

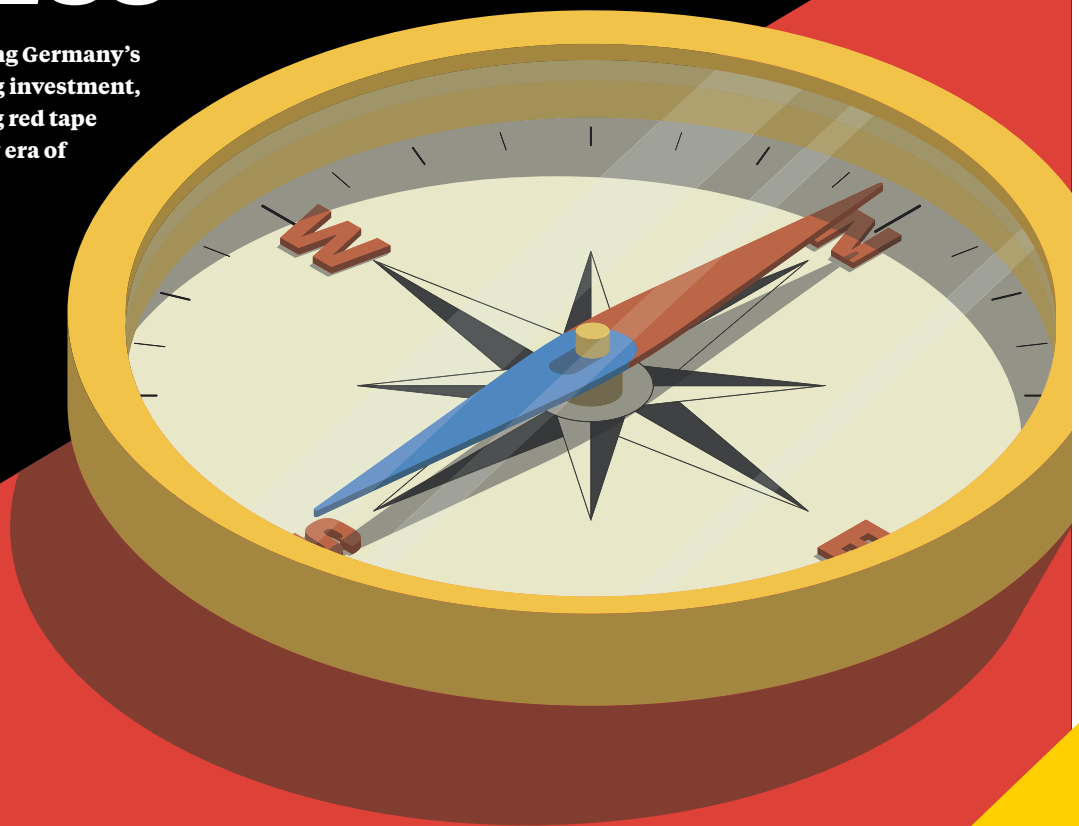
MARKETS

GERMANY

Insights into Europe's Biggest Economy 3 / 25

GERMANY MEANS BUSINESS

A new government is realigning Germany's competitive strategy, boosting investment, rethinking fiscal rules, cutting red tape and setting the stage for a new era of prosperity. → **Page 4**



ARTIFICIAL INTELLIGENCE

Agentic AI is set to transform Europe's economy, and Germany is at the forefront of innovation.

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HIVE MIND

Germany's buzzy swarm robotics sector is redefining smart production and logistics.

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Circular Textiles
Reju's state-of-the-art plant in Frankfurt turns waste into value.
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FOCUS

A CHANGE OF LEADERSHIP

With his new government of conservatives and Social Democrats, Chancellor Friedrich Merz plans to lead Germany to a "new era of prosperity"

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ARTIFICIAL INTELLIGENCE



Agents of Fortune

Agentic AI is set to transform Europe's economy, from industry to professional services. Germany is at the forefront of this silent revolution.

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CIRCULAR ECONOMY



Prêt-à-porter

With its high-tech textile recycling plant in Frankfurt, French company Reju is supporting Germany's pivot to a circular economy.

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ENTREPRENEURSHIP

A Breath of Fresh Air

German industry needs the innovative solutions that green tech start-ups and scale-ups bring to accelerate the sustainable transition.

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Verena Matl



on the basis of a decision
by the German Bundestag



"The stage is set for renewed growth and transformation. Germany is ready to welcome investment, talent and innovation."

Dear Reader,

Germany has entered a new political and economic chapter. With the government's fresh agenda to boost investment, streamline bureaucracy and strengthen competitiveness, the stage is set for renewed growth and transformation. This is not only a signal to domestic companies but also an open invitation to international partners: Germany is ready to welcome investment, talent and innovation. Prosperity is a priority.

In this issue of *Markets Germany*, you will discover how these current policy shifts connect with the dynamism of our economy. From swarm robotics redefining logistics and production, to agentic AI reshaping industries, to circular economy pioneers turning waste into value, Germany continues to demonstrate why it is a global leader in technology and sustainability. Green tech start-ups, established medium-sized "hidden champion" companies and international investors alike will find fertile ground for collaboration.

Our mission at Germany Trade & Invest is to help you navigate these opportunities. This magazine offers a glimpse at the people, ideas and industries driving Germany's future. I invite you to explore, connect and be part of these developments in Germany.

Julia Braune, Chairwoman & CEO

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ONE TO WATCH

Photo: Roman Vagizov/CELUS (2025)

ANDRÉ ALCALDE FOUNDER AND VICE PRESIDENT OF CELUS

Alcalde and his co-founders have pioneered AI-driven component matchmaking for the manufacturers of printed circuit boards.

Smartphones, coffee machines and electric vehicles all share one vital component: printed circuit boards (PCBs) packed with tiny elements such as microchips and resistors. For technicians and engineers, selecting the right components when designing PCBs can be a complex and time-consuming task. “There are now around 500 million components available globally,” says André Alcalde, co-founder of Munich-based software company Celus. To identify the right part, PCB developers have to sift through countless pages of product datasheets.

Alcalde and his co-founders Alexander Pohl and Tobias Pohl aim to streamline this workflow using artificial intelligence (AI). Celus compiles product data from component manufacturers — specifications such as size, technical parameters, availability

and pricing — into a centralized database. Engineers input the details of their project and requirements into the platform and the smart algorithm recommends suitable components. Alcalde calls it “AI-driven matchmaking.”

Before launching Celus in 2018, Alcalde studied electrical engineering in his native Brazil. He moved to Germany in 2011 and worked as an electronics developer, later completing a Master’s in Innovation and Business Creation at the Technical University of Munich, where he met his co-founders. “Munich is the ideal location for us,” he says. “It offers a strong ecosystem for tech companies, a well-educated talent pool and close proximity to many potential clients.”

Today, Celus’s solution is used by many well-known companies, including industry giants Würth Elektronik, Siemens and Blues.

Quick facts

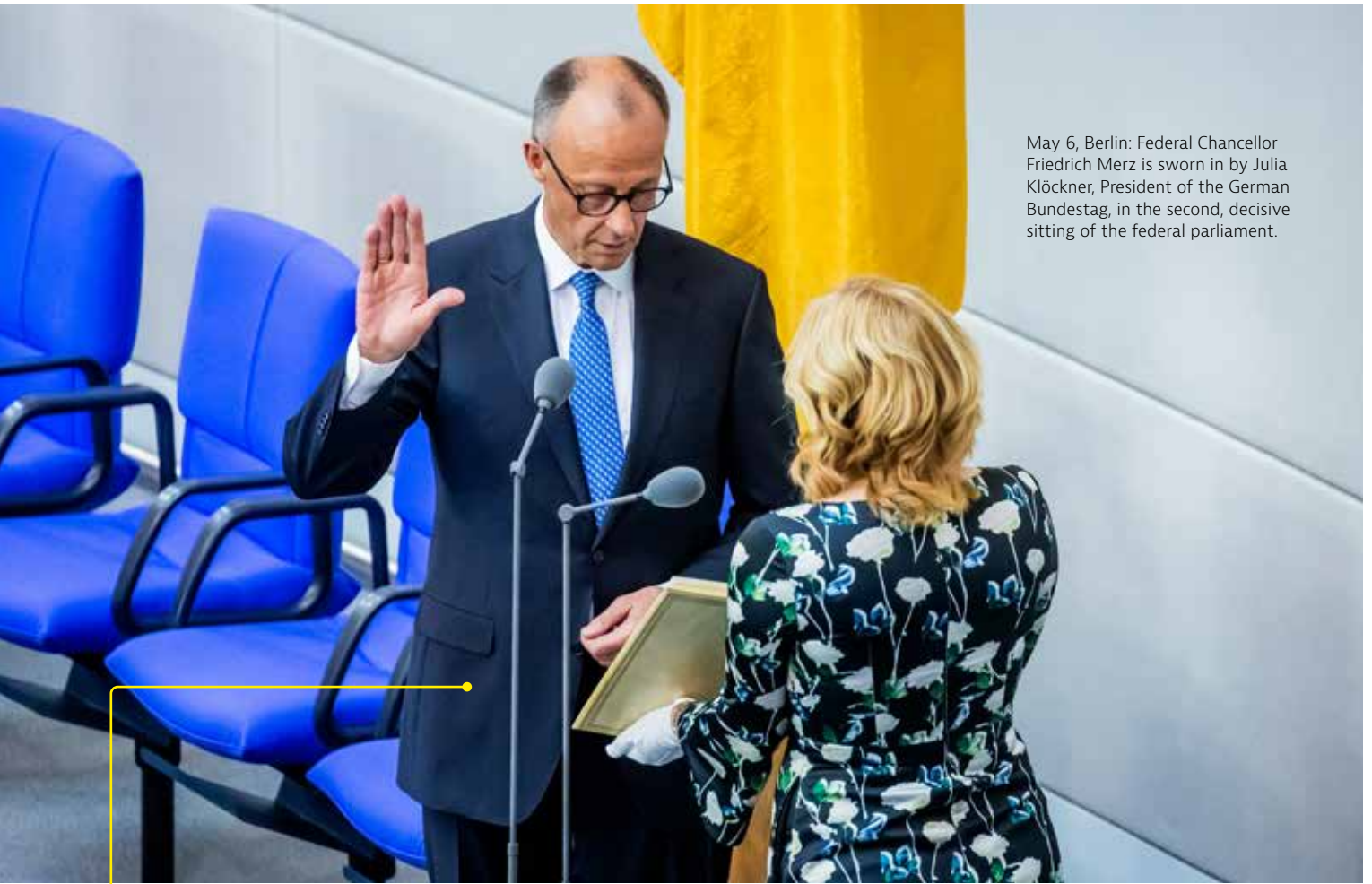
NAME	André Alcalde
NATIONALITY	Brazilian
AGE	38
JOB TITLE	Founder and Vice President of Strategic Development
QUALIFICATION	B.Sc. Electrical Engineering, Executive MBA Innovation & Business Creation
COMPANY NAME	Celus
LOCATIONS	Munich (Germany, headquarters), Porto (Portugal), Austin (USA)
INDUSTRY	Software development
EMPLOYEES	90

