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EU AI Act

Germany

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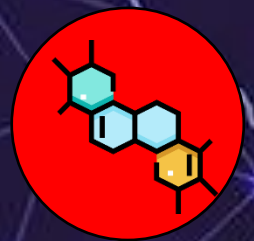
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AI & Partners defends and extends the digital rights of users at risk around the world. By combining direct technical support, comprehensive policy engagement, global advocacy, grassroots professional services, regulatory interventions, and participating in industry groups such as AI Commons, we fight for fundamental rights in the artificial intelligence age.

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Who Are We

AI That You Can Trust

Why Us?

Stay on the right side of history. At AI & Partners, we believe AI should unlock potential—not cause harm. We’ve seen the fear and fallout when teams lose control of AI, but also the trust and innovation that follow when it’s handled responsibly. That’s why we exist: to help you build AI you can trust and stand behind—for the long run.

80%

of AI systems
are unknown

What Do We Do?

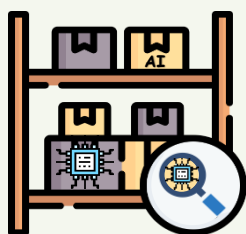
We enable safe AI usage—for your organization and your clients. Unknown AI adoption leads to confusion, risk, and reputational damage. We help you take control with tools to identify, monitor, and govern all AI systems—so you're not reacting to AI, you're leading it.



How Do We Do It?

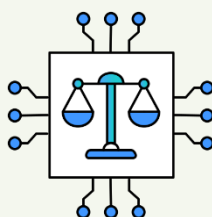
Do you know what AI systems you have? Identify all known and unknown AI systems (algorithms, LLMs, prompts, and models) from all internal and external AI vendors, automated by generating your inventory. Overall, 80% of AI inventory is unknown to our clients.

How do you guarantee ongoing safe AI use? Continuously monitor deployed AI systems for performance drift, anomalies or failures, real-world impacts, and emerging risks (e.g. data poisoning). Any malfunction of an AI system has severe implications for organisations (e.g. inability to assess online misinformation that leads to widespread public mistrust), so monitoring becomes a matter of urgency.



AI Discovery & AI Inventory

Automatically detect all AI systems, including models, algorithms, and prompts, and maintain a live, always-updated register for full visibility and compliance.



Responsible AI

Embed fairness, transparency, and control into every stage of AI use—aligning with the EU AI Act and building ‘Trustworthy-by-Design’.



Model Monitoring

Continuously track your AI models after deployment to detect drift, bias, or failure—so you stay in control and prevent harm before it happens.



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Overview

Artificial Intelligence (AI) is rapidly transforming societies and economies worldwide, and Germany is positioning itself to take advantage of this technological shift. Embracing AI's potential while addressing emerging risks, Germany has adopted a values-driven, innovation-friendly, and EU-aligned approach to AI governance. Rather than developing complicated national legislation, Germany is implementing the European Union's AI Act, while supplementing it with domestic frameworks, sectoral initiatives, and strategic tools to ensure responsible, secure, and transparent AI deployment.

At the core of Germany's AI governance strategy is its alignment with the EU AI Act, operationalized through national instruments such as the forthcoming AI Market Surveillance Act (KIMÜG) and supported by mechanisms including AI sandboxes, the AI Observatory, and regulatory quality infrastructure. These tools are complemented by targeted sectoral efforts—ranging from the Application Lab for AI and Big Data, to the Mittelstand 4.0 Centres of Excellence and platforms like GAIA-X and the Mobility Data Space, which foster ethical data usage and secure AI development.

Germany's institutional AI governance structure is coordinated across multiple agencies. The Federal Ministry for Digitalization and State Modernization leads implementation of the EU AI Act, alongside the Ministry of Justice and Consumer Protection and the Ministry of Education and Research. Organisations such as the Plattform Lernende Systeme and the AI Observatory play key roles in embedding governance principles within public policy and industrial innovation.

Germany's AI governance is also shaped by its commitment to international standards. The country is a signatory to the OECD AI Principles and has endorsed UNESCO's Recommendation on the Ethics of AI. Through bilateral and multilateral cooperation—including with France, Japan, and Canada, as well as through the Global Partnership on AI (GPAI)—Germany advances a coordinated vision of "AI made in Europe" rooted in democratic values, human rights, and technological sovereignty.

As outlined in its National AI Strategy and the 2023 AI Action Plan, Germany envisions AI as a critical enabler of digital transformation, sustainable development, and global competitiveness. Strategic priorities include building compute capacity through Exascale supercomputers, promoting SME participation via the AI Trainer Programme, and expanding AI education through scholarships, professorships, and public sector training. Tools such as the AI Ethics Guidelines, the Data Ethics Commission's recommendations, and sandbox-based experimentation foster ethical and human-centric AI design from the outset.

Through a combination of EU harmonization, national infrastructure development, and global engagement, Germany is advancing a governance model that balances technological leadership with democratic accountability. This report explores Germany's evolving AI policy architecture, regulatory implementation strategies, and institutional innovations—highlighting how Europe's largest economy is shaping a future of trustworthy, inclusive, and resilient AI.





