



EUROPEAN CENTRAL BANK

EUROSYSTEM

Moving up the Data Maturity Staircase

From silos to
sovereignty

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Data is the ECB's Strategic Asset



Evidence-based policy

Monetary policy, financial stability, banking supervision.
Every decision rests on timely, reliable data.



Cooperation

We do not work alone: 27 NCBs plus supervisory
authorities across Europe.



Data Management

Volume, variety and velocity are large and increasing.



A Legacy of Silos

Every business area operated its own data platform and governance

Duplicated data

The same figures re-created in many places

Slow, inconsistent access and slow time to insight

Requests passed hand to hand across teams

No single truth

Competing versions of the same numbers, no foundation for AI



DISC: One Place for All ECB Data

DISC

Data Intelligence Service Centre
(2016 onwards)

30 ECB Business Areas
working on the same data

Single source of truth

data no longer needs to be copied

Unified governance

one system to manage access rights

Shared tools

SQL querying, team data labs, first programmatic analysis

DEVO: Same Mission, Cloud Scale

DEVO

DISC EVOlution
→ 2022 onwards

Upgraded platform and
governance model, now on
public cloud

The accelerators

→ DISC hit a scalability ceiling. No confidence in further on-prem growth.
→ End of Hardware Support

Unlimited Scale

Virtually no hardware ceiling

Elasticity

Automatic scale up/down; pay for what you use

Modern Capabilities

Machine learning, AI (e.g. GPU instances)

Resilience

Better availability, shorter maintenance windows

DISC vs DEVO

								
	Active Users	Tables and Views	ESCB Countries	Used Storage	Curated Data Collections	Team Data Collections	Average monthly queries	Active Data Science projects
DISC (2021)	400+	40k	27 Countries (19 Euro Area)	346 TB	57	345	~1.5M	~100 projects
DEVO (2026)	4,300+ ~11x	65k	27 Countries (21 Euro Area)	1651 TB ~5x	110+	400+	~3M	~2300 projects ~23x

From Data Lake to Data Lakehouse

Data Lake

Flexible Storage

BUT

Fragile consistency and quality

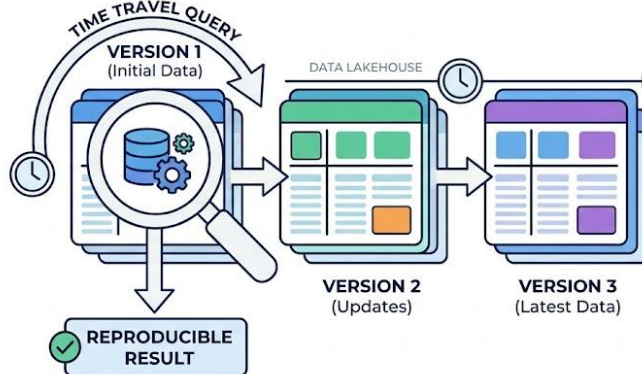


Data Lakehouse

Database-grade reliability:

- transactions
- auditability
- concurrent read and write

One concrete win – **Reproducible research**



Built on Apache Iceberg, the open industry standard.
Same format our future European platform will use.

ICEBERG



Bringing Intelligence to Data

AI Comes to the Data

1

DEVO's Capabilities

- ML in Cloudera AI
- Text-to-SQL
- Governed LLM gateway (preview)
- AI functions inside SQL (preview)

AI next to the data: models execute inside the platform

2

AI Factory: ECB's shared platform for production AI

Multiple models:

- American frontier (OpenAI, Claude)
- European (Mistral)
- Open-source
- Self-hosted (Llama)

Guardrails and EU AI Act compliance.

3

The next frontier is the ***Semantic Layer***

The Consolidation Challenge

Business users increasingly build their own apps, analyses and AI. We call this ***citizen development***.

- + **Good for innovation**
- **Proliferation of platforms and tools**
hard for IT to see, secure and support.

Examples across the ECB:

Virtual Lab

SWAP

AI Factory



“All data,
one for all.”

– *President Lagarde*



Beyond ECB: The ESCB Challenge

DEVO is **ECB-only** – modern supervision and ESCB reporting need **cross-border** data sharing.

Gap 1: Scale

One platform for all 27 NCBs plus the ECB, with full capabilities for everyone.

Gap 2: Sovereignty

Hosting sensitive ESCB data on a US-based cloud is not suitable for every use case



ADA: A Shared, Sovereign ESCB Data Platform

Common Data Management (CDM)

- Harmonize access, remove redundancies, and standardize processes.
- Ensure operational sovereignty – implementation on an EU cloud

1

Analytics & Data Platform (ADA)

Enable self-service analytics, reporting, and collaboration for ESCB and SSM users

2

Integrated Reporting Framework (IReF)