KEY PLAYERS IN MERZ'S GOVERNMENT (from left to right): Karsten Wildberger (German Federal Minister for Digital Transformation and Government Modernization), Lars Klingbeil (Vice Chancellor and German Federal Finance Minister), Boris Pistorius (German Federal Minister of Defense), Katherina Reiche (German Federal Minister for Economic Affairs and Energy) and German Federal Chancellor Friedrich Merz himself.



A CHANGE OF LEADERSHIP

In the spring, Germany got a new government made up of conservatives and Social Democrats and led by Federal Chancellor Friedrich Merz. So what's likely to change, and what course is the country now set on?



May 6, Berlin: Federal Chancellor Friedrich Merz is sworn in by Julia Klöckner, President of the German Bundestag, in the second, decisive sitting of the federal parliament.

FRIEDRICH MERZ, THE NEW CHANCELLOR

He was confirmed in that position no less than 31 years after first being elected to parliament. The author of a book titled *Venturing More Capitalism*, he also had a previous career as a corporate lawyer and has worked on the boards of multiple large corporations.

The Bundestag rose in applause as it confirmed one of the great political comebacks in the last decades in Germany. On May 6, the veteran conservative politician Friedrich Merz became German Chancellor — a full quarter of a century after he had first been elected chairman of the center-right Christian Democratic Union's parliamentary group.

Chancellor Merz did not waste much time basking in his achievement. In his first governmental statement to parliament, he declared his intention to turbocharge the German economy. His strong pro-business stance was hardly a surprise — this was after all a man who once wrote a book expounding the virtues of economic liberalism. "It is in our power to once again become a locomotive of growth upon which the world looks in admiration," he told lawmakers. "Behind us lies a lot of hard work, but before us lies a solid plan, with which, together, we will be able to move our country forward again."

A bold statement, but one that could be made with confidence, thanks in no small measure to an act by the previous parliament: In

March, the outgoing Bundestag amended the German constitution to loosen limits on government credit, freeing up more than EUR 500 billion for government investments. And defense spending — which will now rise dramatically — was completely exempted from budget limits. The greater room to maneuver could make a monumental difference, according to Julia Braune, CEO of Germany Trade & Invest (GTAI), the country's international economic promotion agency. "Germany's GDP is around EUR 4.3 trillion," Braune explains. "So you see, the extra leeway is indeed significant."

Stimulus and reductions

But what is the "solid plan" which Chancellor Merz was referring to? The coalition agreement, essentially this government's roadmap, makes economic growth and prosperity the top priority. The agreement begins with the economy, and one of its headline pledges is to trigger an "investment offensive." Specifically, the government has promised to set up a EUR 10 billion "Germany Fund" stimulus package, aimed especially at helping small and medium-sized enterprises get the financial support they need

KEY GOVERNMENT FIGURES



LARS KLINGBEIL

Vice Chancellor and
German Federal
Finance Minister

From humble beginnings as the son of a soldier, Klingbeil has served as the Social Democrats' party leader and general secretary and is on the board of Germany's most successful football club, Bayern Munich.



KATHERINA REICHE

German Federal Minister
for Economic Affairs and
Energy

Reiche has significant experience in the private sector, and specifically energy, having led E.ON subsidiary Westenergie and also chaired Germany's National Hydrogen Council.



BORIS PISTORIUS

German
Federal Minister
of Defense

The only minister to retain his position from the previous government (he has served in that role since 2023), Pistorius has a background in the armed forces, having completed military service in his youth.



KARSTEN WILDBERGER

German Federal Minister for
Digital Transformation and
Government Modernization

Wildberger has experience in multiple industries in the private sector, including telecoms, energy and electronics, and oversaw digital transformations at companies such as Telstra and E.ON.

to scale up. The government believes its initiative will attract further private investments of at least EUR 90 billion. "Investments are the foundation of a strong economy," the coalition agreement states. "This is the roof under which we will connect the power of private financial markets with the long-term strategic approach of state investment."

The plan is not only to positively stimulate public funding, but to alleviate or remove the various burdens that have been holding back businesses. At the forefront of the agenda is reducing energy costs. "We are going to subject our energy policy to a reality check," said Minister for Economic Affairs and Energy Katherina Reiche, who has a background in the energy sector, in her speech to the Bundestag on May 16, 2025. "Reliability of supply and affordability must return to the center of our political actions."

By lowering electricity taxes, introducing a cap on fees for using the energy grid, reducing bureaucracy and making subsidies available to energy-intensive industries, the government hopes to make it more affordable to do business in Germany — which remains Europe's

largest economy. At the same time, the coalition agreement also commits to expanding Germany's green hydrogen energy network and continuing to invest in renewable energy sources.

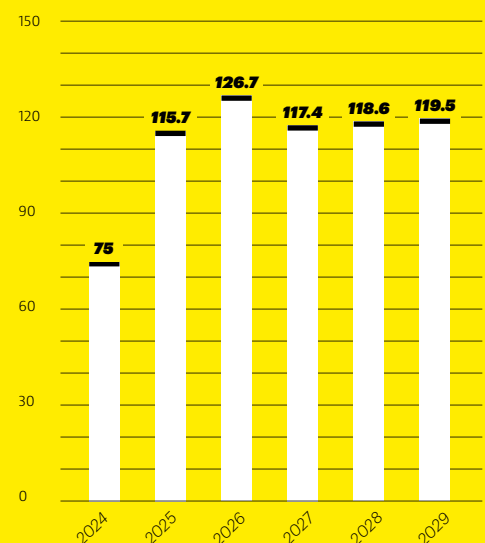
Positive first reviews, cutting red tape

The incoming coalition's agenda earned plaudits from various business quarters, including the Federation of German Industries (BDI), an umbrella organization representing multiple trade associations. The BDI called the government's agenda "important and correct." Further encouragement for businesses comes in the form of a degressive 30-percent tax write-off for equipment investments over three years. And corporate taxes are also set to fall, with five incremental reductions of one percent beginning in 2028 — measures also praised by the BDI, which described them as "important, positive signals."

The government doesn't just want to make doing business in Germany more profitable; it wants to make it easier too by reducing bureaucracy. As Minister Reiche succinctly put it on May 16, "We have to simplify, streamline

GERMANY IS INVESTING HEAVILY IN ITS ECONOMY AND ITS FUTURE

Total real and planned investments in the federal German budget (EUR billion)



Source: Federal Ministry of Finance, 730.2025



EXPANSION IN TURBULENT TIMES

Germany Trade & Invest CEO Julia Braune discusses three aspects of the German government agenda.

One of the headline figures from the coalition agreement is the EUR 10 billion "Germany Fund" aimed at boosting investment. How significant could that be?

Very. One of the biggest hurdles for innovative young companies is securing financing so that they can scale up. The Germany Fund extends and intensifies the policy to encourage these necessary venture capital investments. This sort of state support, we believe, is very important, along with the size of the German market and also the stability of the country and our excellent business environment. It is a reason why companies continue to expand in and to Germany in turbulent economic times.

The coalition agreement mentions a focus on various sectors and industries. How much of this is new?

AI is being stressed to a greater extent than ever before. It is significant that the new German government is creating a ministry especially for digitalization, whereas digital affairs were previously subsumed under the Ministry for Transport. So here we see a decision to really advance digitalization in Germany in the coming legislative period.

The government promises to cut corporate taxes. How significant is this?

The current tax rate is 15 percent on all taxable income for businesses. In 2023, revenues amounted to EUR 45 billion. So we're talking really about substantial amounts that businesses in Germany will be permitted to retain in the future. I think once we have this tax reduction, that will make it even more profitable and attractive to do business here in Germany.



