FACT SHEET

GTAI GERMANY TRADE & INVEST

Artificial Intelligence in Germany

ISSUE 2025/2026

Germany is poised to become a global leader in AI and environmental sustainability. The country's far-reaching AI initiatives, world-leading research community and innovative companies lay the way for Germany to carve a human-centric path to the AI future.

Germany is fast establishing its credentials as a major AI force to be reckoned with – within Europe and beyond. At the time of writing, Germany is the fourth largest AI market in the world according to Statista Market Insights. With forecast AI market value of more than USD 40 billion through to 2031, the country is investing heavily in AI infrastructure and development to meet future demand in an array of sectors.

Innovation and efficiency gains are the key drivers for business AI adoption, with more than 70 percent of companies seeking to invest in AI for faster data analytics, process automation, new products and business models, and revenue growth.

The global AI boom is also providing a boost to Germany's fledgling AI ecosystem, with AI start-up numbers and investment levels continuing to increase thanks to generous public funding and venture capital injections. Backed up by a forward-looking, progressive and human-centric AI strategy and a fast-expanding AI start-up ecosystem, Germany is set to take its place at the head of the international AI table.

Application Sectors and GenAI Growth

The diversity of industries and sectors in which new AI companies are active is striking. From production to research and development to customer service – German AI start-ups are developing solutions for many complex applications. German AI start-ups are, in the main, not building chatbots or building optimized language models but instead focusing on developing tailored AI applications and agentic AI solutions in the B2B market.

Digital economy growth is largely taking place in the software sector, where AI and cloud computing are showing the way. Generative AI – most recently popularized in the public imagination by OpenAI's ChatGPT – nevertheless remains one leading AI development area, with the number of German AI start-ups rising correspondingly: one in five German AI start-ups is working to develop generative AI solutions.

German AI Market in Numbers

USD 9.9 billion
forecast domestic AI market size in 2025

26.3 percent
AI market CAGR forecast through to 2031

USD 40.4 billion
market volume forecast through to 2031

USD 19.5 billion
generative AI market volume forecast to 2031

95 percent
of German companies plan to invest in AI and ML in the next five years

Source: Statista Market Insights 2025

AI Application Markets

AI is a cross-sectional technology whose whole range of potential application areas still remains to be seen.

In Germany, there is huge market potential in automation and additive manufacturing, where AI technologies will most likely form the next generation of automation technologies. Significant market growth is also expected in a number of other areas including the healthcare, mobility and energy sectors.

AI Demand Across All Sectors

Demand for AI solutions is increasing across all industry sectors and areas of civil society. Almost three quarters of businesses and just under two thirds of the population believe that artificial intelligence is the most important technology for the future.

Applications including chatbots, virtual assistants and AI-driven personalization are driving growth, with enterprises also investing in AI to enhance efficiency, innovation and competitiveness. Generative AI that produces content – including text, images and even music – is rapidly growing in terms of market size and is a cross-sectoral technology that can be commercialized in a diverse range of application scenarios.

Transforming Industry and Manufacturing

AI-driven automation of production processes, predictive maintenance and quality control opportunities exist in industry and manufacturing, with significant efficiency gains and cost reductions also being realized through the use of AI-driven systems. Artificial intelligence developments in the manufacturing sector are of particular relevance to Germany's leading automotive and mechanical engineering industries.

Robotics & AI

Artificial intelligence and machine learning advances are of central import to tomorrow's physical AI and embodied AI worlds – a world in which self-learning robots, autonomous vehicles and even smart factories carry out complex tasks independently. Germany is the largest robotics market in Europe and ranks third worldwide with 415 robots per 10 thousand employees. The country's robotics and automation industry is valued at more than EUR 16 billion.

