



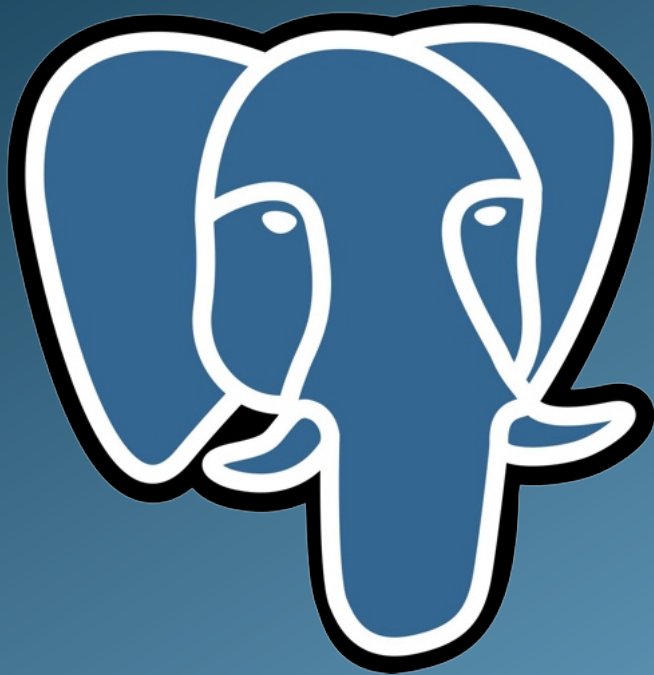
AI Meets PostgreSQL: CloudNativePG on OpenShift for the Modern Data Platform

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June 2025

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Account Executive BeLux



PostgreSQL #Nr 1 Open Source Database



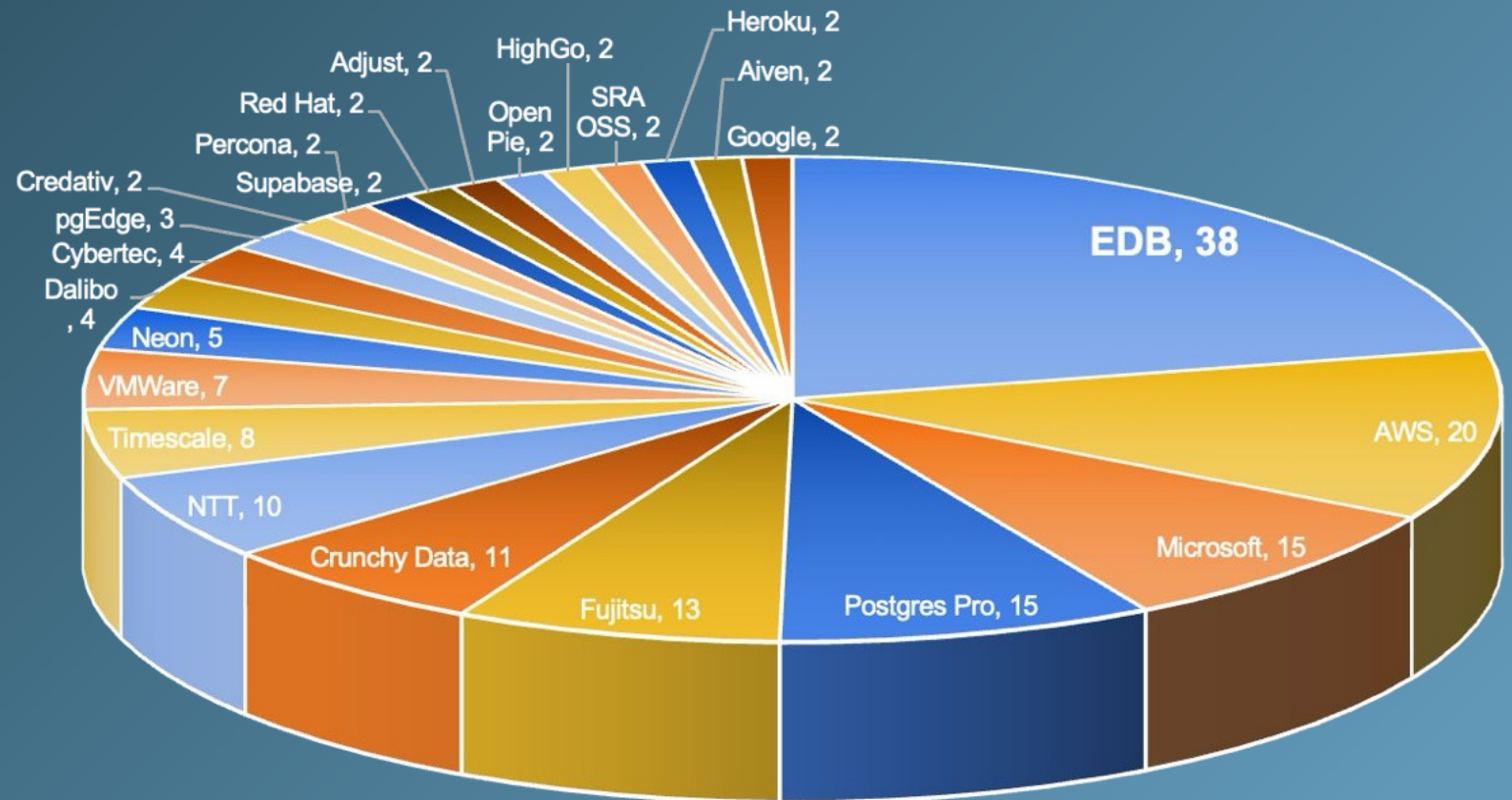
Stack Overflow Survey 2023/2024

EDB - Largest Developer Community

- 407 + contributors to Postgres 16
- 111 companies actively contributing to Postgres 16

Contributors to Postgres 16 by Postgres Companies

Without individuals or unaffiliated contributors





20+ years of Postgres innovation & adoption

- Number one contributor to Postgres, fastest-growing and most loved Database in the world
 - 3 Core Team members, 7 Committers, 9 Major Contributors, 10 Contributors, #1 site for desktop downloads
- Over 700 employees in more than 30 countries
- EDB Postgres AI
 - The industry's first platform that can be deployed as cloud, software or physical appliance
 - Secure, compliant and enterprise grade performance guaranteed





We provide a sovereign data and AI platform to power mission-critical workloads—deployed anywhere across the globe and backed by unparalleled Postgres expertise.

