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SOLUTION BRIEF

Actian Data Intelligence + Data Observability

Building a Reliable Foundation for AI and Analytics

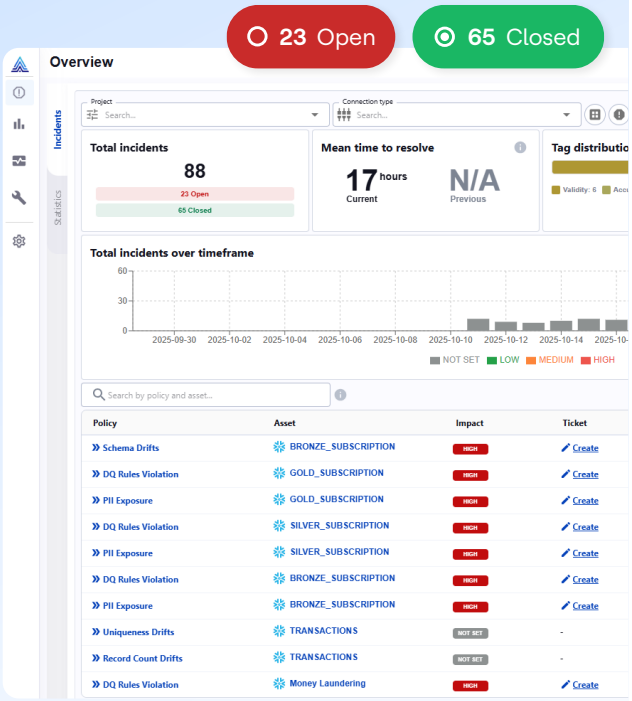
The Gap Between AI Ambition and Reality

Organizations face mounting pressure to deliver AI-driven business outcomes while managing increasingly complex data environments. Yet most struggle with three fundamentals: finding data, verifying its reliability, and demonstrating compliance at scale.

The consequences are significant. Poor data quality costs large enterprises millions each year, and many AI initiatives stall because teams cannot trust, explain, or govern the data behind model outputs. Regulatory audits become resource-intensive when lineage and governance controls are not consistently documented.

Common Obstacles Facing Data Teams

Data scattered across systems	Without a centralized catalog, teams don't know what data exists, where it lives, or who owns it. Time is wasted searching for datasets, and inconsistent metric definitions lead to conflicting dashboards.
Reliability issues discovered too late	Data anomalies often surface only after affecting reports, dashboards, or AI training workflows. Root cause analysis becomes slow and difficult when the lineage is unclear and downstream dependencies are not mapped.
Compliance demands manual effort	Demonstrating adherence to regulations such as GDPR or CCPA requires audits across disconnected tools. Teams struggle to reliably document data usage, access, and retention.
Access bottlenecks slow AI efforts	Data requests rely on ticketing and manual provisioning. New AI initiatives are delayed while teams wait for data that has not been validated for its intended use.



The Actian Approach

Actian addresses these challenges by unifying Data Intelligence and Data Observability. Organizations gain a consistent view of data, automated governance, and continuous quality controls that keep pace with change. This dependable foundation supports analytics and AI with greater accuracy, transparency, and accountability, shifting work from fire drills to value creation.

Actian Data Intelligence

Enable Trustworthy AI with a Complete Governance Lifecycle

Most organizations struggle not because they lack data, but because they lack a complete picture of it. Data lives across dozens of systems with limited visibility into definitions, ownership, or readiness for use. Documentation falls out of date, terms drift across teams, and lineage is hard to trace. When teams cannot answer basic questions about their data, trust erodes, and projects slow down.

Actian Data Intelligence automatically discovers datasets across the enterprise and keeps metadata up to date. The platform captures where data originates, how it moves, and how it is used.

Automated Discovery and Cataloging	Actian connects to data ecosystems and continuously harvests metadata, providing teams with current information about available data assets, their locations, and structures. This eliminates dependency on institutional knowledge and establishes a consistent reference point across the organization.
Business Context and Semantic Consistency	A business glossary and knowledge graph enrich technical metadata with definitions, ownership information, and relationships. Analysts and AI teams work with consistent, clearly defined terms and understand the business meaning behind data elements.
Comprehensive Lineage	Teams can trace any data element from source through transformations to consumption points. This visibility clarifies dependencies, highlights system impacts when changes occur, and supports explainability for analytics and AI.
Integrated Quality Assessment	Built-in quality scoring shows which datasets meet specific use case requirements, including AI readiness. Teams can apply validation rules and monitor completeness, accuracy, and freshness before committing resources to development.
Governed Self-Service Access	Trusted datasets can be published as data products within a governed marketplace. Access requests follow defined workflows, and provisioning occurs automatically under existing security policies—reducing manual overhead while maintaining control.

