

SOLUTION BRIEF

Sovereign Data and AI Factory

The fastest path to sovereign, production-ready Postgres® and AI



Executive summary

Enterprises globally are under increasing pressure to deliver AI-driven innovation while complying with stringent data sovereignty, residency, and security requirements. Yet most organizations are failing to execute. While 95% of enterprises report a [need for sovereign data and AI capabilities](#), only 13% have successfully implemented them. This gap is driven not by lack of motivation but by complexity. Meanwhile, those with a sovereign foundation for their AI and data deliver 5x the ROI of all other enterprises globally.

Sovereign Data and AI Factory addresses this execution gap directly with a pre-integrated, enterprise-grade system that delivers production-ready Postgres and AI capabilities inside a customer's own data center. By combining EDB Postgres AI software with certified hardware from partners including Dell, Supermicro, HP, and IBM, Sovereign Data and AI Factory enables organizations to successfully and rapidly get sovereign AI into production.

Unlike DIY approaches that rely on scarce expertise and take 12-18 months to implement, EDB PG AI delivers a turnkey, fully supported solution with a single vendor relationship across the entire stack. The result is faster time to value; reduced operational risk; and full control over data, infrastructure, and AI workloads.

For organizations that must deliver AI outcomes while maintaining strict data sovereignty, EDB PG AI's Sovereign Data and AI Factory provides the most direct and reliable path to success. It transforms a complex, high-risk initiative into a predictable and achievable outcome.

The challenge: Sovereignty meets AI urgency

Organizations today face competing priorities in innovation vs. control. Executive leadership demands rapid progress on AI initiatives. At the same time, regulatory mandates are tightening requirements around data residency, auditability, and operational control.

Traditional approaches fail to reconcile these demands. Organizations pursuing DIY sovereign stacks must coordinate hardware selection, system configuration, Kubernetes deployment, database setup, and AI integration across multiple vendors. This effort takes 10+ months and depends on highly specialized, limited skills. Public cloud platforms simplify infrastructure but introduce sovereignty risks, including reduced control over data access, compliance challenges with geographic or industry regulations, and difficulty meeting audit requirements.

The result is a widening execution gap. Enterprises understand the need for sovereign AI capabilities but lack a viable, timely path to implementation.

The solution: A pre-integrated sovereign data and AI platform

Sovereign Data and AI Factory delivers a fully integrated, turnkey system designed specifically with sovereign and air-gapped environments in mind. It combines EDB PG AI software with certified hardware, integrated Kubernetes orchestration, and optional NVIDIA GPU acceleration to create a production-ready environment capable of supporting transactional, analytical, and agentic workloads.

This architecture eliminates the need for customers to assemble and validate complex infrastructure components independently. Instead, it delivers a cohesive system that is preconfigured, tested, and optimized prior to deployment, allowing organizations to focus on delivering business outcomes rather than infrastructure integration.

Key business outcomes

EDB PG AI's Sovereign Data and AI Factory gets organizations from delivery to production in fewer than 90 days, dramatically accelerating the path to business value. Pre-integration and standardized deployment eliminate prolonged setup and validation cycles.

Teams can run agentic AI workflows entirely within their own data center. Data never leaves. AI development doesn't slow down. Air-gapped deployment capabilities further strengthen security, supporting compliance with the most stringent regulatory requirements.

A unified support model provides 24/7/365 coverage across hardware, Kubernetes, Postgres, and AI components, eliminating the need to manage multiple vendor relationships and simplifying troubleshooting and lifecycle management. This reduces operational friction and improves accountability.

Use cases and target industries

EDB PG AI and its Sovereign Data and AI Factory are particularly well suited to industries where regulatory requirements and data sensitivity intersect with the need for analytics and agentic capabilities.

In financial services, organizations must comply with regulations while enabling use cases such as fraud detection, risk modeling, and autonomous decision agents within controlled environments. In the public sector and defense, strict national data control and air-gapped environments are mandatory for sensitive workloads. Healthcare organizations must protect patient data while balancing the need to leverage AI for diagnostics, research, and clinical workflow automation. In telecommunications, sovereign AI at the edge requires high-performance data processing and agentic capability across distributed environments—all without sending data outside the organization's perimeter.

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Independent research from McKnight Consulting Group found that teams building GenAI and agentic AI applications on EDB PG AI reach production three times faster than on DIY cloud stacks—compressing time to production from 28 weeks to 9 weeks—with 67% lower development complexity.

The sovereign AI moment is now

Organizations face a convergence of pressures that make immediate action essential. Regulatory requirements around data sovereignty are becoming more stringent, increasing compliance risk for those without appropriate infrastructure. Executive mandates for AI and agentic innovation are accelerating, requiring demonstrable results rather than long-term plans.

The execution gap is widening. Enterprises with a sovereign foundation are deploying agents and delivering 5x the ROI of those still evaluating. Organizations that continue to rely on DIY approaches face extended delays, increased costs, and missed opportunities.

EDB, with O'Reilly, has written the guide to building your own AI and data platform on Postgres. [Building a Data and AI Platform with PostgreSQL](#) is available for your teams.

EDB Postgres AI: The sovereign data and AI platform for the agentic enterprise

EDB PG AI brings together a unified data layer, governance, sovereign control and orchestration, and an agent runtime environment, giving enterprises a trusted foundation for AI on infrastructure they own and control. The platform unifies transactional, analytical, and AI workloads in a single Postgres-based architecture—eliminating ETL, data movement, and operational fragmentation. And you choose where and how to deploy: on-premises, cloud, managed, or certified appliance.

The outcome: production-ready sovereign AI in days or weeks, not months.

Conclusion

EDB PG AI and its Sovereign Data and AI Factory combine agentic capabilities and operational simplicity in a single integrated platform to deliver sovereignty and AI readiness. By reducing deployment timelines from months to weeks, simplifying operations through a unified support model, and enabling AI and agentic innovation within a fully controlled environment, Sovereign Data and AI Factory eliminates the traditional trade-offs between agility and control.

For organizations that must deliver AI outcomes while maintaining strict data sovereignty, EDB PG AI provides the most direct and reliable path to success, transforming a complex, high-risk initiative into a predictable and achievable outcome.



EDB Postgres® AI (EDB PG AI) is the sovereign data and AI platform for the agentic enterprise. Built on Postgres, the world's leading open source database, EDB PG AI unifies transactional, analytical, and AI workloads in a single governed architecture, on-premises and across clouds. To learn more, visit www.enterprisedb.com.