Business challenges are ultimately data challenges



Operational
Burden

55%

IT resources spent on
operations, not innovation



Slow
Innovation

74%

Commercial codebases
have OSS vulnerabilities



Growth
Hurdles

14.5%

Predicted global
economic growth from AI

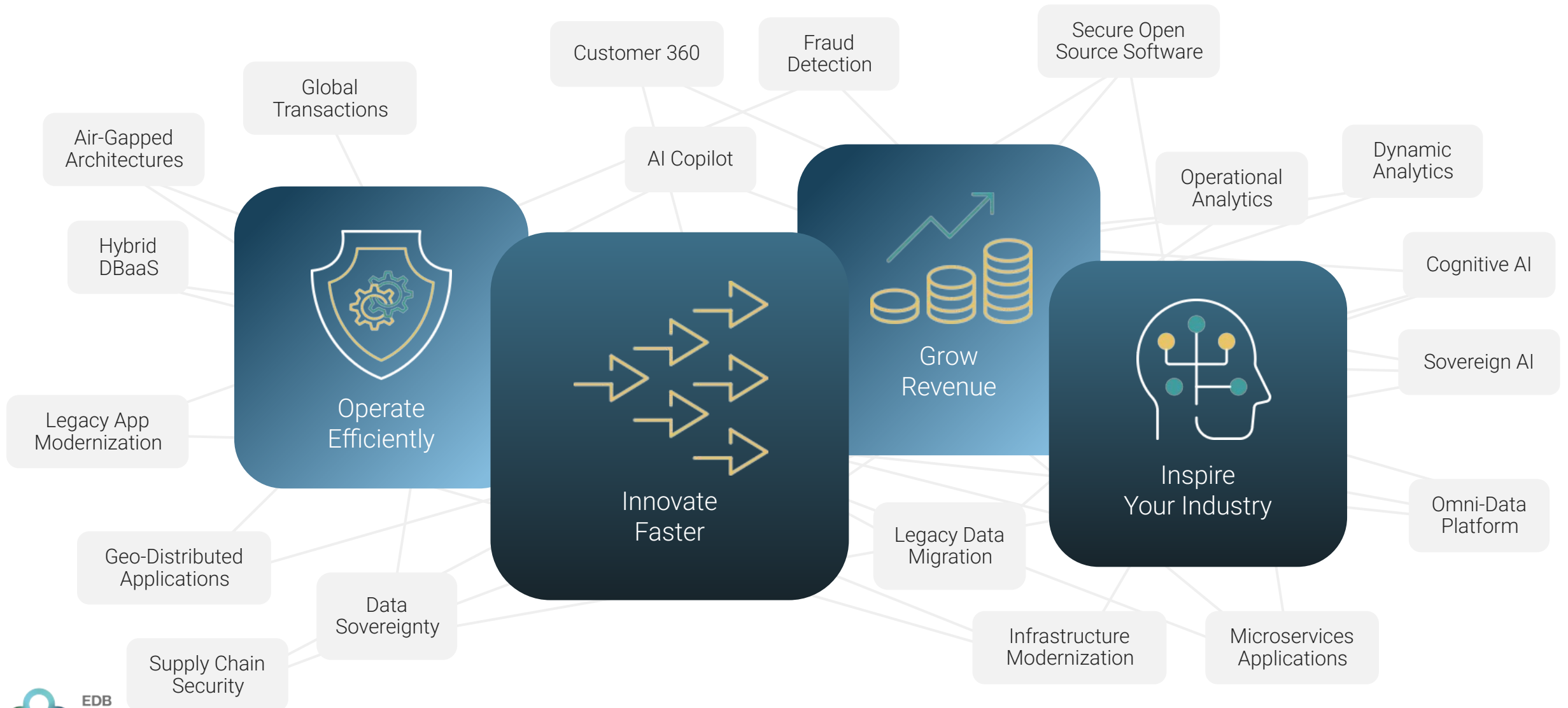


Market
Leadership

1%

Of companies have
mature AI deployments

What value can your data unlock?



EDB Postgres AI

Database

ENTERPRISE POSTGRES SERVER

ORACLE COMPATIBLE SERVER

COMMUNITY POSTGRES SQL SERVER

MULTI-MODEL EXTENSIONS

MANAGEMENT & OBSERVABILITY

KUBERNETES OPERATORS

SUPPLY CHAIN SECURITY

MIGRATION TOOLS

HIGH AVAILABILITY

Analytics Accelerator

ANALYTICS ENGINE

LAKEHOUSE CONNECTOR

SUPPORT FOR GREENPLUM
WORKLOADS

AI Factory

VECTOR ENGINE

AI PIPELINE

GENAI BUILDER

AGENT STUDIO

MODEL SERVING

Hybrid Management

HYBRID OBSERVABILITY

HYBRID DBAAS

DISTRIBUTED HA (99.999%)