Specific AI Governance or Law

Germany relies on the EU AI Act, partially applicable since February 2025, with full implementation by August 2026. A draft AI Market Surveillance Act supports domestic enforcement but faces delays. Germany prioritizes AI as key infrastructure, balancing innovation with oversight. Labour law includes limited AI-related provisions for workplace consultation.

Specific AI Governance in Germany

Germany has not enacted standalone national legislation specific to AI. Instead, as a member of the European Union, it will implement the EU AI Act, which establishes a harmonized regulatory framework for AI systems across all Member States. Chapters I and II of the EU AI Act—covering scope, definitions, and prohibitions on certain AI practices—have been directly applicable in Germany since February 2, 2025. Full implementation is expected by August 2, 2026. In December 2024, Germany published a draft of the AI Market Surveillance Act (KIMÜG), designed to operationalize the EU AI Act domestically. However, progress on this draft has been delayed due to a change in federal government. The new administration has prioritized AI as “key infrastructure” and committed to implementing the EU framework in a manner that minimizes administrative burden and supports innovation. Future regulations are expected to clarify responsibilities for market surveillance, AI sandboxes, and national compliance structures. While Germany does not currently have comprehensive AI-specific legislation, limited provisions referring to AI exist under labour law. Amendments to the German Works Constitution Act grant works councils the right to be informed and consult experts when AI is introduced in the workplace. These references are considered narrow and do not substantially alter existing labour regulations.

AI Ethics Guidelines and Sectoral Governance Tools

Although Germany lacks a unified national ethics framework for AI akin to the EU-level approach, it benefits from strategic guidance embedded in national initiatives. The 2018 National AI Strategy and its 2020 Update highlight the importance of aligning AI development with democratic values, human rights, and data protection. The strategies emphasize transparency, product safety, cybersecurity, and the responsible use of data as core principles. Data protection and non-discrimination are central concerns in German AI governance. The Federal Anti-Discrimination Commissioner has called for stronger safeguards against algorithmic bias, while the Conference of Independent Data Protection Authorities has urged the government to uphold robust privacy standards in AI deployment. These perspectives inform Germany’s contribution to shaping trustworthy AI regulation within the EU. In the absence of a standalone AI ethics law, existing frameworks such as the German Civil Code, the Product Liability Act, and the Copyright Act continue to shape AI-related accountability and rights, especially in areas like liability, intellectual property, and data usage.

Proposed AI Regulatory Authority and Future Outlook

The newly formed Federal Ministry for Digitalization and State Modernization will play a central role in coordinating Germany’s implementation of the EU AI Act. It will work closely with the Ministry of Justice and Consumer Protection, as well as the Ministry of Education, Research and Space Travel, which was responsible for developing the 2023 AI Action Plan. These bodies are tasked with aligning regulatory oversight with innovation policy across sectors including public administration, labour, education, defence, and culture. Germany is also in the process of determining which national authorities will serve as market surveillance and notifying bodies under the EU AI Act. The draft KIMÜG proposed leveraging existing agencies for sectors with established compliance infrastructure, with the Federal Network Agency acting as a central coordinator. The government aims to prevent fragmented enforcement and ensure streamlined oversight. Looking ahead, Germany’s approach will be defined by its role in the EU AI governance ecosystem and by the outcomes of domestic political deliberations.





Discussion: Germany's National AI Strategy

'A striking feature of Germany's AI governance approach is grounded in a values-based, human-centric framework that emphasizes responsible, secure, and public good-oriented development of AI. Anchored in the principles of trust, transparency, and European values, the strategy promotes proportionate regulation and international cooperation. Rather than relying solely on prescriptive legislation, Germany fosters AI through structured ecosystems, research excellence, and cross-sector collaboration—supported by initiatives like the Plattform Lernende Systeme, the AI Observatory, and regulatory sandboxes.'

Strengths	Weaknesses	Opportunities	Threats
• Capacity to attract global talent in business and education • Solid AI compute capacity, especially in research area	• Low number of women in AI research, e.g. leadership positions • Slow progress in updating vocational training regulations to mention AI • Relatively strict data protection laws	• Increased interest in AI applications • Net positive public opinion of AI • AI policy design building on robust social partnerships	• China and USA remain global AI powerhouses and India is catching up on AI research • Risk of inappropriate AI use by Germany to achieve international competitiveness



Analysis

Germany's AI strategy reflects a comprehensive commitment to embedding AI within a framework of ethical, legal, and societal considerations. The updated strategy centers on the notion of "AI made in Europe," underpinned by democratic values and fundamental rights, and aligns with global principles such as those of the OECD and UNESCO. While the European Union's AI Act advances binding regulations, Germany complements this with a governance approach that integrates sector-specific innovation with principled oversight, particularly through norms, standards, and quality infrastructure. A distinguishing feature of Germany's approach is its emphasis on integration within the European and international context. Germany works closely with EU partners and global actors through initiatives like the Global Partnership on AI (GPAI) and cooperation with France, Canada, and Japan. Regulatory efforts aim to ensure both innovation and accountability, focusing on traceability, verifiability, safety, and data protection, especially for high-risk applications.