Listen to the full interview with Julia Braune on GTAI's bi-monthly German business podcast **INTO GERMANY**.

Episode 29: A Fresh Start? New German Government, New Business Opportunities

www.gtai.com/intogermany



and slash." The coalition agreement lays out an immediate action program, featuring a multi-pronged approach. In part it consists of concrete steps like suspending certain regulations, such as the German Supply Chain Act, to lighten the burden of paperwork.

Structural support

The government has also set up the Ministry of Digitalization and State Modernization, concentrating expertise in these fields to help truly make Germany a cutting-edge nation administratively. Among other things, the ministry is tasked with making more procedures available online, eliminating the need to physically visit government offices.

A template for this could be the new system for setting up companies. Plans for a one-stop-shop digital platform that brings together notaries, tax authorities and trade offices aim to consolidate all the necessary forms and processes and ultimately make it possible to form a business within 24 hours.

According to Julia Braune, this development in particular will help GTAI assist companies looking to invest in Germany. "The turn against bureaucracy has officially been set down in the coalition agreement — we're very happy to see that," she says. The pledges to cut red tape were also welcomed by industry representatives, including the German Engineering Federation (VDMA). "The plans in the coalition agreement to dismantle bureaucracy send palpably positive impulses," the group said in a statement. "In the right configuration, this could be a boost for modernization."

Innovation emphasis

Less paperwork, streamlined processes and enhanced state investments under the Germany Fund could make start-ups some of the biggest winners under this government. The coalition agreement refers to start-ups as "tomorrow's hidden champions," while Chancellor Merz signaled his intent to "pave the way to make

Germany a start-up nation." Innovative new companies can soon expect to be navigating a business landscape with fewer hindrances and more opportunities.

That goes too for companies involved in cloud and AI infrastructure, with "massive investments" pledged in the coalition agreement. A further commitment to support innovative technologies such as robotics, 3D printing and lightweight construction also points to a government determined to push Germany to the forefront of modern science.

Of course, traditional heavyweight industries remain crucial to Germany's economy and are reflected in the coalition agreement. Steel production is described as having "central strategic importance" to Germany as a business location. The agreement goes even further with regards to chemicals, pharmaceuticals and biotech, proposing to make Germany "the world's most innovative location" in these fields.

For all the encouraging words written in the coalition agreement, however, a government is made up of people, and therefore succeeds or fails in reaching its stated aims and targets on the basis of the expertise, determination and character of those in power.

"Growth does not simply happen," as Minister Reiche put it in her May 16 speech. "It will be hard work. But this is a hard-working coalition that has come together and is ready to do what is necessary — with courage, reason and persistence."

Want to find out more about your next move to Germany?



ONLINE

www.tinyurl.com/new-german-government

CONTACT

invest@gtai.de



EASING THE TAX BURDEN ON BUSINESSES

Planned reduction of corporate tax in Germany

15%
UNTIL 2027

14%
2028

13%
2029

12%
2030

11%
2031

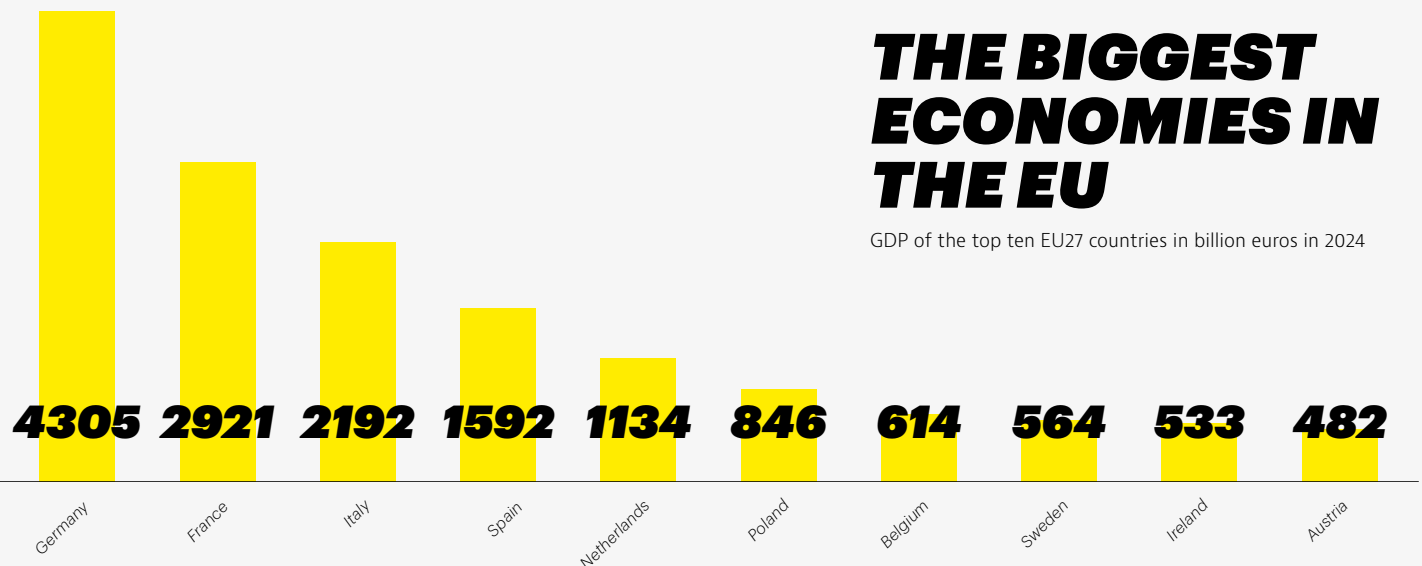
10%
2032

FOUR AIMS

The foundation of the Merz government's "solid plan" to make Germany an engine of growth.

THE BIGGEST ECONOMIES IN THE EU

GDP of the top ten EU27 countries in billion euros in 2024



Source: Federal Statistical Office

INNOVATIONS

The global business community admires the spirit of invention that drives the German economy. Here we highlight some of the most exciting trends and research projects.



Research project leader Prof. Dieter Schinzer with the model of the Disorazol molecule, which has the potential to inhibit cancer cells.

FROM MANURE TO CURE

A research team in eastern Germany has achieved a scientific breakthrough in cancer therapies.

Chemists at Otto von Guericke University Magdeburg (OVGU) have succeeded in synthesizing a natural anti-cancer agent in the laboratory. The compound Disorazol Z1 is normally produced by bacteria found in organic waste such as goat manure. The substance is considered highly effective in combatting cancer, as it prevents the growth of and can selectively destroy human and animal cells. According to research leader Dieter Schinzer from the Institute of Chemistry at OVGU, the laboratory synthesis makes it possible to produce the compound in larger quantities for the first time. The researchers' goal is to modify the

molecule so that it binds exclusively to a certain antibody, allowing it to reach tumors, where the compound inhibits the division of cancer cells. "In collaboration with industry, the substance will now be further developed so that it attacks cancer cells precisely while largely sparing healthy cells," explains Schinzer. The research project has a budget of EUR 1.7 million and is funded by the regional German state of Saxony-Anhalt and the European Regional Development Fund (ERDF).

www.ovgu.de

EXTREME PERFORMANCE MIRRORS

Laser-driven fusion reactors could be a viable source of clean energy in the future. A team of German scientists is developing extremely robust mirrors to enable the technology.

Laser-driven fusion reactors could play a crucial role in achieving climate neutrality. The technology is based on the fusion of atomic nuclei releasing vast amounts of energy — similar to what happens in the Sun. Multiple high-power lasers focus their light onto a small fuel capsule, heating it to extreme temperatures and generating the pressure needed to initiate fusion. High-performance mirrors are needed to guide the laser beams precisely, while withstanding extreme optical, mechanical and thermal stress. This is exactly what the German SHARP (short for Scalable Highpower Reflectors for Petawatts) research consortium is working on.

In addition to ensuring the stability of these high-performance mirrors, the consortium of renowned research institutes (including the Fraunhofer Society) and industry partners (such as glass manufacturer Schott) is developing scalable manufacturing processes, paving the way for future commercial use — for example, in high-power material processing, aerospace applications and EUV lithography. Launched in March, the project will run for three years and is supported by EUR 8.4 million in funding from the German Ministry for Research, Technology and Space.

www.schott.com



The production of highly reflective mirrors for laser applications in a clean lab. The technology is being optimized for use in laser fusion.



The Innovation Park Artificial Intelligence (IPAI) Communications Center at night.

Photo: IPAI MVRDV

QUANTUM AI MADE IN HEILBRONN

From cybersecurity to quantum AI, a city in Baden-Württemberg is becoming a hot-spot for artificial intelligence.

The Fraunhofer Society is significantly expanding its activities in the city of Heilbronn, Baden-Württemberg. Thanks to a funding agreement with a regional foundation, the city will soon be home to eight Fraunhofer research and innovation centers, collectively known as the Fraunhofer Heilbronn Research and Innovation Centers (HNFIZ). The aim is to focus on key future technologies and transfer research findings to industries. AI will play a pivotal role in this, particularly in hybrid artificial intelligence, AI-based robotics and application-oriented quantum AI. The objective is to devise solutions to

issues such as demographic change, skilled labor shortage and core sustainability challenges. Heilbronn is rapidly developing an innovative AI ecosystem with the Innovation Park Artificial Intelligence (IPAI), which will bring together companies, research institutions, start-ups and public stakeholders to jointly develop and implement AI solutions. From late 2025, real-world AI laboratories, data centers and workspaces for over 5,000 people are set to be constructed on a 30-hectare site.

www.hnfiz.fraunhofer.de, www.ip.ai

DOWNSIZING SILICON WAFERS

Infineon is boosting microchip efficiency with the world's thinnest silicon wafers.