MIGRATIONS

Deploy Anywhere

SOVEREIGN DATA AND AI FACTORY

HYBRID SOFTWARE

MANAGED PLATFORM

INTEGRATION PARTNERS: AWS, GCP, AZURE, RED HAT OPENSIFT, IBM, SUPERMICRO, NVIDIA, GRIPTAPE

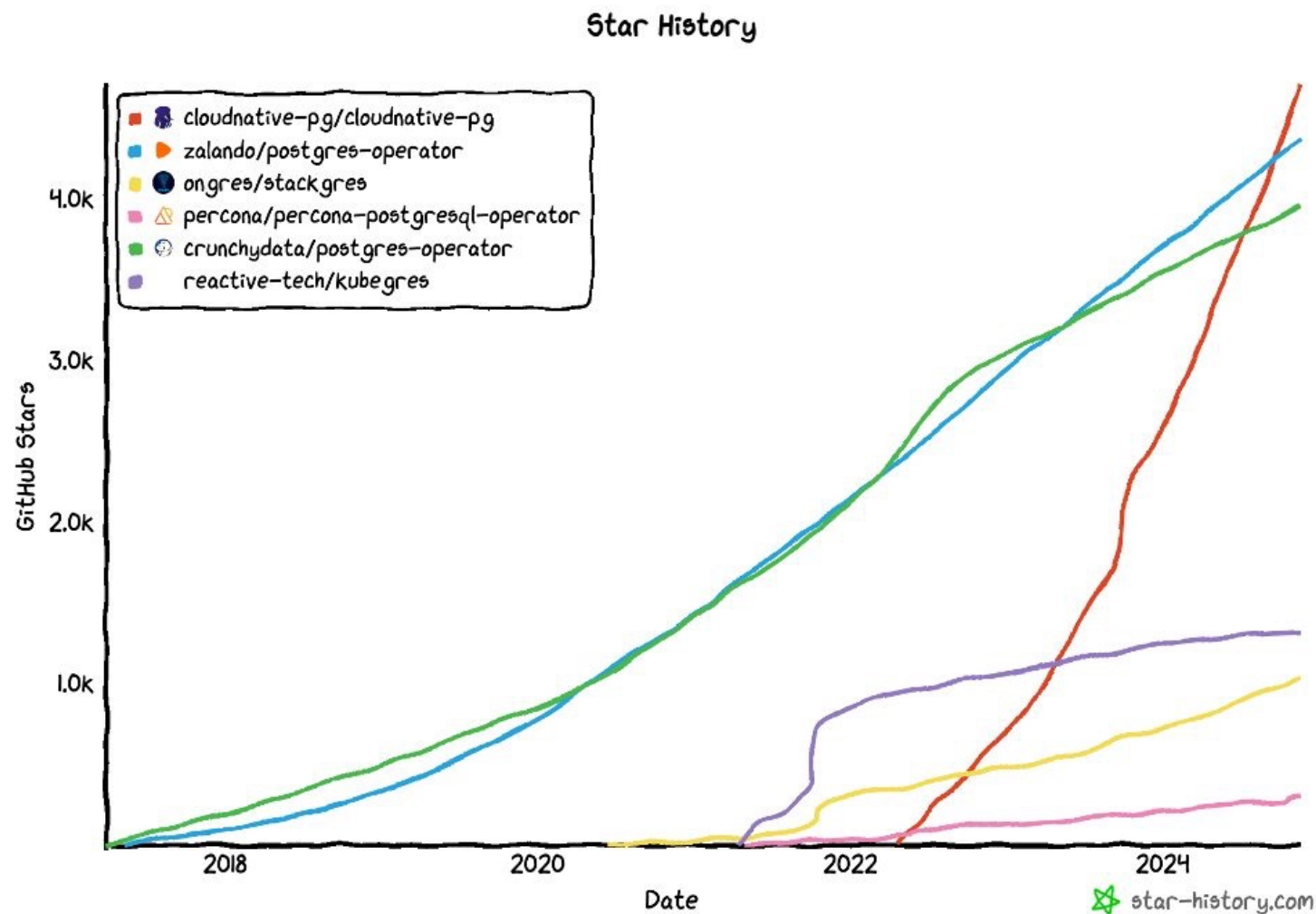
Sovereign Assurance

MANAGED SERVICES

PILOT TO PRODUCTION SLAS

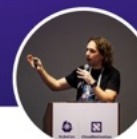
OUTCOME EXECUTION

The world's most popular Postgres operator for Kubernetes



 **CLOUD NATIVE**
COMPUTING FOUNDATION

SANDBOX PROJECTS



Run PostgreSQL.
The Kubernetes way.

Gabriele Bartolini (He/Him) · 1st
VP of Cloud Native at EDB | DoK Ambassador | PostgreSQL

80+ Million
downloads
and counting



EDB POSTGRES AI

YOUR SOVEREIGN DATA AND AI PLATFORM



BUILD WITHOUT BOUNDARIES

A single, sovereign data platform for any workload



ACCELERATE AI INITIATIVES AND GROW REVENUE

Secure, rapid, low-code, fully integrated AI Factory



GET REAL-TIME INSIGHTS WITHOUT COMPLEXITY

Rapid analytics and open ecosystem integrations



DRIVE OPERATIONAL EFFICIENCY WITH HYBRID MANAGEMENT

Cloud-native automation and deep observability across deployments from a single pane of glass



DELIVER CONTROLLED OUTCOMES WITH COMPLETE SOVEREIGNTY

Flexible deployment across hybrid software, sovereign data and AI factory, and managed platform

Solution

Hybrid Control Plane (HCP)

A **centralized management and automation solution** providing 'single pane of glass' management and observability across your Postgres workloads. **Boost productivity** while accelerating application **performance up to 8x**.



WHY EDB POSTGRES AI DATABASE

SINGLE DATABASE PLATFORM FOR ANY WORKLOAD, READY FOR SOVEREIGN AI.



Build without traditional boundaries



Deliver always-on experiences



Secure your data assets for sovereign AI



Boost productivity for busy teams

KEY FEATURES



- **Multi-model database:** Relational, document, time series, columnar, vector, and more.
- **Distributed HA:** 99.999% HA, built on a geo-distributed, active-active architecture.
- **Secure by default:** Transparent Data Encryption and data, database, and app protection eliminate threats.
- **Flexible deployment:** Automate management across hybrid and multi-cloud environments.