Germany's AI governance also supports adaptive implementation mechanisms. Regulatory sandboxes (e.g., Reallabore) and initiatives like the AI Observatory and the Application Lab for AI and Big Data encourage experimental use, iterative learning, and feedback-informed policymaking. These platforms promote evidence-based adjustments to governance frameworks in response to emerging challenges. Another hallmark of Germany's strategy is its systemic focus on embedding AI across sectors through specialized infrastructure, such as high-performance computing centers, AI application hubs, and environmental impact assessments. Distributed responsibility is promoted via shared participation by government, industry, academia, and civil society, exemplified by stakeholder forums and public consultation processes. Germany further prioritizes capacity-building through initiatives like the establishment of 100 new AI professorships, interdisciplinary research funding, and vocational training. The strategy places a strong emphasis on inclusion—targeting SMEs, public services, and underserved regions to ensure equitable access to AI benefits. Lastly, Germany champions dynamic and sustainable governance. Measures supporting green AI, ethical standards, and regulatory flexibility reflect a forward-looking vision that addresses the dual imperatives of technological leadership and societal well-being. This allows Germany to remain competitive while reinforcing public trust and democratic accountability in the age of AI.





Germany's Approach to AI Regulation and Governance

Germany's AI governance aligns with the EU AI Act, with Chapters I and II directly applicable from February 2025 and full implementation by August 2026. A draft AI Market Surveillance Act supports national enforcement. Germany integrates AI into existing laws, including labour, liability, and IP, ensuring balanced innovation and oversight.

1. Regulatory and Strategic Frameworks

Germany's AI governance is fundamentally anchored within the broader European regulatory landscape. Instead of pursuing standalone national AI legislation, Germany aligns its regulatory strategy with the EU AI Act, which forms the cornerstone of AI regulation across all EU Member States. As of February 2025, Chapters I and II of the EU AI Act—covering scope, definitions, and prohibited AI practices—are directly applicable in Germany. Nationally, the first draft of the “AI Market Surveillance Act” (KIMÜG), intended to implement the EU AI Act, was introduced in December 2024. While the draft remains under review due to governmental changes, its anticipated adoption by late 2025 reflects Germany's commitment to establishing an innovation-friendly yet robust compliance framework. Germany embeds AI governance into existing statutory frameworks, such as the German Works Constitution Act, which includes specific provisions concerning AI in the workplace. Broader legal domains—including civil liability, product safety, data protection, and intellectual property—also influence the permissible development and deployment of AI technologies.



2. Institutional Support and Strategic Missions

The German federal government coordinates AI governance through a network of ministries and specialised agencies. The newly established Federal Ministry for Digitalization and State Modernization plays a central role in implementing the EU AI Act, in collaboration with the Ministry of Justice and Consumer Protection. Strategically, Germany's National AI Strategy and its 2020 update frame AI as a key driver of digital transformation and economic growth. These strategies emphasize human-centric AI, cybersecurity, data availability, and the ethical use of emerging technologies. Germany's 2023 AI Action Plan further underscores the importance of balancing regulation with innovation, promoting sectoral AI adoption across public administration, labor markets, education, defense, and culture.

3. Standards Development and Global Engagement

Germany actively participates in shaping EU-wide AI standards and contributes to global AI discourse through partnerships with multilateral organisations and standardisation bodies. As part of the EU, Germany engages with OECD initiatives and technical committees of the ISO/IEC to co-develop interoperable regulatory frameworks and ethical guidelines as well as the standardisation roadmap. Domestically, federal and state-level authorities have published various AI-related policy documents, signalling widespread institutional engagement. Germany also promotes consistent data protection practices across AI systems, championed by independent regulators such as the Federal Anti-Discrimination Commissioner and the German Data Protection Authorities.





4. Sectoral and Extended Regulatory Approaches

Germany's AI governance approach supports sectoral integration within a unified EU framework. While there are no AI-specific national sectoral laws, existing legal instruments across labor, product liability, and copyright law intersect with AI use cases. For instance, works councils are entitled to be informed and consult experts when AI is deployed in the workplace. These narrow references ensure stakeholder inclusion while preserving Germany's established labor rights framework. Ongoing political dialogue is considering extending AI-related provisions in areas like employee data protection, with the goal of fostering responsible innovation across sectors without imposing undue regulatory burdens.

5. Fostering Innovation and Indigenous Development

Germany identifies AI as a national key infrastructure and aims to position itself as a global leader in AI-enabled industrial and societal transformation. The federal government has pledged substantial investments into AI research, development, and infrastructure, focusing on sovereign capabilities and strategic autonomy. Support for local innovation ecosystems is provided through initiatives embedded in the National AI Strategy, targeting interdisciplinary research and public-private collaboration. The government also promotes AI application in SMEs and startups, underpinned by strong IP protection and international partnerships. The Federal Office for Information Security is also heavily driving AI, e.g. as per general guidance on AI-cybersecurity aspects, or dedicated case studies and development of practical frameworks outlined by the Federal Office for Information Security.