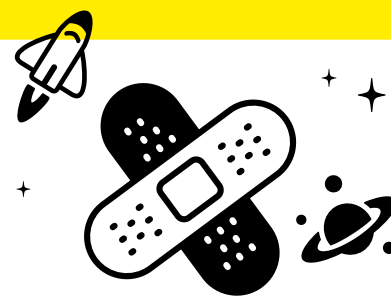


Photo: Infineon

Infineon's ultra-thin silicon wafers of 20 micrometers are only a quarter as thick as a human hair and half as thick as current state-of-the-art wafers of 40–60 micrometers.

The round wafers used by the leading German semiconductor manufacturer Infineon to produce microchips are just 0.02 millimeters thick — a quarter of the diameter of a human hair. Infineon engineers have developed a new grinding process that enables the production of extremely thin wafers with particular precision. These semiconductors are primarily intended for use in AI data centers. "Semiconductors have to work particularly efficiently where a lot of electricity is converted in a small space," says Richard Kunčič, Head of the Power Systems division at Infineon. "This minimizes the amount of energy lost as heat." The thinner the wafer, the shorter the current's path, as electrical resistance decreases. Consequently, Infineon can reduce energy loss in its chips by up to 15 percent. The company has already successfully tested the new technology with customers and used it in power supply modules.

www.infineon.com



SUPER-HEALING SPACE BANDAGES

The Institute of Lightweight Engineering and Polymer Technology (ILK) in Dresden is developing a new type of wound gel bandage for astronauts.

Wounds heal poorly in space due to the disruptive effects of radiation and weightlessness on the natural healing process. The German research team StellarHeal, which includes experts from institutions like ILK, aims to address this issue. The scientists are developing a new type of bandage for space travellers that significantly accelerates the healing process. The new bandage contains cold gel with healing cells that enter the wound directly to stop the bleeding. It also supports the formation of healthy tissue and fights infections until the bandage breaks down by itself.

The biggest challenge is ensuring that the healing cells and gel remain effective over a long period of time. ILK scientists have solved this by developing a unique artificial tissue that can be safely frozen. This innovative plaster could also enable new treatment possibilities for patients with chronic wounds.

www.ilkdresden.de

SATELLITE PROPULSION SIMULATORS

Researchers in Dresden have developed a vacuum chamber to test a novel propulsion system for satellites.

Until now aerospace companies have avoided orbits below 250 kilometers because the atmosphere at this altitude is dense enough to slow satellites down, eventually causing them to crash, and compensating for this drag would require huge amounts of fuel. The solution: innovative propulsion systems that allow satellites to use the surrounding air as propellant. Aerospace experts at the Technical University of Dresden have built a special space simulator to test the concept, including a vacuum chamber where researchers can realistically simulate how these new propulsion systems would operate in orbit.

Operating satellites in lower orbits offers several advantages: closer proximity to Earth reduces signal delays, enabling observation satellites to capture much higher-resolution images, and space debris burns up more quickly due to higher atmospheric drag. "With this innovative propulsion technology, satellites could theoretically operate indefinitely," explains Martin Tajmar, who leads the Residual Atmosphere Simulator project. The European Space Agency-funded project is set to continue until March 2027.

www.tu-dresden.de

GERMANY'S **QUANTUM LEAP**

At QCI All Hands 2024, held in Hamburg, all stakeholders and members of the DLR Quantum Computing Initiative (DLR QCI) met to consider important questions concerning Germany's quantum ecosystem and create solutions together.





Scientists around the world are advancing quantum computing, and Germany is emerging as a global leader. **Robert Axmann**, Director of the DLR Quantum Computing Initiative (DLR QCI), explains how international companies can tap into Germany's growing quantum ecosystem.

Mr. Axmann, the DLR QCI aims to further develop Germany's quantum computing ecosystem. Why is this so critical for Germany?

ROBERT AXMANN: Quantum computers have the potential to perform calculations thousands of times faster than conventional systems and tackle problems that classical computers simply can't solve. The range of applications is vast: Quantum sensors, for instance, offer far greater precision than traditional technologies and can be used in fields like medicine and construction. Quantum technology also plays a key role in secure data transmission. In short, this is a foundational technology. For Germany — an industrial and technological powerhouse — it is crucial to be at the forefront of this revolution.

Does this make Germany an attractive hub for companies developing quantum computers?

RA: Absolutely. Companies here benefit from an excellent environment: Germany has a strong basis in atomic physics, outstanding training in quantum optics and quantum physics, and a deep talent pool. In addition,

collaboration between academia and industry is particularly close, which is essential for innovation.

What is your organization doing to further strengthen this ecosystem?

RA: As a public research institution that works hand in hand with industry, we serve as a bridge between deep-tech start-ups, established companies and academia. Our mission is to co-develop quantum technologies with all stakeholders, always keeping practical applications in mind. To support this, we issue EU-wide calls for projects — for example, to develop quantum error correction codes for ion-trap quantum computers. These projects are 100 percent publicly funded, which is quite rare. Typically, public funding covers only 70 to 80 percent, leaving companies to finance the rest. This is often a challenge in such a high-cost field. Our funding comes from the German Ministry of Research, Technology and Space. Currently, over 60 application-driven projects are underway, involving 28 industrial partners.

What opportunities are there for international companies to participate in these publicly funded projects?

RA: We publish calls for proposals across Europe, and several international firms are already involved. For example, UK-based Universal Quantum is developing two prototype ion-trap quantum computers for us, while Quix Quantum from the Netherlands delivered the first photonic processor last May. That processor is now being used to explore photon sources for future quantum processors.

The funding for these quantum initiatives was approved by the previous German government. What can we expect of the new administration?

RA: While specific plans are still being finalized, the new government has clearly identified quantum technologies as one of its strategic priorities in its coalition agreement. We're confident that support will continue. We're already seeing the returns on recent investments. Germany now leads globally in quantum-related patent applications.

Which industries in Germany stand to benefit the most from quantum computing in the not-so-distant future?

RA: Logistics stands out as a prime early beneficiary. Coordinating freight transport across rail, road and sea quickly pushes conventional planning systems to their limits. Quantum computing can optimize these complex supply chains. We see similar opportunities in energy grid management, as well as in the chemical and automotive sectors, all of which are strong in Germany. And if quantum algorithms reduce steel waste in a car factory or increase daily output by even two percent, that could translate into a significant competitive edge.



QUANTUM HOTSPOTS

With sites in both Hamburg and Ulm, the DLR QCI maintains a strong presence in northern and southern Germany. The Hamburg team specializes in ion-trap quantum computers, while the Ulm site focuses on neutral atoms, NV centers and photonic quantum computing.

ONLINE



Detailed information about the DLR Quantum Computing Initiative:

qci.dlr.de/en

Ready to take the leap into quantum?



ONLINE
www.tinyurl.com/industries-digital-economy

CONTACT
asha-maria.sharma@gtai.de
GTAI expert for AI

HARNESSING **THE HIVE**

In a swarm of intelligent robots, collaboration succeeds where a single machine would fail. Germany's young but dynamic swarm robotics sector presents foreign companies with a unique opportunity to get in early and shape an emerging market with plenty of whiz, buzz and zip.

In a modern distribution center, dozens of small transport robots whiz around, shuttling packages, deftly avoiding one another and constantly recalculating their routes. When a package is too large or heavy for a single unit, multiple robots seamlessly team up to carry it. These machines, called LoadRunners, were co-developed by the Fraunhofer Institute for Material Flow and Logistics (IML) in Dortmund and tested in 2023 by parcel delivery company DPD.

The concept behind them is inspired by nature. Much like ants or bees, robots like LoadRunners work as a swarm, collaborating to accomplish tasks no individual robot could manage alone. There's no hierarchy or centralized command. Instead, the machines communicate directly, optimizing their behavior within the group. "This decentralized control is the key distinction between swarm robotics and traditional multi-robot systems, where everything is centrally managed," explains Heiko Hamann, a professor at the University of Konstanz and a leading expert in the field.

German market is buzzing

Swarm robotics is part of the broader automation and robotics industry — an area where Germany enjoys a global reputation for excellence, thanks to its engineering heritage and robust industrial base. Though the swarm robotics

THE BOTTOM LINE

From agricultural machinery to logistics robots, the field of swarm robotics is gaining serious traction. With its rich research landscape and high potential for practical applications, Germany offers foreign companies an opportunity to shape this fast-paced market.

market is still in its infancy, industry observers anticipate rapid growth in the coming years.

"With its strong research ecosystem, Germany is set to become a trendsetter in this space," says Peggy Görlitz, a robotics expert at Germany Trade & Invest (GTAI). She believes foreign companies stand to benefit by investing early: "Germany leads Europe in attracting foreign direct investment in robotics and automation."

Several German institutions are pushing the boundaries of swarm robotics. At the Technical University of Munich, researchers are exploring how robots can leverage data gathered by other members of the swarm. At the

Technical University of Darmstadt, scientists are studying swarms of robots that can learn what tasks they are suited for and how to collaborate with humans.