HCP Supported Deployments

RedHat OpenShift Self-managed or cloud using vm's or bare metal (v1.1, 1.2)

- **For Cloud, nodes run in customer cloud accounts**

AWS EKS (Auto mode/Standard) (v1.1, 1.2)

- Kubernetes control plane managed by AWS
- Kubernetes data plane nodes run in customer accounts (except Fargate managed by AWS)

GKE (Standard/Enterprise/Autopilot) (v1.2)

- Kubernetes control plane managed by GKE
- Kubernetes data plane nodes run in customer accounts

Kubernetes (vendor/tool distros) on-premise or cloud using instances or vm's or bare metal. (Future)

- example distros: Kubadm/Ansible/Terraform/Kubespray/Rancher/Pharos/Pivotal Container Srv (PKS<-Tanzu)



USE CASE: HYBRID DATABASE-AS-A-SERVICE (DBaaS)

CLOUD AGILITY IN A SECURE, SELF-HOSTED MODEL

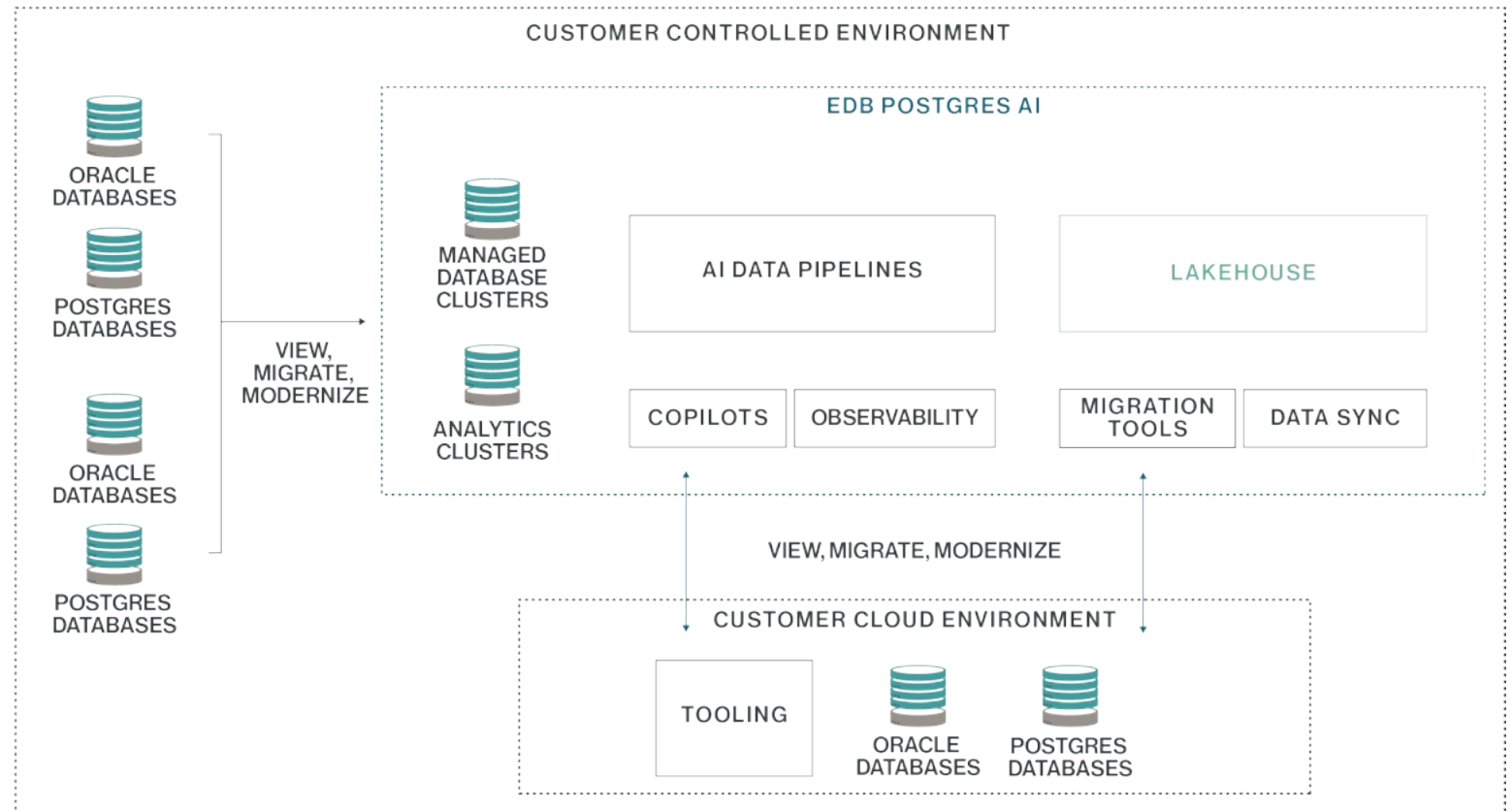
Challenges

- Deployment flexibility
- Developer agility
- Complex management

EDB Postgres AI Solution »

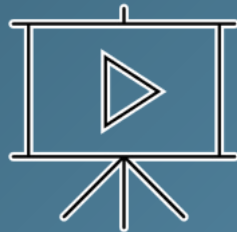
Outcomes

- Hybrid deployment
- Faster app development
- Operational efficiency and TCO reduction



Hybrid Control Plane (HCP)

Live Demo



WHAT ARE DATA CHALLENGES IN THE AI ERA



SOVEREIGNTY REQUIREMENTS

Data and AI sovereignty is at the forefront of every decision today, with organizations repatriating data back on-prem and prioritizing tech that is secure by default to minimize risk. They require full control over their data across hybrid and multi-cloud environments. Governance challenges can't stall their path to AI readiness.



FRAGMENTED ECOSYSTEM

Organizational data is spread across legacy systems, disconnected cloud databases and tools, and siloed teams. The growing sprawl makes it difficult to view, manage, transform, and augment critical data for new AI demands, blocking organizations from unlocking the full value of their data.



TIME TO VALUE

The evolving AI ecosystem has left organizations with piecemeal tech that will be outdated in months. Economic pressures demand IT to get more out of existing infrastructure. Organizations need a flexible platform that adapts to emerging technology while extending the value of existing data assets.

Solution

EDB Postgres AI Factory

A complete Postgres platform for GenAI inferencing—with code when you need it and UI when you don't—that combines knowledge bases, observability, and agent orchestration to enable production-ready GenAI in **weeks** instead of months or years.



Why EDB AI Factory?



Accelerate time to market

Build GenAI apps in days and get to production in weeks with an end-to-end platform. Get started quickly and eliminate 50–80% of integration work with an intuitive application builder and just five lines of code to set up AI data orchestration.



Equip every team to build custom, sovereign AI

Enable your whole organization to create sovereign GenAI solutions that deliver immediate business impact. Developers can use a Python SDK and business users can use a no-code interface.



Design only once with secure, automated data management

Confidently pursue scalable AI initiatives with sovereign data control and governance in secure-by-default Postgres. Adapt seamlessly to new use cases with reusable architecture, automated AI data pipelines, and swappable models.