6. AI in Public Sector Transformation

AI is an integral part of Germany's vision for digital government reform. The Federal Ministry for Digitalization and State Modernization is tasked with embedding AI into public services, aiming to reduce bureaucracy and increase administrative efficiency through data-driven decision-making. Public sector use cases of AI span domains like education, healthcare, and law enforcement, guided by ethical principles and aligned with human rights. A coordinated oversight framework is in development to ensure that AI deployments meet the accountability and transparency standards outlined in the EU AI Act.

7. AI Skills, Education and Inclusion

Germany's AI strategy includes a strong emphasis on digital skills development and inclusive participation. Through collaborations with universities, vocational institutions, and the private sector, Germany promotes workforce readiness and continuous upskilling for the AI era. Programs under the National AI Strategy support AI literacy and interdisciplinary training, with special attention to equipping public servants and professionals across sectors. Initiatives also promote diversity and fairness in AI-related education to ensure equitable access and societal inclusion.

8. Infrastructure, Compute and Data Foundations

Germany is investing in infrastructure to support AI scale-up, including the development of data-sharing frameworks, cloud infrastructure, and regulatory sandboxes. The establishment of AI sandboxes, as mandated by the EU AI Act, is underway to enable real-world experimentation under regulatory supervision.

Germany's approach encourages data interoperability and responsible data access while safeguarding privacy and security. The Federal Network Agency is expected to play a central role in coordinating market surveillance and technical oversight of AI systems, ensuring enforcement capabilities are modern, integrated, and innovation-friendly.





Germany's Approach to Fostering AI Innovation

'Germany's AI Strategy builds on the nation's strong research foundations, robust industrial ecosystem, and societal values to responsibly deploy and govern AI. The strategy emphasizes international leadership in trustworthy AI, human-centric applications, and sustainable innovation, with a firm commitment to European collaboration and global standards.'

1. Unlocking Economic Value through Strategic AI Deployment

Germany is harnessing AI to enhance productivity and innovation in key sectors such as mobility, healthcare, environmental protection, and manufacturing. With initiatives like the "AI Innovation Competition" and targeted support for the Mittelstand (SMEs), Germany fosters AI adoption that strengthens economic resilience and global competitiveness. AI is also leveraged to support pandemic response, energy efficiency, and digital logistics, ensuring national impact through practical, scalable solutions.



2. Driving Innovation via Research Clusters and Application Hubs

The Federal Government is scaling a decentralized yet interconnected network of AI research centers and innovation hubs across cities like Munich, Tübingen, and Berlin. These hubs foster collaboration between academia, startups, and large enterprises, forming the backbone of Germany's AI ecosystem. Initiatives like the "Application Hubs for Recycling and Circular Economy" reflect Germany's commitment to regional economic development through applied AI research.

3. Enabling Trusted and Responsible Data Use

Germany's data strategy promotes secure, ethical access to high-quality data. Projects such as GAIA-X and the Mobility Data Space ensure data sovereignty while enabling innovation. The Federal Government supports anonymisation, open data models, and the use of synthetic data to enable research and industrial applications, aligned with European data protection principles.

4. Scaling AI in Public Administration

Germany's public sector is deploying AI in areas like smart mobility, urban planning, environmental monitoring, and cybersecurity. The "Application Lab for AI and Big Data" develops AI applications for sustainable development goals. Regulatory sandboxes and procurement reforms encourage responsible experimentation and accelerate AI adoption in public services.





5. Advancing Compute and Research Infrastructure

Germany is investing in scalable compute capacity through the Gauss Centre for Supercomputing and National Supercomputing Centre (NHR), integrated with AI R&D. The expansion of Exascale computing and high-performance infrastructure enables advanced model development, supporting sectors from health to aerospace.

6. Empowering SMEs and Startups

Initiatives like Mittelstand 4.0 and the AI Trainer Programme help SMEs integrate AI into operations. Germany's approach lowers adoption barriers by providing AI toolkits, advisory services, and funding for proofs-of-concept. EXIST and German Accelerator programmes drive AI commercialization and startup scaling.

7. Developing a Future-Ready Workforce

Germany promotes AI education and lifelong learning through the National Skills Strategy, STEM initiatives, and programmes like the DAAD AI Scholarship.

8. Aligning AI with Sustainability Goals

Germany leverages AI to achieve climate neutrality and sustainability objectives under the European Green Deal. Flagship initiatives target AI in energy systems, circular economy, biodiversity, and climate forecasting. The government also supports green AI hardware and environmental impact assessments for AI deployment.



9. Building Public Trust and Ethical AI

The Federal Government embeds ethics into AI through guidelines developed by the Data Ethics Commission and supports transparent, fair, and contestable AI systems. The AI Observatory monitors societal impacts, while public participation and civil society engagement are integral to policy design.

10. Shaping Global AI Governance and Standards

Germany is a proactive player in shaping global AI governance through the OECD, GPAI, ISO, and Council of Europe. The country supports harmonized EU-level AI regulations and fosters global AI partnerships, particularly with France, Canada, and Japan, promoting an "AI made in Europe" model based on democratic values and human rights.