Since 2024, the newly established Robotics Institute Germany (RIG) in Munich has been consolidating expertise in the field. Coordinating a network of universities and industrial partners, RIG aims to accelerate the transfer of knowledge from academia to industry. "We're keen to work more closely with international partners in the future," says Roderich Gross, who leads RIG's Multi-Robot Systems research cluster.

Swarm-bots on the farm

German-developed robot swarms are expected to play a transformative role across multiple industries. Agriculture, for instance, could benefit greatly: swarms of robots may one day weed fields, plant seeds and monitor soil and crop nutrients. The potential market is substantial. Germany alone has roughly 255,000 farms.

"I see particular opportunities in vegetable and herb cultivation," says Robert Everwand of Agrotech Valley, a business-driven innovation cluster in Northwest Germany that links agricultural research and industry. "This segment still relies heavily on manual labor, and farmers are under pressure from labor shortages. Swarm robotics could offer a solution."

The Fraunhofer Institute for Manufacturing Engineering and Automation (IPA) in Stuttgart is among those developing service robots for the precise management of individual plants in open fields. Meanwhile, the Technical University of Dresden is building its Smart Mobility Lab, a major research hub and testing ground for autonomous agricultural machines and field robot swarms.

Logistics applications

Germany's research institutions are increasingly partnering with industry players to test their swarm technologies in real-world logistics environments. One example is the Fraunhofer IML in Dortmund, co-developer of the LoadRunner. "We welcome collaboration with companies that have robotics expertise or

are interested in robotics and artificial intelligence," says Jana Jost, Head of the Robotics and Cognitive Systems Department at Fraunhofer IML. She emphasizes that this invitation extends to foreign firms with existing or planned operations in Germany: "International partnerships can be highly beneficial for both sides."

Want to find out more about swarm robotics opportunities?



ONLINE
www.tinyurl.com/robotics-industry



CONTACT
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 GTAI expert for robotics

FDI PERSPECTIVE: EDAG GROUP

Swiss engineering firm Edag has been working in robotics for more than three decades and, over the past three years, has extended its expertise to swarm robotics. "Thanks to advances in artificial intelligence and computing power, progress in this field has accelerated dramatically," says Thomas Dörmer, an Edag industrial engineer responsible for smart factory solutions.

The company has invested heavily in server infrastructure and hardware to support these demanding projects. Its engineers develop and refine swarm robotics systems at Edag's location in the central German city of Fulda, delivering solutions for clients across multiple industries.

"Germany is an ideal location for developing swarm robotics," Dörmer says. "It offers a highly skilled workforce and strong industrial partners in mechanical engineering and automation, combined with innovation-minded customers in manufacturing, logistics and the automotive sector."



21
locations
in Germany



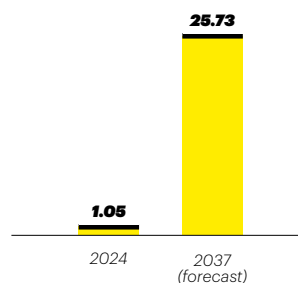
5,600
employees
in Germany



€822M
of total revenue
in 2024

EXPONENTIAL GROWTH FORECAST

Size of the global swarm robotics market (USD billion)



Source: Research Nester

LoadRunner package shuttling technology, developed by Fraunhofer IML and tested by DPD, is on the verge of a breakthrough with a licensing deal with KION Group.





AGENTS **OF** **FORTUNE**

Germany is emerging as a strategic hub for "agentic AI" — autonomous AI-driven systems that are revolutionizing industrial operations around the globe. That's down to emerging innovation clusters, fast-evolving industry standards and a plethora of new commercial opportunities.



At Otto, Germany's second-largest mail-order company, AI agents have taken over warehouse planning. Long before a human manager might notice stock levels running low, the smart system has already anticipated a potential shortage and placed a reorder. The agents learn from historical data but also factor in variables like weather and macroeconomic trends.

Otto is a great example of a wider transformation among industrial and commercial enterprises in Germany, which are integrating autonomous AI agents at remarkable speed.

With a strong SME base, a high degree of process automation and robust tech infrastructure, the country is at the forefront of the practical deployment of agentic AI across its industrial sectors. That's good news for international AI solution providers.

"In Germany, real-world applications are materializing at record speed — in manufacturing, logistics, energy and inventory management," says Asha-Maria Sharma, digital economy expert at Germany Trade & Invest (GTAI).

A recent survey highlights that momentum: 66 percent of German IT managers report already using AI agents, with another 27 percent planning to adopt them within the next year. For global AI providers, the market indications are clear: Germany is open to innovation and actively seeking bespoke solutions.

Untapped potential

Despite Germany's advanced automation landscape, the country is currently engaged in some catching up. Only one in four German companies believes it has fully leveraged the potential of AI, according to the industry association Bitkom. For AI merchants looking to enter new markets and forge strategic alliances, this means plenty of room to grow. →

THE BOTTOM LINE

Agentic AI is set to transform Europe's economy, from industry to professional services. Germany is positioning itself at the forefront of this quiet but rapid revolution.

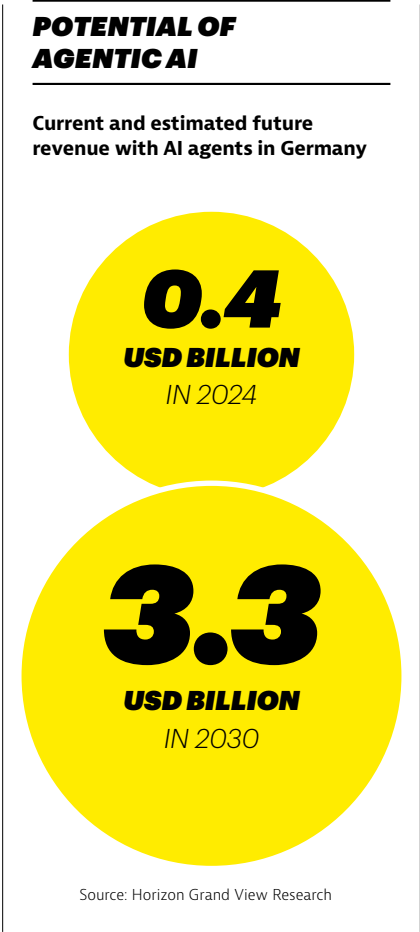
→ Bitkom data shows that German companies see the greatest potential for AI agents in core industrial domains: 85 percent cite energy management, 74 percent robotics, 73 percent analytics and 72 percent warehouse management. Providers with specialized agent solutions in these areas are well-positioned to gain traction in Europe’s biggest market.

“Anyone offering AI solutions that boost productivity or automate processes will find a ready market in Germany,” confirms Bitkom AI expert Marvin Pawelczyk.

Global tech moving in
Key international players have been quick to recognize Germany’s strategic importance in this evolving area. In May 2025, OpenAI opened a new office in Munich — a clear signal of commitment to the European market. With close proximity to the Technical University of Munich and strong industrial ties, the region offers an ideal springboard for global AI leaders.
“Germany is one of the most dynamic digital and industrial markets in Europe,” says Sandro Gianella, head of OpenAI’s Munich office. “Our local presence lays the foundation for global collaboration with businesses, academia and industry.” In addition to Munich, other locations such as Berlin, Frankfurt, North Rhine-Westphalia and Heilbronn — home to the emerging Innovation Park Artificial Intelligence (IPAI) → *see p. 11* — are also gaining visibility.

In July, Texas-based Oracle announced a EUR 1.7 billion investment in its Oracle AI Agents services in the greater Frankfurt area. “The growing demand for cloud solutions shows

The demand for agentic AI that’s independent of the US hyperscalers is soaring in Europe. Greater autonomy, trust and local industry know-how and access are fuelling this interest.

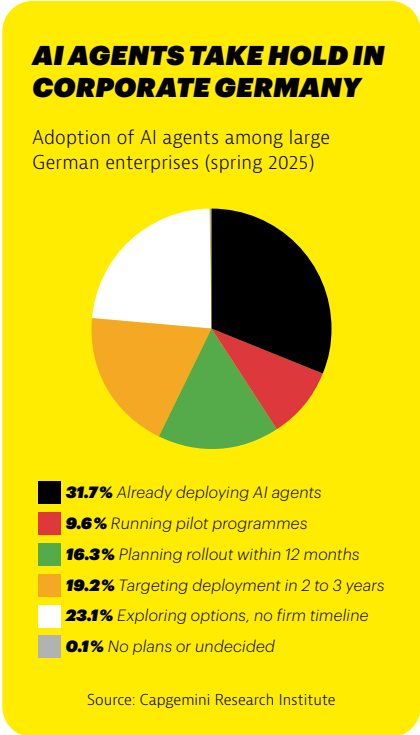


that the digital transformation in our country is progressing well,” says the German Minister for Digital Transformation and Government Modernization, Karsten Wildberger, on the company’s website. “We welcome increasing investment, both from Germany and internationally, and welcome this investment expressly.”

The advantage of regulatory clarity
For international companies, market potential must be balanced with regulatory considerations. The European AI Act has been met with some skepticism — but the concern is somewhat misplaced. While the legislation introduces obligations such as transparency in decision-making and safeguards against manipulative systems, it also creates predictability and trust — an increasingly compelling argument for corporate leadership abroad. “Providers that align with EU standards will be well-positioned to scale globally,” notes GTAI’s Sharma. Europe’s leadership in AI governance, she adds, may offer a gateway to regulated markets worldwide.