Deliver more value from data and systems with agentic AI

Turn data into action with intelligent AI agents—systems that unlock new insights and efficiencies by autonomously performing tasks, solving problems, and operating end-of-life systems.



WHY EDB POSTGRES AI FACTORY

SECURELY BUILD, TEST, AND LAUNCH SOVEREIGN AI APPLICATIONS



Accelerate time to market
for GenAI apps



Equip every team to
build custom, sovereign AI



Design only once with secure,
automated data management



Deliver more value from
your data with agentic AI

KEY FEATURES



- **GenAI builder:** Accurate GenAI with robust **low-code SDK** for devs and **no-code interface** for others.
- **Agent studio:** Use **open source agent** templates or build custom **agent workflows** to enhance productivity.
- **AI pipeline:** Auto-embedding in a single system for always-current knowledge bases without the complexity.
- **Model serving:** Run customized **AI models** on a secure vector database without exposing data to the cloud.
- **Hybrid deployment:** Leverage your **own infrastructure** or a **pre-configured solution** with Nvidia and Supermicro.

Sovereign Data and AI Factory

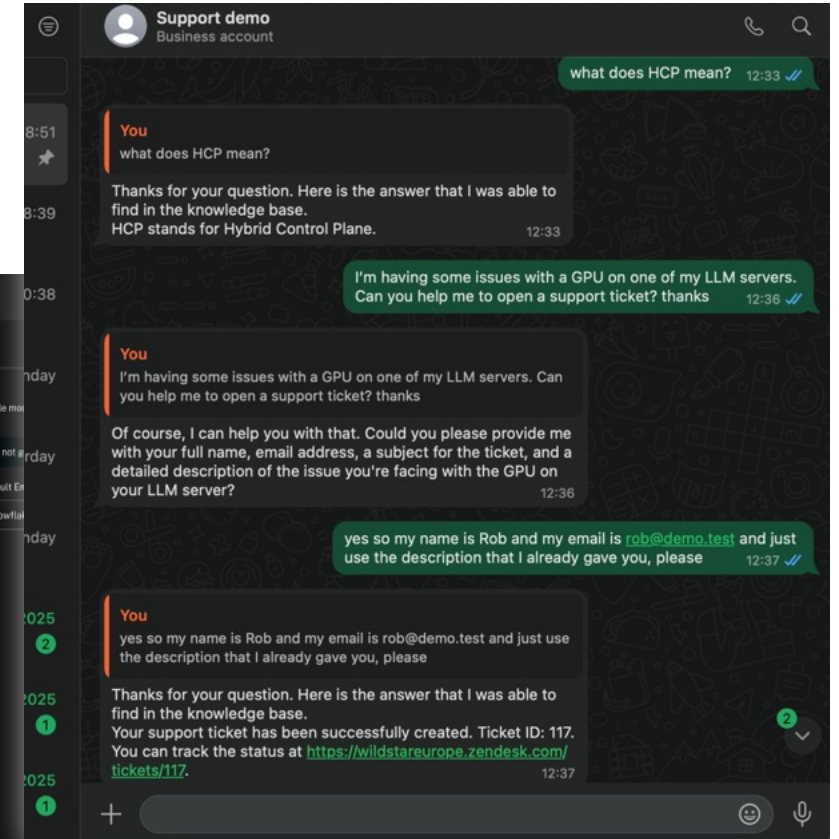
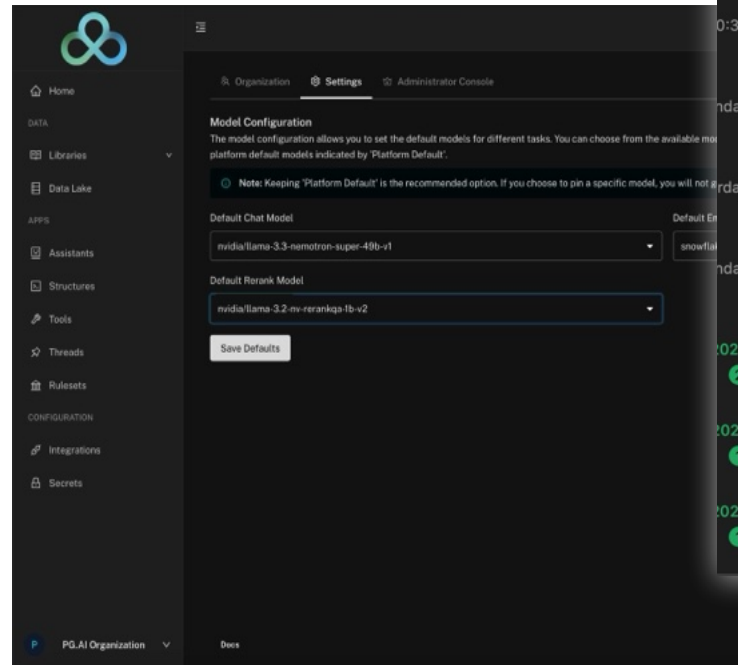
LOCAL MODEL SERVING FOR TRUE, REGIONAL DATA AND AI SOVEREIGNTY

Challenges

- Regional AI governance requirements (e.g. EU AI Act)
- Cloud sovereignty concerns
- Global GPU access

EDB Postgres AI Solution »

- **Models and data** are entirely contained in the system
- **Custom models** for local languages, norms, and ethics
- **No public cloud dependencies**
- **Pre-configured** with Supermicro and NVIDIA GPUs





Gen AI Footballer Lookalike demo

We created the game as a fun way to showcase how AI and Postgres can process data in real time - just like businesses can use AI and Postgres to analyze and act on their own data. Plus, who doesn't want to know which footballer they look like?