Figure 1: Outlined next Steps in Implementation of Germany's AI Strategy by German government



Minds

- Expand support for young AI researchers through better working conditions and new funding initiatives.
- Promote AI talent via challenges and awards such as "AI made in Germany."
- Integrate AI into higher education curricula and enhance vocational training with AI-based platforms.

Research

- Build a European AI network under the brand "AI - made in Europe" and expand high-performance computing.
- Fund targeted AI R&D in areas like healthcare, long-term care, and digital epidemiology.
- Advance trustworthy and sustainable AI through synthetic data, civil security, and environmental applications.

Transfer and Application

- Promote AI start-ups and link research centres with SMEs via application hubs and AI trainers.
- Expand AI use in sectors like agriculture, mobility, environment, and public administration.
- Develop GAIA-X and digital platforms to support federated data and sustainability initiatives.

Regulatory Framework

- Contribute to shaping EU and international AI laws, and assess gaps in existing legislation.
- Implement AI standards for safety, transparency, and human rights protection.
- Create legal certainty for AI stakeholders and establish bodies for certification and governance.

Society

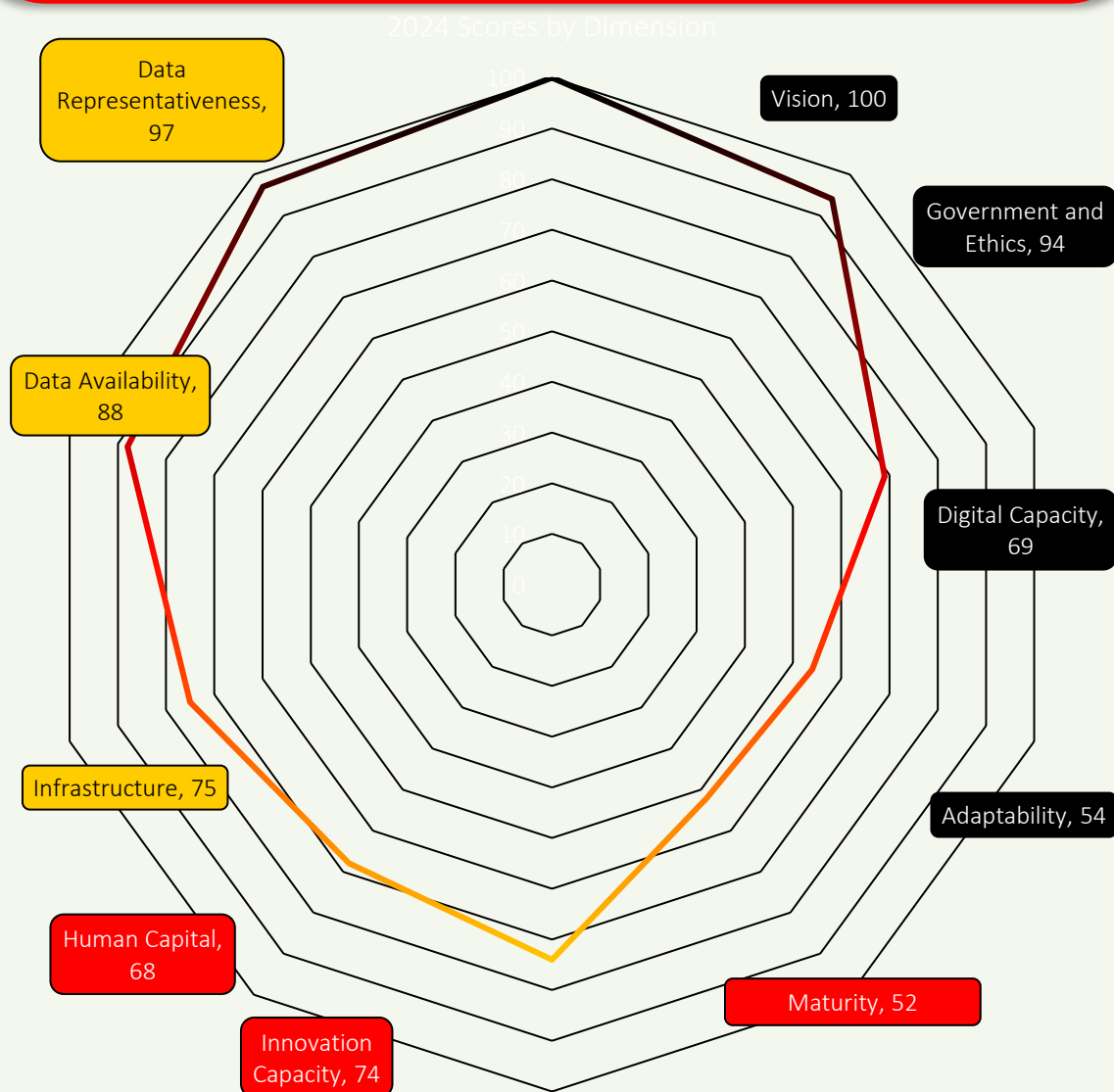
- Foster civic participation through platforms like Civic Innovation Platform and Civic Data Lab.
- Fund AI that supports everyday life, such as consumer tools and cultural preservation.
- Boost media literacy and public trust in AI with inclusive education and Sustainable AI initiatives.