Issues of infrastructure and data sovereignty are also gaining importance. Germany offers alternatives to US-based cloud solutions, with European server locations, GDPR compliance and secure data space becoming decisive factors for many industry partners. International vendors with European-centric architectures have a significant strategic edge.

“There’s huge demand for AI solutions that are independent of US hyperscalers,” Sharma explains, citing not only compliance, but also trust, autonomy and industrial access.





Photos: Kammann Rossi/Verena Matl/generated with AI, Andreas Döring

Solutions for every niche

While the development of foundational AI models is still dominated by the United States and China, Germany is carving out its own niche for specialized, high-implementation AI solutions. For decision-makers in international IT firms — especially those serving the mechanical engineering, automotive, or energy sectors — this presents a unique opportunity.

“Germany excels at finding the best solution for every niche,” says Daniel Abbou, the head of the German AI Association. Many German start-ups are developing promising agent-based AI solutions, particularly for industrial use cases and business services. Berlin-based Parloa, for example, which builds AI agents for customer support hotlines, is now one of Germany’s most valuable tech start-ups.

While many of these firms are strong on innovation, they often lack the resources for

international expansion. This creates fertile ground for strategic partnerships. Global AI providers seeking a foothold in Germany could benefit from collaborations in product development, local implementation or go-to-market strategies. And the best way to do that is to put an AI agent on the ground by expanding to Europe’s top market.



Ready to join the agentic AI revolution?

ONLINE

www.tinyurl.com/industries-digital-economy

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GTAI expert for AI

FDI PERSPECTIVE: YOUR TRUSTY AI FINANCIAL ADVISOR



The fintech start-up PaceUP Invest has developed AI agents to provide personalized, digital financial advice. Here's why it is committed to running operations from Germany.

In 2020, founder Rukayyat Kolawole launched PaceUP Invest with the goal of helping women and underrepresented groups build financial resilience through behaviorally informed, data-driven guidance powered by autonomous AI agents. She brought with her a wealth of financial expertise from roles at Goldman Sachs, Bloomberg and BMCE Bank International in London and New York. “We deliver AI-powered, behaviorally informed financial literacy and wealth-building tools,” says Kolawole. “Our agents analyze user data and simulate personalized investment strategies.”

The digital advisor is designed to be transparent, easy to understand and accessible around the clock. For Kolawole, Germany provides the ideal foundation: “The German economy is stable, and the local expertise is exceptional.” She also sees the country’s regulatory rigor as a particular advantage. “If you can get a financial license in Germany, you can expand anywhere,” she says. With offices in the UK and Nigeria and a growing international user base, PaceUP Invest is positioning itself as a global platform for digital financial advice — with Germany as both its launchpad and quality assurance base.



3

countries with
locations



6

employees



20,000

B2C users


10,000

active world-class patents in green technologies have been registered in Germany. This represents half of the European Union's world-class patents in this field.

Source: Study Greentech made in Germany, 2024

3,000

greentech start-ups are active in Germany. One in five greentech start-ups can be classified as a "deep tech" company, in the sense of bringing to market advanced technologies based on deep scientific or engineering innovation.

Source: Greentech Monitor 2025

A BREATH OF FRESH AIR

Zhengliang Wu (left) and Peter Säger launched their greentech start-up, Green City Solutions, in Dresden, where they met while at the TUD.

Photos: Green City Solutions

In Germany, cleantech start-ups and scale-ups benefit from an ideal environment to bring their ideas to market and take crucial steps toward growth — often by partnering with established industrial companies.

When Peter Säger and Zhengliang Wu launched their greentech start-up, Green City Solutions, in 2014, they quickly realized that success would depend on winning over established companies as partners. The two met while studying at the Technical University of Dresden and went on to develop filter modules covered in specially cultivated moss. These modules can be installed along busy streets or in city squares, where they efficiently clean and cool the air.

"With just nine square meters of surface area, our moss modules deliver the same air-cooling effect as 81 trees," says Säger. It was a novel concept, so the first step was to

make the technology market ready. The second was to demonstrate its value in real-world applications. Green City Solutions achieved both by partnering with established companies across various industries.

This approach — a successful strategy for many young companies — is especially effective for cleantech start-ups in Germany, says Christine Curtius, international relations lead at the digital hub GreenTech in Düsseldorf in the Rhineland. "For a start-up with a novel concept you have to tackle two challenges. First: advancing the technology to be market ready. And second: continuously demonstrating its value in real-world applications by partnering

INNOVATION HUBS SUPPORTING GERMANY'S CLEANTECH ECOSYSTEM

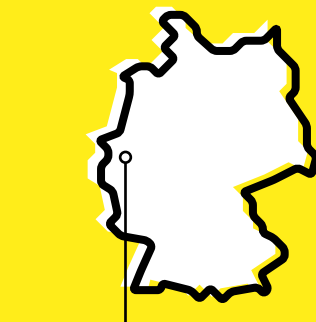
with players that are facing a problem.” Having founded her own greentech start-up, she speaks from experience: “Collaborations with established companies are crucial for cleantech start-ups to quickly develop their innovations, tailor them to customer needs and bring them to market.”

Opportunities for these kinds of collaborations are plentiful in Germany. “The country’s decentralized industrial landscape and abundance of innovative mid-sized companies provide countless opportunities for collaboration,” Curtius notes. Medium-sized companies are particularly attractive as potential partners for cleantech start-ups, says Sängner. “They’re often family-run and genuinely interested in sustainable products and business models.”

Germany's backbone

Sängner has first-hand experience of how Germany’s “Mittelstand” (its SME backbone) businesses operate, having grown up in an entrepreneurial family. One of the first companies to support Green City Solutions was his parents’ gardening business, which contributed its expertise and network. Soon after its founding, a partnership with Deutsche Telekom gave the start-up access to the smart city market and helped secure customers among municipalities and infrastructure providers.

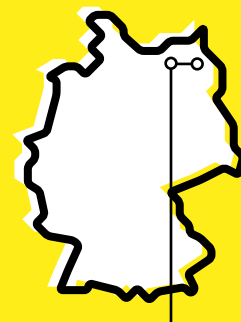
Further down the line, the company teamed up with leading outdoor advertising firms to develop a method of using the moss modules as cooling elements for large digital displays. “As a start-up with a new, innovative concept, these partnerships were essential in building trust in both ourselves and our technology,” says Sängner. Dr. Jobst von Hoyningen-Huene also sees strategic partnerships as key to successfully positioning cleantech start-ups. A former investment banker, he co-founded the



DÜSSELDORF
NORTH RHINE-WESTPHALIA

DIGITAL HUB GREENTECH DÜSSELDORF

The Digital Hub GreenTech Düsseldorf is at the heart of North Rhine-Westphalia, a region known for its strong industrial base and vibrant start-up scene. The hub connects local and international players in areas such as energy-efficient process engineering and sustainable technologies — from energy tech to construction tech and the circular economy. With support from leading research institutions, forward-thinking companies and a growing start-up community, the region aims to lead the green transformation of industry.



ROSTOCK/GREIFSWALD
MECKLENBURG WESTERN-POMERANIA

GREENTECH HUB ROSTOCK

In north Germany, the Greentech hub in Rostock offers international start-ups access to academic resources including the universities of Rostock and Greifswald. These institutions play a vital role in advancing renewables, hydrogen tech and CO₂ reduction strategies. State programs like Accelerate MV provide targeted support to energy start-ups and connect them with corporates and investors. Research facilities such as the Life Sciences Plasma Technology Center and BTG Biotechnikum offer space for R&D and access to a powerful European network.

cleantech holding company Econnext with Michael Schneider in 2016. Together, they brought family offices from across Europe on board to back early-stage cleantech ventures under the Econnext umbrella.

“We support founders not just with capital, but more importantly by connecting them to companies and strategic partners from our network,” von Hoyningen-Huene explains. “We begin by identifying a partner with a strong industry reputation.” Established players help start-ups validate their technology, prove its added value and often support commercialization efforts. “That clear market focus is critical — especially for technically driven founding teams,” he adds.

strong reputation is a real vote of confidence for any start-up,” says von Hoyningen-Huene. Another good example is the partnership of FLAXRES, an econnext subsidiary that offers PV-module recycling technology and services, with Hyundai.

Germany’s diverse and technically advanced cleantech and climate tech ecosystem offers vast potential for collaboration between established firms and young innovators. Econnext is actively tapping into this potential because, as von Hoyningen-Huene argues, true environmental and social innovation doesn’t happen in isolation.

THE BOTTOM LINE

Start-ups in cleantech, climate tech and greentech are natural allies for German industrial firms seeking innovative solutions to decarbonize their operations and accelerate the energy transition.

Promising portfolio

Econnext’s portfolio now includes six start-ups, among them Berlin-based energy company Lumenion. Its high temperature storage systems deliver CO₂-free process steam and heat from renewable energy sources to industrial clients. The German subsidiary of Swedish energy giant Vattenfall came on board as a partner. “Securing a partner early with such a

Are you a start-up or want to work with innovators?



ONLINE

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GTAI Director

Trend & Innovation Scouting





JOLLY GOOD **BUSINESS**

Germany is a top destination for British businesses, especially innovative manufacturers. **Robert Scheid** from the London office of Germany Trade & Invest (GTAI) and manufacturing expert **Peggy Görlitz** share their insights into why the UK's industrial sector is increasingly looking to Germany to expand its European footprint.