[Play Now](#)

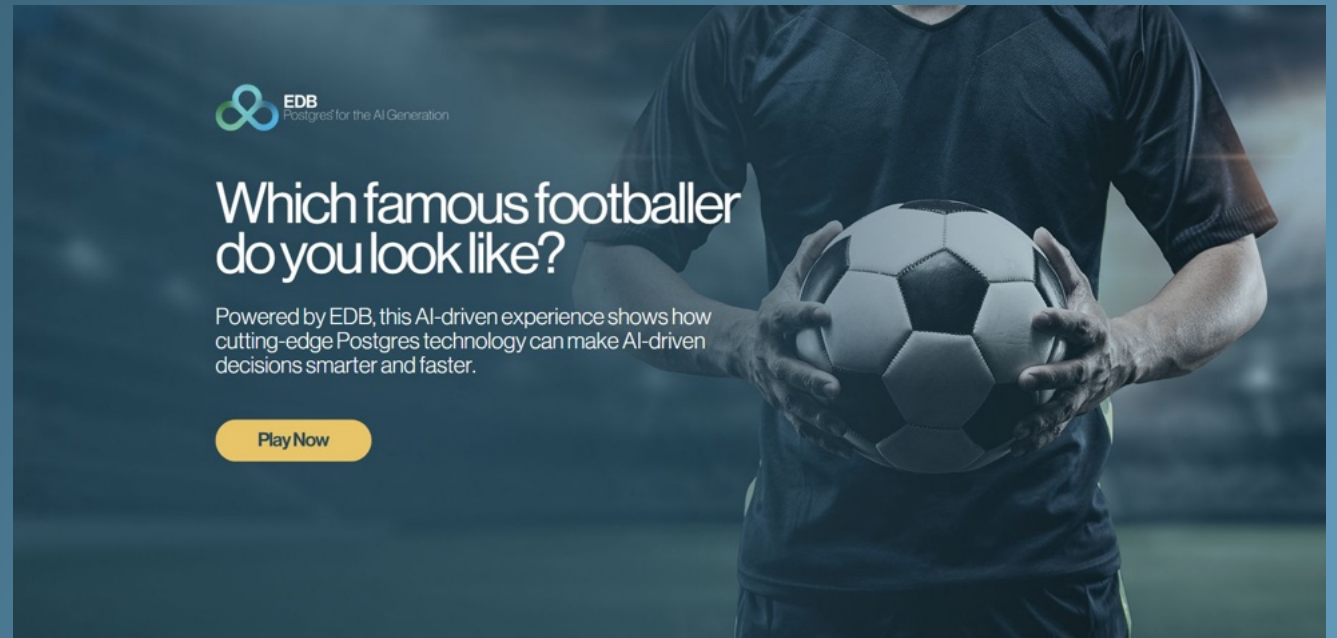