Government AI Readiness by Oxford Insights

Western Europe ranks as the highest-performing region in this year's Government AI Readiness Index, with five countries in the global top 10. France leads the regional ranking with a score of 79.36, narrowly ahead of the United Kingdom (78.88), followed closely by the Netherlands (77.23), Germany (76.90), and Finland (76.48). With an average regional score of 69.56, Western Europe outperforms the global average (47.59) across all three pillars of Government, Technology, and Data & Infrastructure. The region's standout strength is the Data & Infrastructure pillar, where it averages 81.91, more than 21 points above the global benchmark (59.62), reflecting its advanced digital infrastructure and high-quality data environment. Although a few microstates such as San Marino, Liechtenstein, and Andorra fall slightly below the global average in the Government pillar, Western Europe's dominance at the top of the index underscores its continued leadership in AI readiness.





Government

Germany scores 79.24 in the Government pillar, reflecting its strong institutional commitment to advancing artificial intelligence as a tool for public value and economic competitiveness. The country's AI strategy—Artificial Intelligence Strategy of the Federal Government—embeds responsible AI within national policy, backed by significant public investment and sector-specific initiatives. Germany adopts a whole-of-government model, integrating federal, regional, and EU-level efforts while supporting human-centric AI through ethical frameworks and multi-stakeholder engagement. Institutions such as the AI Observatory and Plattform Lernende Systeme aim for transparency, inclusion, and public trust in AI governance.

Technology Sector

With a Technology pillar score of 64.91, Germany showcases solid foundations in digital innovation and technical capacity. Strong university-industry linkages, vibrant research clusters, and innovation hubs such as Cyber Valley and the AI innovation centres foster a dynamic ecosystem. Programmes like EXIST and AI start-up accelerators support commercialization and internationalization of AI ventures. While the sector still has room for growth in entrepreneurial dynamism and deep-tech scalability, Germany's investments in talent development, AI hardware, and green AI models position it for steady progress.



Data & Infrastructure

Germany scores 86.55 in the Data & Infrastructure pillar, one of the highest globally, underpinned by robust data governance frameworks and advanced digital infrastructure. Organisations such as GAIA-X and the Mobility Data Space exemplify Germany's emphasis on data sovereignty, interoperability, and secure data exchange. Investments in high-performance computing, cloud infrastructure, and data sharing platforms create a fertile ground for scalable AI innovation. The focus on ethical data use, open-source practices, and synthetic data generation supports privacy-preserving and socially beneficial AI deployment.



Conclusion

Germany's artificial intelligence ecosystem is entering a critical juncture—poised to translate substantial public investment, research leadership, and regulatory momentum into broad-based, sustainable impact. With a cohesive national vision embedded in the National AI Strategy and reinforced through the 2023 AI Action Plan, Germany has laid a strong foundation for AI innovation that reflects its values of democratic accountability, technological sovereignty, and human-centricity. Initiatives like Plattform Lernende Systeme, the AI Innovation Competition, and sectoral deployments in mobility, healthcare, and the circular economy demonstrate Germany's commitment to leveraging AI for economic competitiveness and societal benefit.

Yet, persistent challenges remain. As outlined in recent ecosystem assessments and readiness indicators, Germany must accelerate the transfer of AI research into scalable, commercial applications, particularly among SMEs. Enhancing the usability of AI infrastructure, including compute resources like the Gauss Centre for Supercomputing and access to synthetic and open datasets, will be critical for enabling experimentation and reducing entry barriers. Talent shortages—especially in applied AI engineering and cross-disciplinary roles—further underscore the need to align educational pipelines and vocational training with market demand.



While Germany's governance model benefits from EU harmonization and strong regulatory foresight through the EU AI Act, domestic implementation must continue to ensure clarity, administrative simplicity, and effective enforcement. The development of the AI Market Surveillance Act (KIMÜG) and designation of market surveillance authorities will be pivotal in shaping the operational landscape. Equally important will be the scaling of regulatory sandboxes and the institutionalization of participatory mechanisms—such as those supported by the AI Observatory—to maintain public trust in high-impact AI deployments.

To secure long-term leadership, Germany must double down on inclusive innovation strategies that bridge regional divides, empower the Mittelstand, and foster collaboration between academia, startups, and industry. Strategic international engagement—through the OECD, GPAI, and bilateral alliances—positions Germany to influence global AI norms and governance frameworks, particularly around safety, ethics, and sustainability. If Germany continues to act with strategic coherence, technical ambition, and a strong societal mandate, it can not only lead the European AI agenda—but also define the global trajectory for responsible, human-aligned AI systems.



Appendix A: Expert Vignettes



Naveed Ahmad

PENTADOC AG



“

“Germany’s engineering heritage, strong regulatory alignment and thriving research ecosystem create the perfect conditions to lead Europe in AI innovation combining precision, trust, and market impact for long-term global leadership.”