Mr. Scheid, British companies' interest in Germany seems to be growing. What's behind this trend?

ROBERT SCHEID: Since 2018, UK investment patterns have shifted significantly due to Brexit. In the early stages, uncertainty held many companies back. But the 2019 Withdrawal Agreement between the UK and the EU brought more legal clarity, prompting a wave of British firms to establish operations in Germany. The main driver has been the need to maintain access to the EU market.

Many of these firms are high-end manufacturers, and Germany remains Europe's industrial heartland. Back in 2019, some companies started by setting up warehouses, but now we're seeing long-term commitments — production facilities rather than just logistics hubs. Post-Brexit trade rules have complicated UK-to-EU exports, especially for businesses with complex supply chains. Establishing a legal entity in Germany helps them avoid tariffs and logistical challenges.

Today, the UK ranks as Germany's fourth most important source of inward investment —

137

Number of UK FDI projects in Germany (2024)

Source: Germany Trade & Invest, Regional Business Agencies

6.4%

Share of total UK investment projects (new) in smart manufacturing that go to Germany (2024)

Source: GTAI FDI Competence Center

somewhat akin to a “new Switzerland,” closely connected, yet outside the EU framework.

Ms. Görlitz, is it true to say that British tech companies in manufacturing are particularly drawn to Germany?

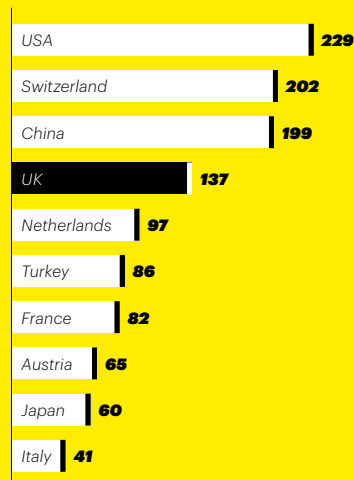
PEGGY GÖRLITZ: Absolutely. We're seeing considerable interest from UK firms in electronics and automation. Germany's economic resilience and its strong industrial backbone are key attractions. And British companies here find themselves in close proximity to a large customer base.

Are there other reasons why British manufacturers are choosing Germany over other EU countries?

PG: Germany offers excellent conditions for production-oriented and tech-driven firms. There's a dense ecosystem of innovators, industrial players and research institutions. Take additive manufacturing — it's booming. British companies in this space see Germany as the ideal launchpad for developing and scaling advanced technologies.

FDI IN GERMANY: UK IN TOP 5

Number of FDI Greenfield & Expansion Projects in Germany by country (2024)



Source: Germany Trade & Invest, Regional Business Promotion Agencies

Which German regions are attracting the most investment from British manufacturing companies?

PG: When we look at additive manufacturing, Bavaria stands out, especially Munich with its renowned Technical University. North Rhine-Westphalia is another key hub, while Berlin draws start-ups and Hamburg excels in aviation. These regions combine established corporations, agile start-ups, research bodies and universities — creating a rich talent pool and collaborative environment.

How does GTAI support British firms entering the German market?

RS: My job is to work closely with UK companies and help them navigate Germany's decentralized market landscape. GTAI offers support on everything from legal and tax matters to government funding opportunities at federal and state levels. We also connect them with the right regional partners. Our goal is to make the market entry process as seamless as possible.

What are the main challenges UK firms face when setting up in Germany?

RS: Germany's decentralized structure can be a hurdle, and bureaucracy is another. In the UK, you can register a business online in just a couple of hours. In Germany, the process is more paperwork-driven and time-consuming. That

said, the government has pledged to streamline business registration to within 24 hours, which is a promising development. Language can be another challenge. While much business is conducted in English, dealings with local authorities often require some German proficiency.

What's the feedback you get from UK businesses coming to Germany?

RS: Many British firms are pleasantly surprised by Germany's strong, trust-based business culture. While it may take longer to build relationships than in the UK, once that trust is established, German partners are known for their loyalty and reliability. This often translates into long-term business success.

BRITISH START-UP FYOUS HAS EYES ON GERMANY



Thomas Bloomfield, co-founder and COO of Fyous, explains why the British manufacturing-tech start-up sees Germany as the next frontier in its expansion strategy.

Mr. Bloomfield, can you give us a brief overview of what Fyous does and what makes your technology unique?

Fyous has developed a process called "polymorphic molding." It uses more than 28,000 digitally controlled pins to create a mold directly from a digital 3D model in under an hour. The technology has wide applications, from packaging solutions to custom medical devices and aerospace components.

Is the system reusable?

Yes. The same mold can be reconfigured for different products, making it significantly more efficient than traditional molding or 3D printing. This approach speeds up production, reduces waste and is compatible with various manufacturing methods, including vacuum forming and foam casting.

You're looking to expand to Germany. Where do things currently stand?

Right now, we're raising capital in the UK to support our growth plans. We haven't yet chosen a specific location in Germany. Our priority is to gain deeper market insight. Last year, we exhibited at the Formnext trade fair in Frankfurt, which helped us build connections and introduce our technology to potential partners. We also attended a more targeted industry event in Germany this September.

Our goal is to have equipment up and running in Germany by the end of the year and begin establishing a local footprint.

What makes Germany an attractive destination for Fyous?

Germany's engineering heritage, advanced manufacturing ecosystem and status within the EU post-Brexit all make it highly appealing. We've identified potential customers across several sectors. For example, Germany has a large number of orthopedic footwear manufacturers — from major players to artisanal producers. Many rely on custom shoe casts, which our technology can efficiently provide. Producing locally means these customers wouldn't need to import our equipment.

What challenges do you foresee as Fyous enters the German market? Where will you have to work the hardest?

Many of our potential customers are quite traditional and may be cautious about adopting new technology. At the same time, they face growing pressure to modernize and improve efficiency. Our challenge is to clearly demonstrate to new customers in Europe how our solution drives innovation, reduces waste and accelerates production. We're confident that as the benefits become evident, interest will follow.

PG: I agree. Entering the market can be complex, but the potential rewards are significant. Germany offers a stable, innovation-friendly environment in which companies can truly thrive.

Want to know more about expanding to Germany?



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GTAI Director Invest UK

Time to address the elephant in the room? This large textile sculpture created by Reju was featured at the Outside Festival in Denver. It is made from donated textiles, highlighting the problem of waste in the fashion and textiles industry.



PRÊT-À-PORTER

Across the globe, ninety-nine percent of discarded garments end up in landfills, but a French start-up is determined to change that. Reju's goal is to turn waste into a resource and upend an outdated, linear industry. And it's launched a cutting-edge textile-to-textile recycling facility in Frankfurt.

Tiny white granules slip through the fingers of Reju CEO Patrik Frisk. Hardly spectacular, but they represent the seeds of an ambitious industrial pivot. Reju's mission is simple in principle but complex in execution: to manufacture new textiles from old ones at scale. Central to this effort is the recycling of polyester, a non-biodegradable synthetic polymer.

Reju's broader ambition is to enable a circular economy for textiles worldwide. Its first step toward this goal is the "Regeneration Hub Zero" in Frankfurt. In October 2024, after less than a year of construction, the company inaugurated its pilot plant, which demonstrates how polyester garments are chemically broken down through depolymerization — a process that disassembles the polymer into its base monomers, which are then reassembled into new polyester. The company is planning to open industrial-scale Regeneration Hubs in

THE BOTTOM LINE

French company Reju is laying the groundwork for a circular textile economy with its state-of-the-art plant in Frankfurt. Polyester is the first material it will focus on recycling.

the near future, capable of producing a thousand tons of recycled polyester annually. The result, the company claims, is a material with roughly half the carbon footprint of virgin polyester. The Frankfurt facility serves as proof that this process of chemistry can be indeed industrialized.

Why Frankfurt?

Established in 2023, Reju is a subsidiary of Technip Energies, an engineering and technology firm employing over 17,000 people across 34 countries. The company could have located its first plant almost anywhere. It chose Frankfurt am Main — a nod not only to the city's strategic location, but also to the broader appeal of the regional state of Hesse as a destination for innovation-driven businesses with a global mindset.

Frankfurt offered more than just a convenient location. It is also home to T.EN Zimmer, a polymer technology affiliate within the Technip Energies group. Reju also benefited from the region's strong logistics infrastructure — its international airport, dense motorway network and high-speed rail links — and its geographic proximity to European markets. "Frankfurt's central location supports our partnerships across Europe, where we're working to build a circular textile system," says the company.

Germany's deep bench of technical talent and world-class research institutions also tipped the scales. Reju notes that access to engineering, materials science and sustainability expertise is crucial for ongoing innovation and scale. "This ecosystem is essential for advancing our recycling technology and scaling our impact."

Equally compelling for Reju was the sheer volume of Germany's secondary materials. With an estimated two to three million tons of textile waste generated annually, the country presents both a challenge and an opportunity. "Recycling options are still scarce," says Carsten Ott of the regional development agency Hessen Trade & Invest. Demand, however, is growing. "Germany is a highly attractive market for recycled polyester," Reju observes, citing ambitious sustainability targets, increasing appetite from brands and consumers and a favorable regulatory and industrial environment.