Consolidate statistical data collection, production and dissemination

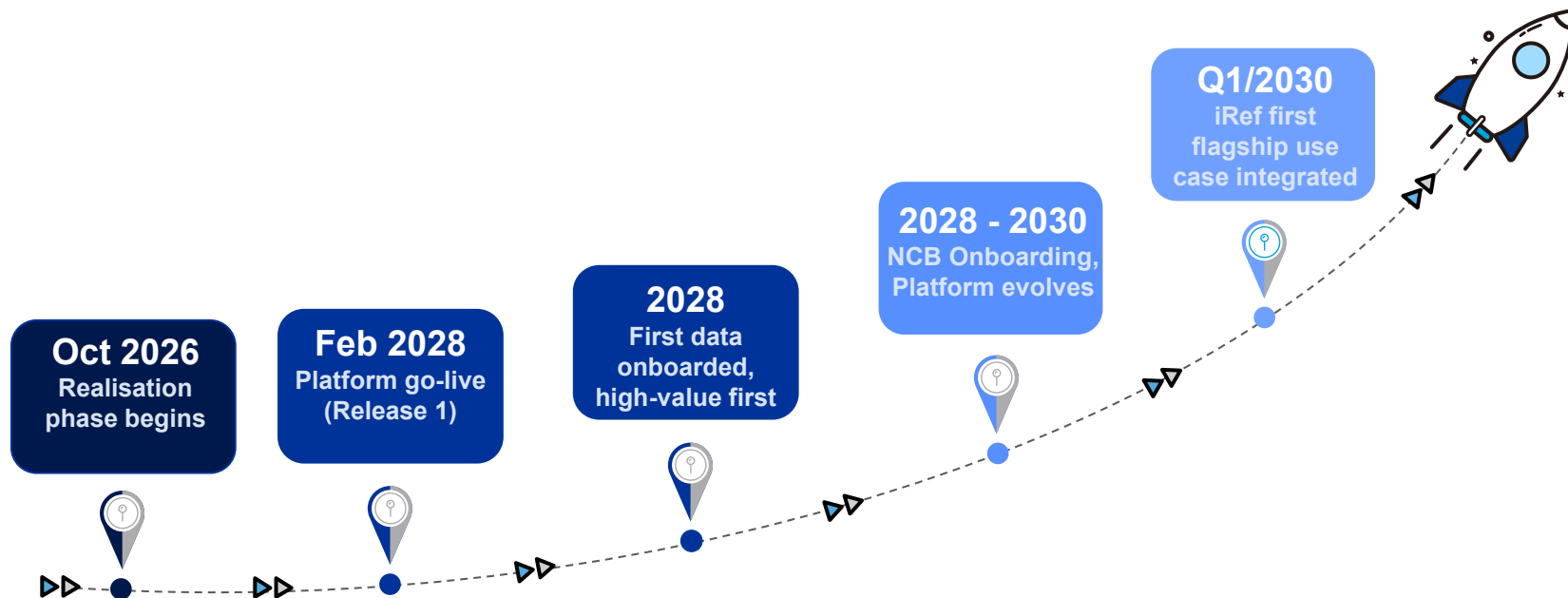


Analytics and Data

DEVO Today, ADA Tomorrow

	 DEVO (today)	 ADA (2028 to 2030)
Who	ECB only	All ESCB, 27 NCBs plus ECB
Cloud	US provider, EU region	European sovereign cloud
Data model	Central platform, owner-managed data	Data Mesh, domains publish data as products
Technology	Cloudera / Impala / Spark / Iceberg (optional)	Dremio / Spark / Iceberg (core)

The Road to ADA: 2026-2030



The Semantic Layer: Making Data AI-Ready



The Problem

Raw data is not AI-consumable



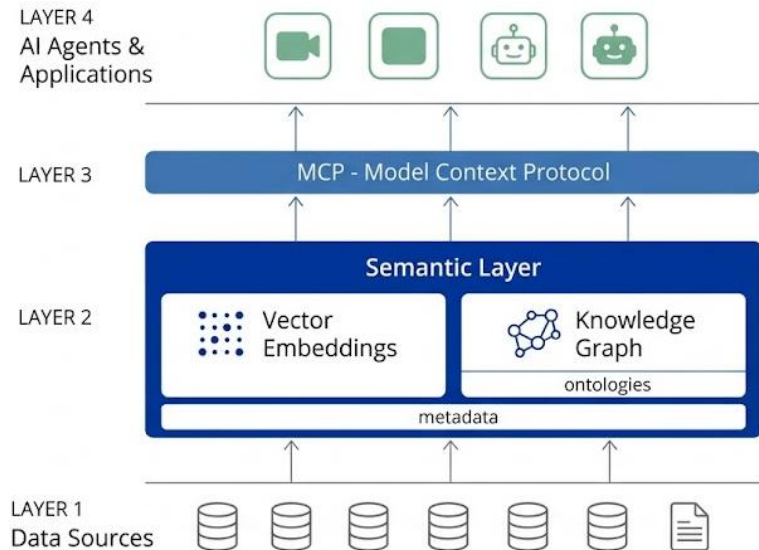
The Fix

Enrich once, reuse everywhere. Shared infrastructure



The 'How'

Hybrid vector and graph, exposed via MCP so any AI agent can consume it



From a Suitcase of Cash to a Sovereign European Cloud

We once flew to San Francisco with 'cash in the suitcase' to buy hardware.

Next, we handed the heavy lifting to a US cloud.

Now we are building the same power on European, sovereign ground.





Q&A