”

Biography

Naveed Ahmad, AI Consultant | Fortune 500 Experienced Data Researcher | Financial Services Specialist. Naveed thrives at the intersection of AI, data, and business strategy, transforming complex datasets into clear, actionable insights that drive impactful decisions. With experience in the Global Financial Services sector, he brings a proven ability to enhance operational efficiency and delivering measurable value by leveraging cutting-edge AI technologies.



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Michael Alf

Beyond the Obvious



German companies, particularly in automotive and manufacturing sectors, are pioneering contextual data governance by tailoring AI datasets to specific geographical and operational environments. This approach not only ensures Article 10 compliance but creates exportable best practices that strengthen Germany's position as a leader in responsible AI innovation across European Common Data Spaces.



“

Germany's industrial heritage and privacy-first culture position it uniquely to transform EU AI Act compliance from regulatory burden into competitive advantage in the global data economy.



”

Biography

Michael Alf is a global AI and GenAI executive education specialist and advisor, serving clients across Europe and the Middle East. With 30 years of executive experience at Capgemini, KPMG, and other leading firms, he combines deep consulting expertise with entrepreneurial insights to help organizations navigate AI transformation. Michael specializes in translating complex AI regulations and emerging technologies into actionable business strategies for executive team



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Valentino Halim

Oppenhoff



“

Germany's draft AI Act implementation act appoints the Federal Network Agency as central AI watchdog, aimed at lean oversight, fewer bureaucratic hurdles, clear contacts and faster processes—pragmatic rules designed to spark home-grown European AI innovation.

”

Biography

Valentino Halim is an Attorney-at-Law (Germany) at the independent German law firm Oppenhoff specializing in tech, data and digital and law, with a focus on AI, data protection, IT and data law. He advises companies in regulatory and court proceedings relating to German and EU digital law, e.g., in cases of data protection violations. Valentino Halim also has expertise in the field of digital business models and in legal issues relating to artificial intelligence (AI) and data economy. He is a member of several professional organizations such as iapp and ITechLaw and has gained international experience in Chicago (USA), among others.



Mike Flache

Digital Growth Collective



“

Germany's AI strategy rightly emphasizes responsibility and European values. Yet success depends on translating the strategic framework into outcome-driven execution—creating a high-performing ecosystem where research, business, and society collaborate at scale. This transformation is an essential building block to ensure Europe's future viability as a region for responsible AI.

”

Biography

Mike Flache is a former entrepreneur and board member. As chairman of the Digital Growth Collective, he brings together business, tech, and investment leaders worldwide. By leveraging expertise, capital, and networks, the Collective drives value creation across five key industries. Mike is recognized as one of the world's most influential experts in digital transformation (Global Excellence Awards).





Prof. Dr. Patrick Glauner

Deggendorf Institute of Technology



“

The EU AI Act, while intended to create a clear framework for AI regulation, has instead introduced significant uncertainty for both multinational corporations and small-to-medium enterprises in Germany's dynamic AI ecosystem. Its immense length and complexity make compliance a formidable challenge. While simplified checklists offer a glimpse of clarity, the absence of industry-specific guidance leaves many businesses, from professional services to agriculture, struggling to navigate the requirements. Rather than creating new, horizontal legislation, a more effective approach would be to update existing vertical regulations, thereby providing targeted and practical compliance pathways that reflect the diverse nature of AI applications.



”

Biography

Prof. Dr. Patrick Glauner, Professor, executive advisor, book author, and programmer in high-tech R&D. I advised the European Parliament, the parliaments of France, Germany, and Luxembourg, and the Inter-Parliamentary Union as an expert witness. CDO Magazine has ranked me among the worldwide academic data leaders.



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Appendix C: De-Risking Dependencies with Europe's First Exascale Supercomputer



Sheila Beladinejad

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Analysis

Digital sovereignty requires de-risking across multiple interconnected elements, including building a robust technology stack, securing supply chains, owning data, controlling energy sources, advancing high-performance computing, cultivating expertise and talent, strengthening manufacturing capabilities, and establishing effective governance frameworks. Europe is advancing on many of these fronts.

On 5 September 2025, Europe inaugurated JUPITER, its first exascale supercomputer. Built through collaboration between EuroHPC and German partners, JUPITER delivers over one quintillion calculations per second, ranks as the world's fourth fastest, and stands out for its energy efficiency thanks to green electricity, warm water cooling, and heat reuse capabilities.

JUPITER* provides sovereign computing resources not only for academic researchers in climate science, medicine, and physics but also for startups, SMEs, and larger industry players. Under EuroHPC's access scheme, eligible SMEs and small innovators can use certain innovation modes free of charge, while commercial users pay on a per-use basis for large-scale requirements.



While no single supercomputer can guarantee digital independence, JUPITER gives Europe a vital asset: the infrastructure and computational foundation to drive scientific breakthroughs, strengthen economic competitiveness, and contribute to de-risking certain dependencies.

*JUPITER is Europe's first exascale supercomputer, developed through the EuroHPC Joint Undertaking together with the European Union, the Bundesministerium für Bildung und Forschung (BMBF), and the Ministerium für Kultur und Wissenschaft des Landes Nordrhein-Westfalen (MKW NRW).