With a little help from some friends

Reju did not make the journey alone. Its relocation was facilitated by a coalition of public-sector partners, including Germany Trade & Invest, Hessen Trade & Invest and the Hessian Ministry of Economic Affairs. Together, they helped move the project from plan to pilot in under a year. "We bring relocation support and technology funding under one roof," explains Ott. "That shortens timelines, reduces bureaucracy and accelerates results."

Support starts at an early stage. Before a location is chosen, businesses receive market intelligence, assistance with site selection and advice on regulatory processes. Technical experts can be brought in at the outset to smooth the path from concept to commissioning. The state of Hesse's support extended beyond advisory services. Reju also received a grant as part

REJU AT A GLANCE



CEO Patrik Frisk

FOUNDED November 2023, Paris

PARENT COMPANY Technip Energies

MISSION Build a global circular system for textiles through textile-to-textile recycling

TECHNOLOGY VolCat, an IBM-developed depolymerization process

PILOT PLANT "Regeneration Hub Zero," operational in Frankfurt since October 2024

ENVIRONMENTAL IMPACT Recycled polyester has approximately 50 percent lower CO₂ emissions than virgin material

NEXT STEPS A facility capable of processing 60,000 tons of used textiles annually is planned for the Netherlands by 2027

of its program to promote circular economy technologies. The scheme targets firms, both large and small, that deploy novel methods for reintegrating raw materials into industrial production. Funding typically ranges from EUR 500,000 to 1 million. "It's a perfect fit," says Ott.

Reju echoes the sentiment: "We're grateful for the strong support from Germany Trade & Invest, Hessen Trade & Invest and the Hessian Ministry of Economic Affairs, which reflects the region's commitment to sustainable innovation." Initial batches of recycled polyester are now in production, with deliveries scheduled to begin in 2025.

Want to know more about circular economy opportunities in Germany?



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GTAI Deputy Director
Chemicals and Health

"GERMANY IS NOT JUST A MARKET:
IT'S A STABLE, INNOVATION-
DRIVEN PLATFORM FOR LONG-
TERM GROWTH IN EUROPE."

YAO TANG, GTAI office Singapore

SOUTHEAST ASIAN CONNECTION

Yao Tang, Head of Investment Promotion for the ASEAN region at GTAI's ASEAN Hub in Singapore, reflects on the first year of operations and shares some success stories and insights.



Photo: Yao Tang personal

Germany Trade & Invest (GTAI) opened its Singapore office in spring 2024, with one of its goals being to inspire even more companies from Southeast Asia to invest in Germany. What has been the focus of your work to date, Ms. Tang?

YAO TANG: Firstly, to directly connect with Southeast Asian companies and multipliers and provide them with sector-relevant information on doing business in Germany; and secondly, to raise awareness of GTAI's presence as a government-backed agency that supports foreign investors. I've initially focussed on Singapore while developing networks in Vietnam, Malaysia and Thailand. We've already seen tangible results: a steady pipeline of investment projects from Southeast Asia across sectors such as healthcare, semiconductors and digitalization.

Can you share any stand-out examples of success?

YT: I have supported multiple companies across diverse technology sectors. For instance, Inno-wave Tech specializes in agentic AI and data-driven solutions for the semiconductor and advanced manufacturing industries and is planning to expand to Dresden, part of Germany's "Silicon Saxony." Another example is RNAscence Biotechnology, a Singapore-based firm focused on innovative anti-scar solutions. The company is currently exploring the German market. Its CEO, Jack Wong, noted that having our support was

reassuring. When asked why he chose Germany over the UK — where he had studied — he explained it was because GTAI reached out to him first and our team's healthcare expert Gabriel Flemming gave him valuable consultation.

From the perspective of Southeast Asian companies, what are the most compelling reasons to invest in Germany?

YT: They are drawn to Germany for several reasons: it is the largest economy in the European Union, providing access to the European single market. Also, it offers political and economic stability, ensuring a reliable environment for long-term investment. It has a strong industrial base, especially in advanced manufacturing, automotive and engineering — sectors where many Southeast Asian firms already contribute as suppliers or partners. Germany is a global leader in R&D, with strong public-private collaboration. Companies benefit from a skilled workforce, excellent infrastructure and a transparent legal framework. And there are also attractive public funding and incentive programs supporting R&D, employment and investment. Germany is not just a market: it's a stable, innovation-driven platform for long-term growth in Europe.

In what sectors are companies most interested in Germany?

YT: Using Singapore as an example, there is strong alignment between GTAI's strategic fo-

cus and the sectors Singaporean companies are actively exploring. Key areas of interest include digitalization, electronics and automation, healthcare including medical devices and biotech, green economy such as battery recycling and offshore wind and mobility and logistics.

How do you support companies in expanding to Germany?

YT: GTAI acts as a neutral, first-stop consultancy for companies considering expansion into Germany. Our services are free of charge, confidential and government backed. We help companies understand the market and navigate the setup process. We provide tailored market and sector intelligence, site selection support including site visits, consultation on legal, tax and company setup procedures as well as information on funding, grants and incentive programs. Many walk away from our conversations with a clearer picture of where Germany fits into their expansion strategy.

Want to connect with GTAI's ASEAN hub in Singapore?

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Head of Investment Promotion,
ASEAN

How Germany Works

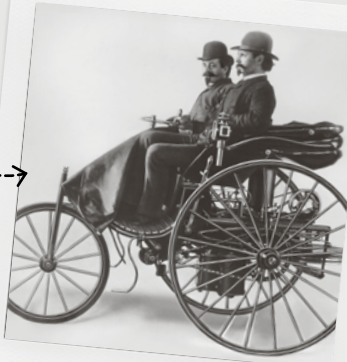
LAND OF INVENTORS

Germany is a consistent world leader in the number of patents filed. That's not surprising considering German R&D expenditures run high, for instance to nearly EUR 128 billion (over three percent of GDP) in 2023. Innovators profit from Germany's unique R&D landscape, encompassing industry, universities and world-renowned extra-university research societies and institutions. In contrast to the US, Germany and Europe use a first-to-file patent system, which provides simplicity and clarity about who is entitled to profit from innovations.

GERMANY'S MILESTONES OF INNOVATION

From the motor car to the first mRNA vaccine...

1886



Carl Benz invents the world's first car.

1908



Melitta Bentz invents the coffee filter that billions of people use today.

1987



Konrad Zuse develops the first functional computer.

1941



The Fraunhofer Institute for Integrated Circuits (IIS) develops the MP3.

2020



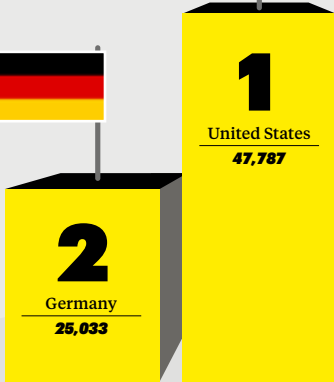
BioNTech develops the world's first approved mRNA vaccine to fight COVID-19.



THE LARGEST PATENT APPLICATION COUNTRIES

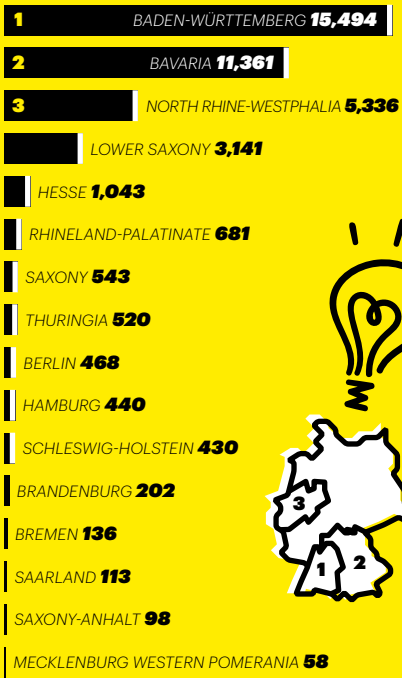
Number of company patent applications to the European Patent Office in 2024 by country

Source: European Patent Office



GERMANY'S INVENTION HOTSPOTS

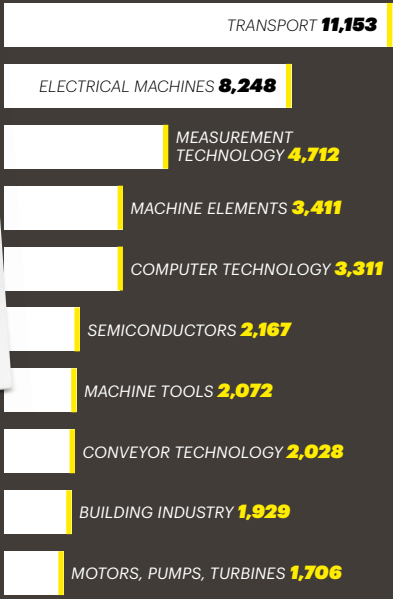
Number of patent applications by regional state in 2024



Source: German Patent and Trademark Office

THE TOP TEN SECTORS THAT DRIVE GERMANY FORWARD

Number of patent applications in the ten technology fields with the highest number of applications at the German Patent and Trademark Office in 2024



Source: German Patent and Trademark Office

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- Information on financing and incentives for businesses
- Tax and legal information on setting up a company
- Information, data and statistics about key industries in Germany

All investment-related services and inquiries are treated with the utmost confidentiality and are provided free of charge.

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