



CASE STUDY

Building a Unified Data Intelligence Platform at Scale

Ingest at Scale. Derive Intelligence.
Accelerate Outcomes.



Customer Profile

A large global infrastructure operator managing complex, distributed systems across multiple regions. The organization collects and processes massive volumes of operational, asset, and external datasets to support critical decision-making and operational resilience.



Business Challenge

The customer was managing exponential data growth from disparate sources with no unified view. Legacy systems and siloed data pipelines created latency, duplication, and high operational cost—limiting the ability to generate timely intelligence and act proactively.

- > Inability to ingest and process high-velocity data at scale
- > Fragmented data across systems, geographies, and platforms
- > Limited real-time visibility and context for decision-making
- > Manual data preparation delaying analytics and ML initiatives
- > Long time to build, train, and deploy ML models in production
- > Need for a secure, scalable, and AI-ready data platform



Our Solution

IoT83 deployed the Flex83 AIoT Platform to create a unified data intelligence layer that ingests at scale, enriches in real time, and accelerates AI/ML and analytics initiatives across the enterprise.



Unified Data
Ingestion at Scale



Contextual
Enrichment &
Processing



Accelerated ML &
Analytics Lifecycle



Secure, Governed
& Future-Ready
Platform

Outcomes Achieved



60M+

Events ingested and processed every second



10x

Faster data ingestion and processing



70%

Reduction in data preparation time



3.5x

Faster ML model development and deployment



99.9%

Platform availability and reliability



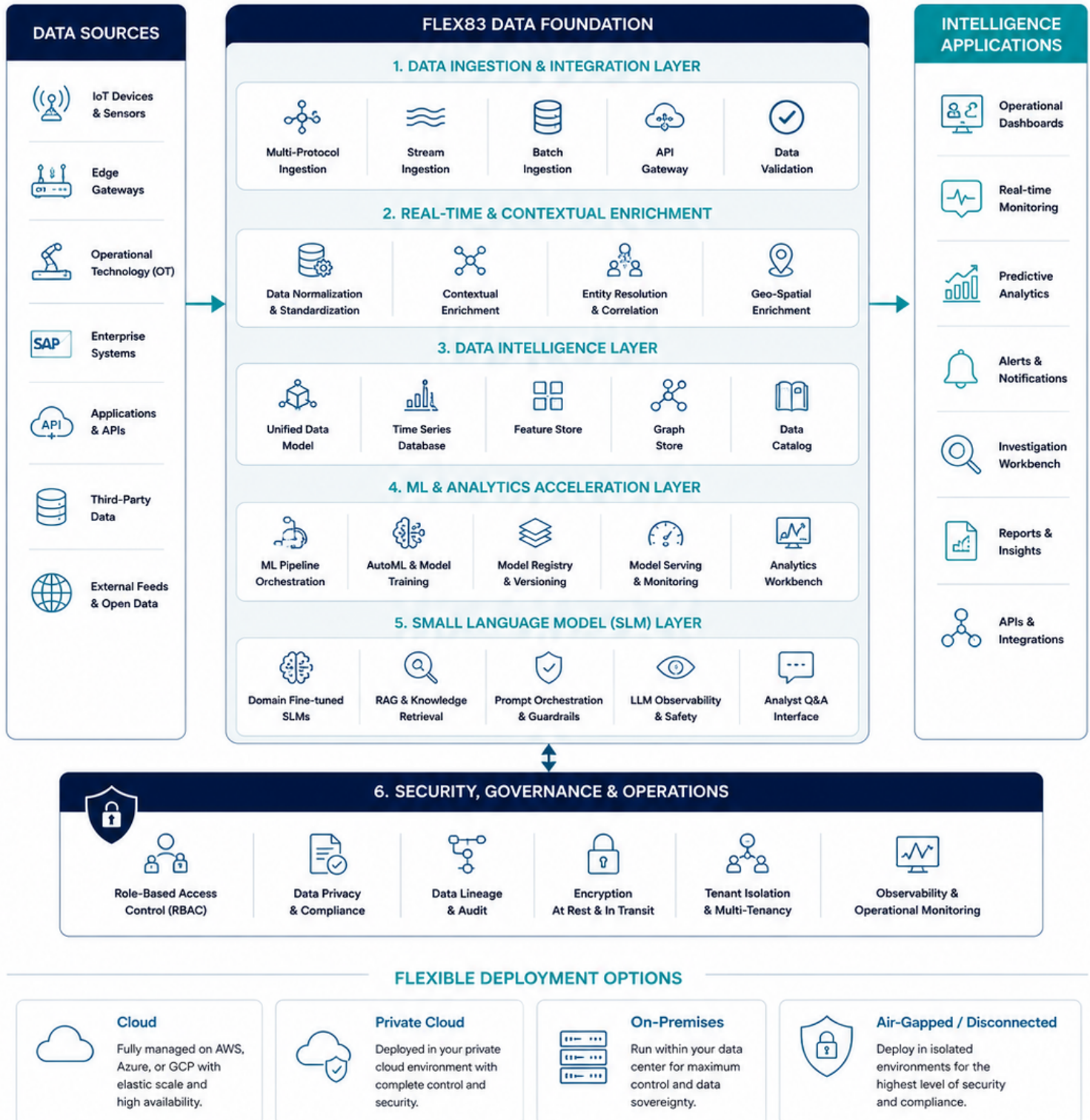
Significant

Improvement in operational efficiency and decision speed

FLEX83 PLATFORM ARCHITECTURE

Unified. Intelligent. Secure.