Actian Data Observability

Proactively identify data reliability issues, prevent them, and deliver agentic AI apps with confidence

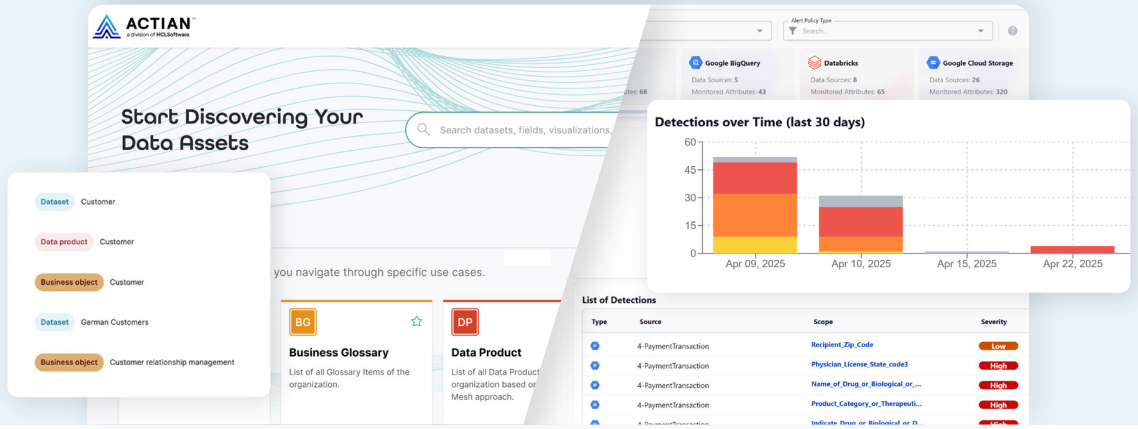
Data quality issues are often discovered only after they reach dashboards, executive reports, or model outputs. By then, the issue has already influenced decisions and may have propagated across multiple systems.

Actian Data Observability breaks this cycle by identifying issues as they enter the environment. Data is checked against expected patterns before reaching lakes or warehouses. Machine learning models understand normal behavior and detect unusual changes that may signal drift. As data moves through processing layers, the platform reconciles each stage to maintain accuracy and consistency.

Agent-Driven Data Validation	Reliability Agents continuously validate data values against expected patterns before they are entered into data systems. Schema violations, missing required fields, and business-rule violations are identified immediately, preventing bad data from entering downstream environments or AI models.
ML-Based Anomaly Detection	Instead of relying solely on static thresholds, Actian uses machine learning to understand typical data behavior. The system identifies true anomalies in schema structure, distributions, and logic while minimizing false positives.
Automated Issue Resolution	As data moves through raw, refined, and curated layers, Actian reconciles each transformation stage. This keeps refined datasets consistent with source data and identifies drift early, before it impacts analytics or AI.
Multi-Layer Data Reconciliation	Actian integrates with cloud warehouses, data lakes, streaming platforms, ETL/ELT tools, and incident management systems, allowing organizations to embed observability into existing workflows without reengineering pipelines.
Agent-Driven Diagnostic and Resolution	- Diagnosis Agents explain anomalies and root causes in plain language - Lineage Agents trace impact across data sources without moving data - Routing and Orchestration Agents coordinate resolution steps across tools and teams - Insight and Help Agents surface context and answers through natural language

The Actian Advantage

Data Intelligence + Observability



When Data Intelligence and Data Observability work together, organizations experience fewer delays, fewer surprises, and fewer costly cleanups. Actian supports data teams at every stage of the AI lifecycle. Metadata stays accurate without manual upkeep, quality checks run continuously across pipelines, and governance updates automatically capture lineage, documentation, and access patterns.

Unified Data Intelligence and Observability

Most platforms require choosing between discovery and governance capabilities or monitoring and quality management.
Actian provides both in a unified platform, aligning design-time governance with
run-time monitoring.

Delivering Business Value

Decision-making improves when based on high-quality data – whether forecasting revenue, optimizing marketing spend, or managing clinical outcomes. Time to insight decreases as access friction drops. Preventing data reliability issues early increases the ROI of analytics and AI investments.

Agentic Era Readiness

Teams can identify appropriate training data more rapidly. Quality monitoring prevents model corruption. Governance capabilities are integrated rather than added as afterthoughts, enabling safer scaling. Agents expose data quality signals that AI workflows can verify automatically before training, inference, or autonomous actions.

Addressing Compliance and Risk

Actian provides lineage, audit trails, and data usage documentation required by regulations such as GDPR, CCPA, and sector-specific standards. Automated documentation stays up to date without manual maintenance.