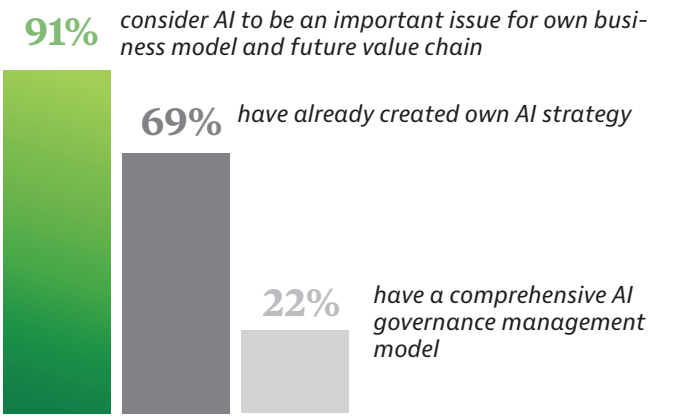
Revolutionizing Healthcare

Artificial intelligence used in diagnostics, image processing, drug development, and patient management is set to revolutionize the healthcare sector, creating major new opportunities for start-ups and established concerns alike.

Safeguarding Banking, Financial Services and Insurance

Artificial intelligence solutions used for risk assessment, fraud detection, automated consulting, and process optimization will open up new and lucrative areas of business to AI providers, with banks and insurance companies investing heavily in generative AI for customer interaction and data analysis purposes.

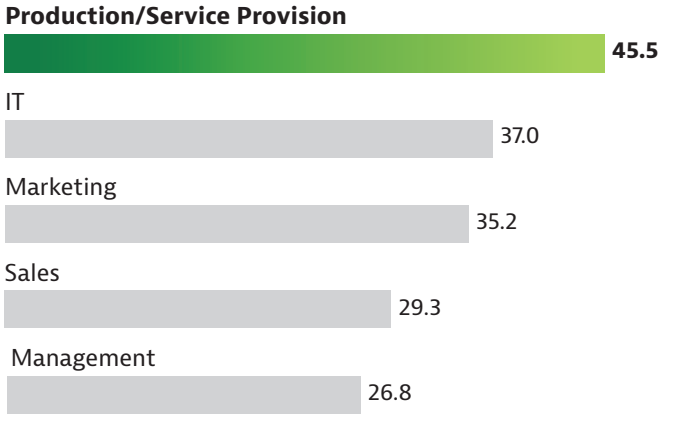
Strategic Relevance and Practical Implementation of AI



Source: KPMG Germany 2025

Top 5 Business Sectors by AI Use in Germany

as percent of AI-using companies that deploy AI in their respective sector



Source: Institute of the German Economy 2024

Vibrant AI Ecosystem and Economy

While Germany's AI ecosystem and start-ups have undoubtedly benefited from the current global AI hype, public funding for start-ups and significant venture capital flow into AI companies have also proven decisive and are further indicators of a functioning and healthy AI ecosystem in the country.

Germany's economy is enjoying a boost thanks to continued domestic AI market growth. According to KfW Research, German AI start-ups raised more capital (EUR 568 million) than non-AI start-ups in Q2/24. Domestic investors are also committing to AI, with German investment up to 39 percent of total investment compared to 26 percent in Q1/24. The "German AI Start-up Landscape 2025" study conducted by the AppliedAI Institute for Europe records a 36 percent increase in the number of start-ups in the country – continuing the growth trend of the previous year. Artificial Intelligence start-up survival rates (>90 percent) are also higher than those of non-AI start-ups.

AI Start-up Industry and Enterprise Focus
The Applied AI Institute for Europe reports that, within those AI start-ups and scale-ups with an observable industrial focus, the predominant areas of use are in cross-industry, healthcare and social services, manufacturing, and transport, mobility and storage. The noted year-on-year tendency is toward cross-industry applications and use within the manufacturing and production sector. Most AI start-ups are also predominantly active in platform development (271 of 935 start-ups surveyed).