The Flex83 AIoT Platform unifies data from any source, enriches it with intelligence, and accelerates AI/ML and analytics applications.



DATA INTELLIGENCE & AI ACCELERATION

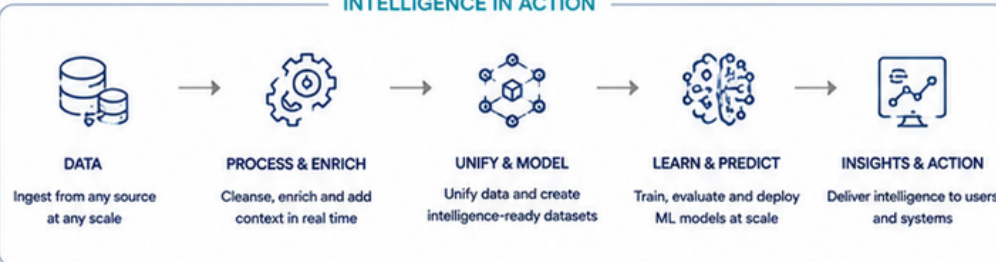
From Raw Data to Actionable Intelligence—Faster.

Flex83 accelerates the entire data intelligence lifecycle—ingesting and unifying data, engineering rich features, building and deploying ML models, and operationalizing insights with AI-powered automation.

END-TO-END INTELLIGENCE LIFECYCLE



INTELLIGENCE IN ACTION



SMALL LANGUAGE MODEL (SLM) CAPABILITIES IN FLEX83

- Domain-Tuned SLMs**
Pre-trained on your domain data for accurate, context-aware understanding.
- Natural Language Query**
Ask questions in natural language and get precise answers across your data.
- RAG for Trusted Answers**
Retrieval Augmented Generation ensures responses are grounded in your enterprise data.
- Secure & Private**
SLMs run in your environment—data never leaves your control.
- Analyst Copilot**
Summarize events, generate reports, explain anomalies, and recommend next best actions.
- Extensible & API-First**
Easily integrate SLM capabilities into applications and workflows via APIs and SDKs.

“ Flex83’s end-to-end intelligence lifecycle and SLM capabilities help teams uncover insights faster, automate analysis, and make confident decisions at mission speed. ”

BUILT ON A TRUSTED DATA FOUNDATION

Data Security by Design

Role-Based Access & Least Privilege

Data Lineage & Audit

End-to-End Encryption At Rest & In Transit

Policy-Driven Governance & Compliance

Multi-Tenancy & Isolation

MEASURABLE IMPACT. MISSION ACCELERATED.







Delivering Intelligence at Scale with Flex83.

The Flex83 platform empowered the organization to modernize its data infrastructure, accelerate AI/ML initiatives, and deliver actionable intelligence across the enterprise.

BUSINESS & OPERATIONAL OUTCOMES

 60M+ Events ingested and processed every second High-throughput ingestion with sub-second latency	 10x Faster data ingestion and processing From hours to minutes for critical data availability	 70% Reduction in data preparation time Automated enrichment, cleansing and feature creation
 3.5x Faster ML model development With reusable components, AutoML and model factory	 99.9% Platform availability and reliability Built for high availability, resilience and scale	 Significant Improvement in operational efficiency & decision speed Unified view, real-time insights and AI-driven automation

WHY FLEX83

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Unified Data Intelligence Platform
 End-to-end platform that unifies ingestion, enrichment, analytics and AI in a single, integrated foundation.
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Accelerated Time to Value
 Pre-built accelerators, templates and best practices to go from pilot to production—faster.
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Cloud-Agnostic & Flexible
 Deploy anywhere—cloud, on-premises or air-gapped environments—with consistent experience.
- 
Pro-Code Extensibility
 Microservices architecture, open APIs and SDKs for unlimited extensibility and customization.
- 
Enterprise-Grade Security
 Security by design with fine-grained access control, encryption, audit and compliance built in.
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Proven at Scale
 Deployed across millions of devices and high-volume data workloads in mission-critical environments.

“ Flex83 helped us break data silos and build a unified intelligence layer that accelerated our AI/ML initiatives by months. The platform’s scalability, security and flexibility were key to our success.
 — Head of Data & Analytics

SIMILAR INDUSTRIES SERVED

 Energy & Utilities	 Smart Infrastructure	 Transportation	 Public Safety & Security
 Manufacturing	 Oil, Gas & Renewables	 Telecom	 Environmental Monitoring

ENGAGEMENT SNAPSHOT


 Duration 6 Months	 Deployment Hybrid (Cloud + On-Prem)	 Data Volume 100s TB/Day	 Team Involved IoT83 + Customer Data & Engineering Teams
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READY TO ACCELERATE YOUR DATA INTELLIGENCE JOURNEY?

Connect with IoT83 to see how Flex83 can help you ingest at scale, build intelligence faster, and drive real mission impact.

Let's Connect >

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