Biography

Sheila Beladinejad is a technology leader with over 20 years of experience in Mergers & Acquisitions (M&A) technical due diligence, digital transformation, and cloud migration across Europe and North America. She advises private equity and venture capital firms, supporting C-suites and boards in aligning technology with business outcomes. A recognized keynote speaker and workshop leader, she has delivered talks and conducted sessions for organizations such as the Ministerium für Wirtschaft, Arbeit und Tourismus Baden-Württemberg, the Auswärtiges Amt, the Bundesministerium für Wirtschaft und Klimaschutz (BMWK), the Bundesministerium für Bildung und Forschung (BMBF), as well as leading German universities and global conferences. She also serves as a jury member for the Bundesagentur für Sprunginnovationen (SPRIND), Germany's Federal Agency for Disruptive Innovation. Her work focuses on AI and its intersection with sustainability, technical due diligence, and foreign direct investment (FDI). Sheila is also a member of the European Commission AI Alliance and the founder of registered NGO and nonprofit networks in AI & Robotics based in Germany.





Appendix C: From Rights to Results—How Germany Puts Digital Principles into Practice



Dr. Martha
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Germany's AI and digital governance strategy sets a compelling European benchmark by pairing legal clarity with practical tools, strong institutional leadership, and professional collaboration. This approach aligns national ambitions, sectoral priorities, and international standards to address both the promise and risks of artificial intelligence, data sharing, and digital sovereignty—translating regulatory ideals into business and public sector impact. [Report-AI-Ecosystem-Brief-Germany-2025-06-09.docx+1](#)

Moving from Frameworks to Operational Tools

At the core of Germany's journey is its early adoption and active implementation of the EU Artificial Intelligence Act (2024/1689)—the pan-European law establishing harmonized requirements for trustworthy AI systems, risk governance, compliance assessments, and transparency. Rather than simply transposing these requirements into law, Germany uses them as a launch pad for real-world engagement. Initiatives like the Mittelstand 4.0 Centres of Excellence offer SMEs hands-on guidance, toolkits, and workshops to clarify obligations related to explainability, bias detection, and data security—bridging the gap from compliance checklists to AI adoption in manufacturing or logistics. This concrete support is reinforced by the Federal Commissioner for Data Protection, who, alongside technical standards bodies (such as VDE and TÜV), ensures that personal data and algorithmic decisions comply with GDPR and sectoral standards. [Report-AI-Ecosystem-Brief-Germany-2025-06-09.docx](#)





Building Data Sovereignty Through Trusted Infrastructure

Germany's approach to data sovereignty transforms regulation into an engine of collaboration and innovation. Platforms like GAIA-X and the Mobility Data Space operationalize principles of interoperability, controlled access, and federated data management, enabling industrial partners and public services to securely exchange and monetize data while complying with European and German laws. These efforts set precedents for Europe's data infrastructure, demonstrating how transparency, shared technical standards, and contractual controls can fuel innovation ecosystems, not just compliance. [Report-AI-Ecosystem-Brief-Germany-2025-06-09.docx](#)

To ensure that innovation does not outpace responsible governance, Germany actively runs regulatory sandboxes (Reallabore) that allow businesses, healthcare providers, and start-ups to test new AI models in real-world conditions under regulatory supervision. The lessons and metrics from these sandboxes both refine national practice and directly inform evolving pan-European requirements, creating a feedback loop among regulators, technical auditors, and industry. These sandboxes help maintain legal oversight—as required under the EU AI Act—while promoting a culture of proactive compliance and cross-border learning. [Report-AIO-2026-05-11.pdf+1](#)

Strategic Leadership and Professional Engagement

Germany's professional associations (Bitkom, VDE), standardization actors, and law firms (CMS, Osborne Clarke) play a vital role by translating policy into technical documentation, participating in joint committees, and publishing practical policy briefs and sectoral guides on compliance, digital sovereignty, and AI innovation. For instance, Bitkom's discussion papers directly inform both industry and policymakers, clarifying ambiguities and helping shape consensus-based standards for trustworthy, human-centric digital services. [Report-AI-Ecosystem-Brief-Germany-2025-06-09.docx](#)



Monitoring Progress and Readiness

Germany consistently scores among the top countries in the Oxford Insights: Government AI Readiness Index and OECD.AI's Country Dashboard, confirming its ability to translate legal and policy frameworks into real-world progress across government, technology, and data infrastructure. Germany's strong scores highlight robust institutional commitment, effective data infrastructure, and the ability to scale technical best practices nationally and across the EU. [Report-AI-Ecosystem-Brief-Germany-2025-06-09.docx](#)

Conclusion

Germany's approach—grounded in pan-European law, yet delivered through professional service, sector engagement, and collaborative technical infrastructure—demonstrates how digital rights and data sovereignty can be operational, actionable, and competitive advantages for organizations and societies. By building regulatory sandboxes, professional capacity, and trusted data sharing platforms, Germany helps establish a European model for digital trust and responsible AI, balancing innovation with accountability for the benefit of citizens, businesses, and public value.



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