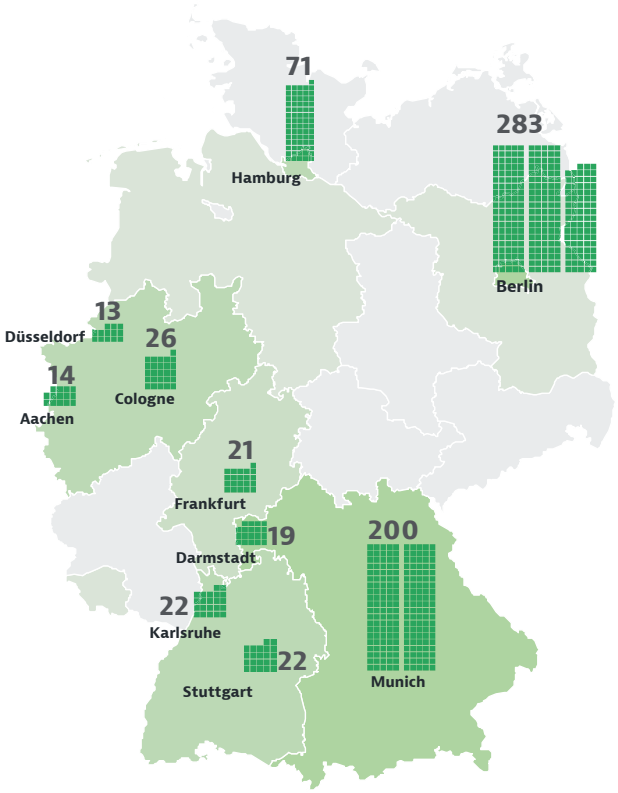
German Cities Show the AI Way
According to the German AI Start-up Landscape report, a total of around EUR 2 billion was invested in the first half of 2025. Berlin and Munich continue to show the way, with the two cities enjoying approximately 50 percent of all new domestic AI start-up volume. However, the report finds that other urban sites including Hamburg, Karlsruhe, Stuttgart, Cologne, Darmstadt, Aachen, Düsseldorf, and Frankfurt are recording significant growth numbers. More than 90 percent of all German AI start-ups are located in six federal states.

High-Tech Agenda 2025

Artificial intelligence has been identified as one of six key technologies – alongside semiconductor research and production – within the federal government's High-Tech Agenda 2025. The stated objective is to generate 10 percent of domestic economic output from AI-based activities by 2030.

The EUR 5.5 billion policy initiative to promote "new technologies made in Germany" will set aside large-scale funding for next-generation intelligence models, increased computing capacity and data infrastructure with a focus on industrial applications. Flagship knowledge transfer projects for AI application in key industries – automotive, chemicals, biotechnology, cleantech, medicine, and agrifood – and central research areas (materials, climate, biodiversity, energy, and sustainability and research) will be set up from 2026 onward.

AI Company Landscape in Germany 2025
Number by region in Germany



Source: appliedAI Institute for Europe 2025

Germany was one of the first countries in the world to launch a far-reaching AI strategy. Launched in 2018, the five-billion-euro Artificial Intelligence Strategy was initiated to position the country as a leading international location for AI development and application.

AI Made in Germany – Clusters, Networks and Innovation
Germany's government has placed AI front and center of its High-Tech Agenda 2025. Internationally renowned research institutions, business and innovation hubs and a flourishing AI ecosystem provide the tools and services for successful AI business operations in Germany.

German Research Centre for Artificial Intelligence
The German Research Centre for Artificial Intelligence (DFKI) is the largest independent AI research institute worldwide. The DFKI conducts and supports activities to develop reliable and trustworthy AI in order to establish Germany and Europe in the international AI sphere. Product functions, prototypes and patentable solutions in the information and communications technology field are developed from application-oriented basic research. One of the DFKI's main activities is the transfer of AI knowledge into business applications, with the institution engaged in public-private partnerships with software, automotive and manufacturing companies among others.