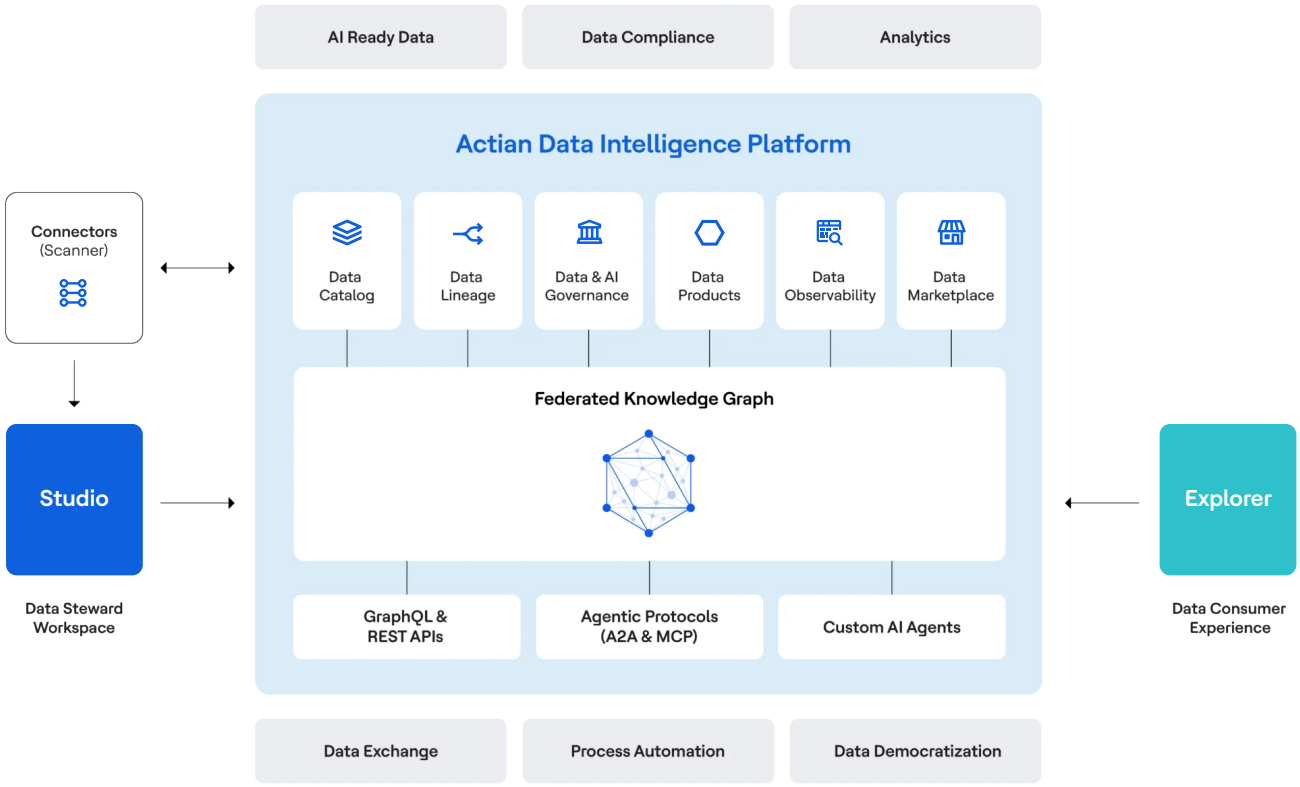
Improving Operational Efficiency

Data discovery and validation take less time when users can search, evaluate quality, and request access from a single place. Self-service expands without compromising security or quality standards, allowing data teams to focus on strategic initiatives rather than manual tasks.

Enterprise-Grade Architecture

Actian's cloud-native architecture scales with organizational needs and integrates with existing tools and infrastructure. The platform supports multi-cloud, hybrid, and on-premises environments and provides fine-grained access control, audit logging, and policy enforcement.

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The success of AI hinges on fundamentals. Teams need a clear understanding of their data, confidence in its accuracy, and governance that aligns security and compliance with the pace of innovation. Without these pieces, even strong AI initiatives lose momentum as teams spend time resolving issues instead of building solutions.

Actian brings these fundamentals together by unifying Data Intelligence and Data Observability. Teams can discover and use reliable data products with guardrails already in place. Training datasets stay consistent and validated, and drift is identified early. Stakeholders trust model outputs because the data behind them is transparent, traceable, and continuously monitored.

With support for hybrid, multi-cloud, and on-premises environments and seamless integration into existing tools, Actian provides a practical foundation for real-world enterprise conditions. Organizations move faster, reduce friction, and convert AI plans into measurable outcomes. When the foundation is solid, AI becomes a reliable, scalable part of the business.

About Actian

Actian powers the full data value chain for the AI era. We deliver databases that store and secure data at scale; platforms to connect, manage, govern, and observe it; and solutions to activate it through BI, conversational analytics, and AI agents. More than 20,000 organizations worldwide, including 30 of the Fortune 100, rely on Actian to fuel intelligent decisions and autonomous systems.

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