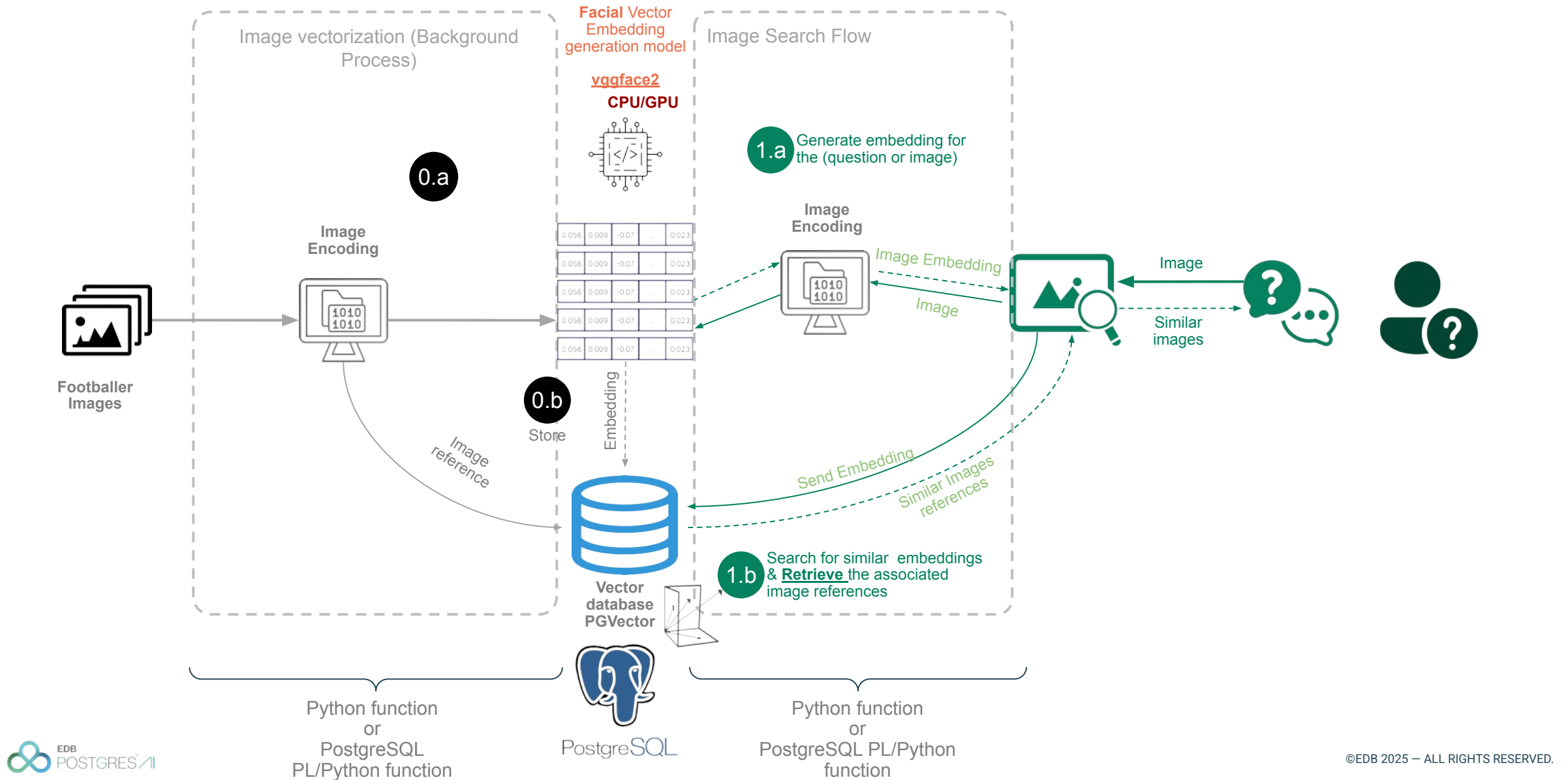
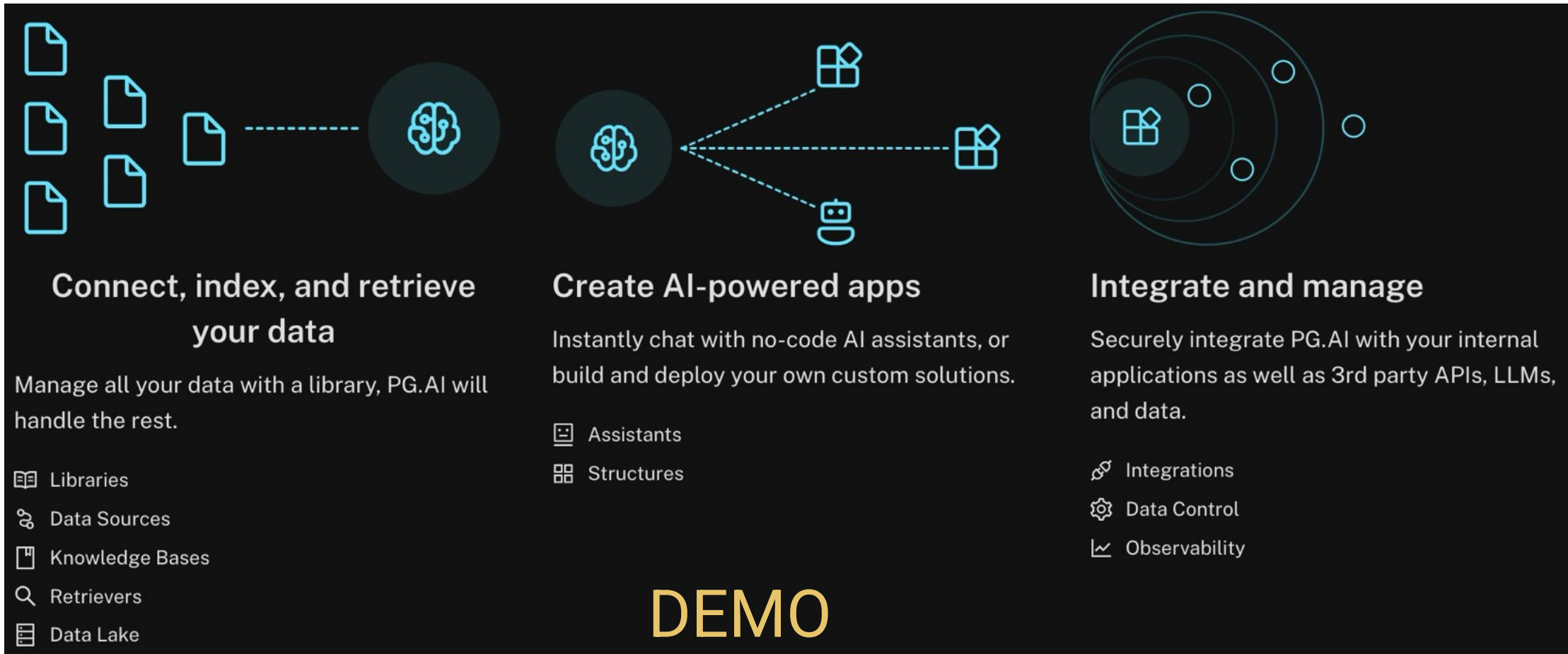