Cyber Valley
Located in the Stuttgart-Tübingen region in Baden-Württemberg, Cyber Valley is Europe's largest AI research cooperation. The initiative strengthens research and education in the fields of machine learning, computer vision and robotics as well as the promotion of knowledge transfer between the respective disciplines. Ten new research groups have been established, with five at the participating Stuttgart and Tübingen universities and the remaining five at the Max Planck Institute for Intelligent Systems. Ten new university chairs for AI and machine learning have also been established at the two universities. A lively start-up culture helps promote the swift transfer of research findings to the marketplace.

Artificial Intelligence Hubs – Digital Hubs Germany
Artificial intelligence hubs in the cities of Karlsruhe and Saarbruecken are at the forefront of AI innovation in Germany. The digital hubs are part of the government's "Digital Hub Initiative." The country's 25 digital hubs provide digital services for finding start-up partners, promoting knowledge transfer, identifying support programs and expertise in an array of tech and industry sectors. By bringing together large businesses and SMEs with innovators from the worlds of tech and science, the Digital Hub Initiative has helped create a digital start-up ecosystem with a truly global footprint.

European Digital Innovation Hub (EDIH-AICS)
The European Digital Innovation Hub Applied Artificial Intelligence and Cybersecurity (EDIH-AICS) provides the complete set of services and infrastructure to start-ups, small and medium-sized enterprises and public sector organizations seeking to digitalize their business. Drawing on the AI and cybersecurity strength in the Karlsruhe region, the hub is active in the areas of production (AI engineering), mobility (future mobility), energy (net zero), commerce/services (sustainability), administration/municipalities (innovation and digital citizenship participation).

Plattform Lernende Systeme
Designing self-learning systems for the benefit of society is the goal pursued by *Plattform Lernende Systeme (*Germany's Platform for Artificial Intelligence). Platform members are organized into working groups as well as a steering committee that consolidate the current technological state of self-learning systems and AI play.

AI4Germany
AI4Germany operates as a complementary initiative to the *Plattform Lernende Systeme* and the European Union AI4EU platform. The implementation platform operates as a coalition of operational initiatives and coordinates closely with its AI4EU partner initiative.

Artificial Intelligence Service Centers
Germany has established four AI service centers to strengthen the country's AI ecosystem and promote the research, development and application of AI technologies. The government-funded centers provide services including computing infrastructure, research support and educational training.

AI Gigafactories in Europe
The European Union has established a new EUR 20 billion fund to create upwards of five AI gigafactories as part of the EuroHPC Joint Undertaking to develop trustworthy cutting-edge AI models. Artificial intelligence gigafactories are large-scale facilities dedicated to the development and training next-generation AI models containing trillions of parameters. There are currently two AI factories (Jupiter Artificial Intelligence Factory and HammerHAI) active in Germany with more set for the immediate future after the completion of the official end for call for new EU-wide AI gigafactory proposals planned for the end of 2025.

Supporting "Trusted AI"

Artificial intelligence legislation and data privacy laws in Europe and Germany have advanced the growth of ethical and human-centric AI practices, helping make Germany a global leader in "trusted AI" implementation.

The AI market is in a period of rapid growth and structural transformation. Artificial intelligence will play an ever more important role in innovation, efficiency and competitiveness in the changing market landscape. Ethical, transparent and trustworthy AI implementations aligned to targeted investment are determining factors in sustainable market success.

Regulatory and Policy Framework – "Trusted AI"
According to Bitkom, just under three quarters of companies in Germany believe that clear and properly implemented AI regulations provide a competitive advantage for companies in Europe. Germany's adoption of a "trusted AI" philosophy provides a clear competitive edge and location advantage in industries and application areas – healthcare, financial services and public services to name but a few – where accountability and customer trust play a decisive role.

