a wide range of subjects to a student body of over 20,000. Based in the vibrant city of Halle, it has elite strengths in molecular-materials and life-sciences research, which it collaborates on closely with firms based at the nearby Technology Park Weinberg Campus, the most important site for those sectors in central Germany. To date, MLU has nurtured about 200 startups through both its associated institute Univations that promotes state-wide innovators, and by offering founders inexpensive access to laboratories and workshops for prototype development.

Around 13,000 more students from 100 nations study at OVGU’s campus in the city of Magdeburg. “The university’s teaching is focused on a large number of technical and scientific study programs, vocational training, teacher training, economics and humanities. Our bachelor and master’s degree courses are characterized by interdisciplinary approaches, with forward-looking combinations such as medicine and technology that will help shape society in a sustainable manner. In addition, students find an ideal, flexible environment for study here, thanks to our dense network of partnerships with other universities in Saxony-Anhalt,” explains Strackeljan.

Working alongside those students are hundreds of scientists, he adds: “Our research priorities are in engineering, natural sciences and medicine. Interdisciplinary and internationally connected, our research is increasingly based on application-related transfer of scientific knowledge to the economy and society—the potential of our university community to find



Jens Strackeljan, Rector, Otto von Guericke University Magdeburg

viable and sustainable solutions for urgent challenges is multi-layered and tangible.” Areas in which OVGU has world-leading capabilities that are catalyzing regional innovation include dynamic systems and neuroscience: it is one of only two places globally that has a 7-Tesla Connectome magnetic resonance imaging (MRI) system, which is available for use by other institutions in the state, for instance. Medtech is another, as evidenced by successful startups it has fostered like Neoscan Solutions, which has developed compact MRI equipment for newborns and infants, and Raydiac that has designed an innovative digital imaging system for minimally invasive cancer treatments. OVGU has also played a key role in making Saxony-Anhalt a hub for medtech as a partner in the Stimulate research campus, where it collaborates on projects related to that sector with other institutions and companies.

“The potential of our university community to find viable and sustainable solutions for urgent challenges is multi-layered and tangible.”

Prof. Dr. Jens Strackeljan, Rector
Otto von Guericke University Magdeburg

OVGU is a prominent force in sustainable mobility as well, notes Strackeljan. “Last year saw an important milestone in our mobility research capabilities when we started constructing our new Center for Method Development (CMD), where our competencies in mechanical, electrical and process engineering, plus natural and computer sciences will be inter-linked. We’re creating hybrid environments that will shorten development times for sustainable drive technologies, new vehicle concepts and innovative components, which will be available to business and science partners.”

The effective cooperation on education and research between universities and the private sector in Saxony-Anhalt attracts innovative international investors, he states: “The university and research landscape contributed to Intel’s decision to locate its \$17-billion semiconductor factory in Magdeburg, for example. The challenges that a gigafactory entails are enormous, although the associated opportunities for the city, the state and its universities are just as great—we see it as a joint task to help shape the future.”