Image Search Interactions - detailed flow



Sovereign Data and AI Factory

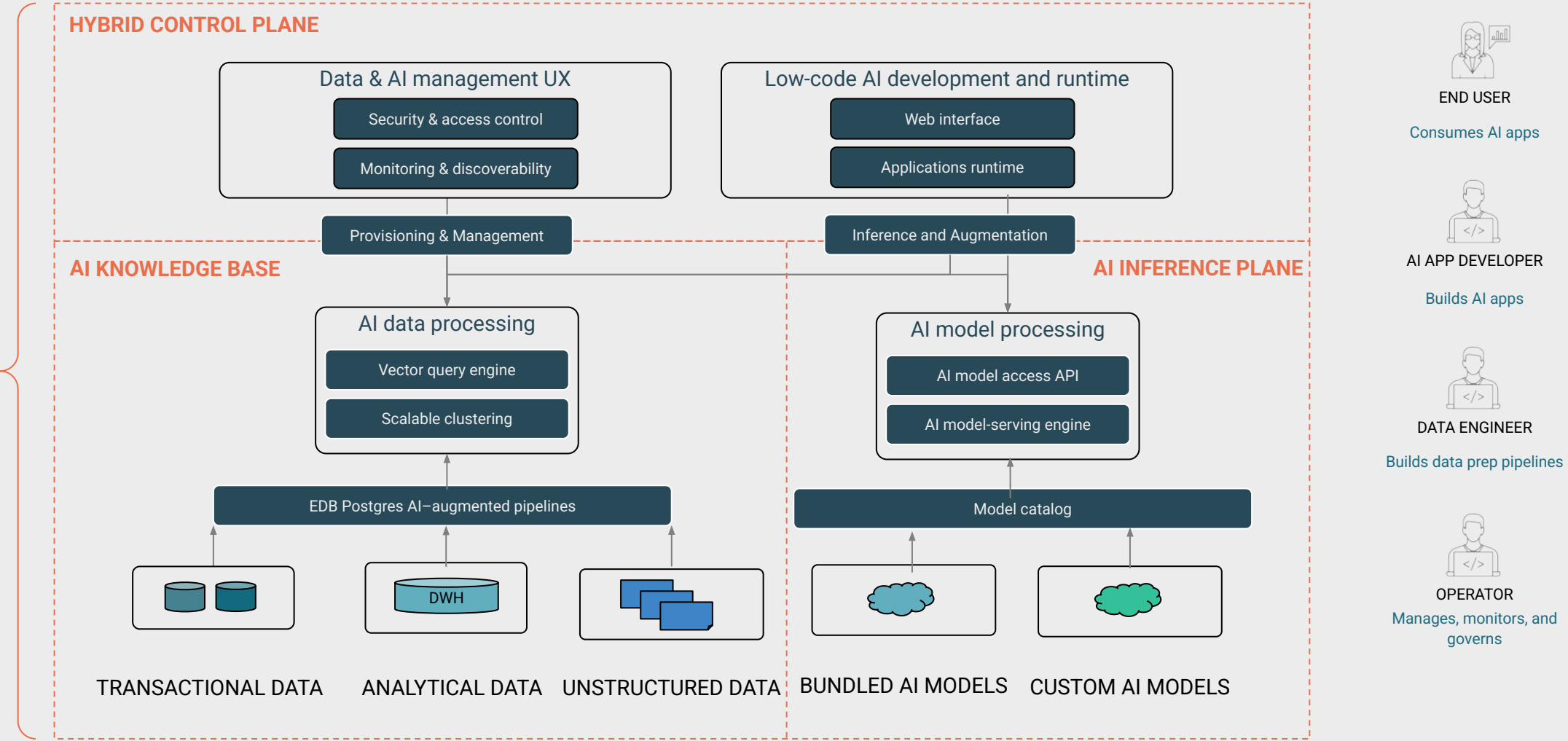
LOCAL MODEL SERVING FOR TRUE, REGIONAL DATA AND AI SOVEREIGNTY



A full-stack agentic AI system with enterprise maturity

EDB AI Factory on the EDB PG.AI platform

EDB AI
Factory



Workloads

Database

SCALES BY CORE

DATABASE

Community, Standard, or Enterprise

SUPPORT

Basic, Premium, or Production

Hybrid Management

SCALES BY CORE

HYBRID MANAGEMENT

Including database requirements

DISTRIBUTED HA

Including database requirements

AI Factory

SCALES BY CORE

AI FACTORY

Including database requirements

Analytics Accelerator

SCALES BY CORE

ANALYTICS ACCELERATOR

Including database requirements

SUPPORT FOR GREENPLUM
WORKLOADS

Sovereign Assurance

MODERNIZATION

GOVERNANCE

COMPLIANCE

Professional Services & Support

CUSTOMER SUPPORT

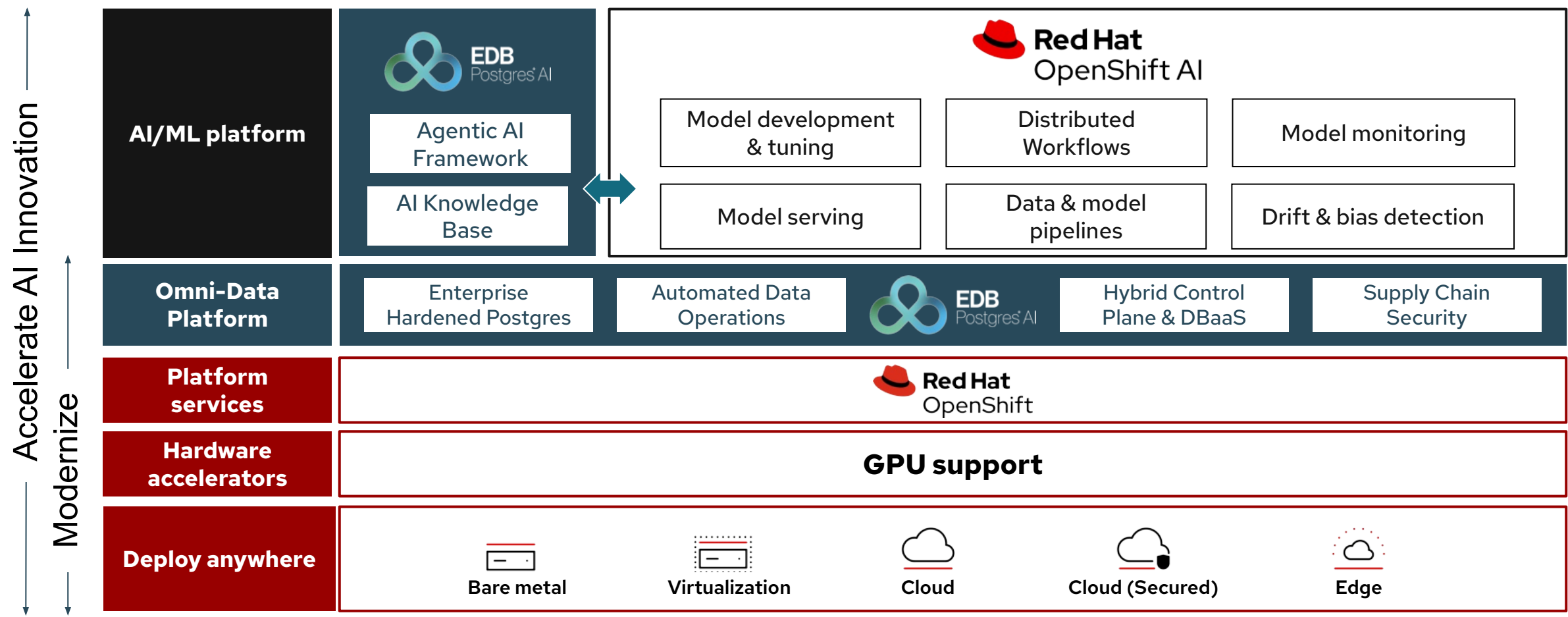
PROFESSIONAL SERVICES

REMOTE DBA

TECHNICAL ACCOUNT MANAGEMENT



Accelerate AI Innovation & Modernize Legacy Data Apps



Get more value from your data

- Accelerate AI Innovation for GenAI apps
- Modernize legacy data apps on Oracle, VM
- Manage Enterprise Software Risk with Open-Source

with an Enterprise-ready Omni-Data Platform, that provides

- ✓ Data and AI sovereignty
- ✓ Fast and risk-free migrations
- ✓ Hybrid Cloud ready with Secure Supply Chain



Next Steps

- Learn more about the [EDB and Red Hat Solutions](#)
- Download and review the [Solution Brief](#)
- Download [Reference Architecture HA & DR](#) & plan your implementation
- Experiment with [AI Generation with LLM/RAG Validated Pattern](#)
- [Contact EDB](#) to schedule an overview and demo

Thank You