European Union Artificial Intelligence Act
The European Union (EU) Parliament passed the Artificial Intelligence (AI) Act in 2024 to regulate the use of AI systems – particularly high-risk applications – across the EU community. The legislation establishes clear guidelines for permitted areas of application as well as strict prohibitions for other areas of application. The "human-centric" act sets out strict requirements for the use of AI and emphasizes the transparency obligation of companies that develop basic AI models. The foundation of the agreement is a risk-based tiered system where the highest level of regulation applies to those machines that pose the highest risk to health, safety and human rights.

The legal framework is intended to become a blueprint for other countries and position Europe as a global AI standard setter. General regulations and obligations for high-risk application will apply in full by 2027.

Network and Information Security Directive 2
The Network and Information Security Directive 2 (NIS-2) is the EU's baseline framework for cybersecurity risk management and incident reporting in a number of "critical" and "important" sectors that covers energy, transport, healthcare, the manufacturing of certain goods, digital infrastructure and food production. The revised framework obliges SMEs to implement comprehensive cybersecurity measures in the future.

GAIA-X – European Cloud Platform
GAIA-X is a Franco-German cloud platform initiative to create a federated secure data infrastructure for Europe according to data-driven business model principles. European data sovereignty principles ensure that data owners maintain full control of their data in a trustworthy environment that safeguards data protection, security and transparency.

IPCEI Artificial Intelligence
The "Important Project of Common European Interest (IPCEI) Artificial Intelligence" is a joint project of several European states to develop a powerful AI ecosystem in Europe that is tailored to the AI needs of industry. Industry within Europe – and particularly in Germany – has control over huge amounts of data that could be used to train specialized AI models. Europe is seeking to establish itself as a global AI Europe powerhouse by developing next-generation industrial and highly specialized AI models.

AI and Cybersecurity Regulations Roll-out

Companies need to comply with a number of specific AI and cybersecurity rules and regulations being rolled out in Europe.

NIIS 2
2025

Publication of the second EU directive on network and information security to close security gaps in sectors including energy and water supply, transportation, finance and more.

AI Act
2025

The AI Act enters into effect on August 1, 2024. The AI Act was created to ensure that AI developed and used within the EU is trustworthy and that the fundamental rights of people are protected.

Cyber Resilience Act
2027

The Council of EU Interior Ministers adopts the CRA. The act has been created to ensure the cybersecurity of products and applications developed within the EU.

Source: GTAI 2025

Our Support for Your Business in Germany

Germany Trade & Invest (GTAI) is the foreign trade and inward investment agency of the Federal Republic of Germany. We advise and support foreign companies planning to expand into the German market and assist German companies seeking to enter global markets.

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

Investor Consulting
Our Investor Consulting division of specialist industry teams provide international investors in all sectors with comprehensive consultancy services specific to each individual investment project. Services include:

- Market and industry reports
- Market entry analyses
- Business and tax law information
- Funding and financing information

Contact

Asha-Maria Sharma
Digital & Service Industries
Germany Trade & Invest
Asha-Maria.Sharma@gtai.de

Stay informed about Germany

Visit us online at:
www.gtai.com

Stay ahead and follow us on
X: *@GTAI_com*

LinkedIn: *www.linkedin.com/company/germany-trade-&-invest*

Find out more about business opportunities in Germany on our YouTube channel:
youtube.com/gtai

Imprint

Publisher: Germany Trade and Invest
Gesellschaft für Außenwirtschaft und Standortmarketing mbH
Friedrichstraße 60, 10117 Berlin, Germany
T +49 30 200 099 0, invest@gtai.de

Executive Board: Julia Braune, CEO
Dr. Robert Hermann, COO

Editor: William MacDougall, GTAI

Layout: Danielle Röbbenack, GTAI

Print: Kern GmbH, 66450 Bexbach, www.kerndruck.de

Picture Credits: Cover: ©GettyImages/mikkelwilliam; portrait: ©GTAI/Illing & Vossbeck Fotografie

Order Number: 21477

XY1
www.blauer-engel.de/uz195

Supported by:

Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag