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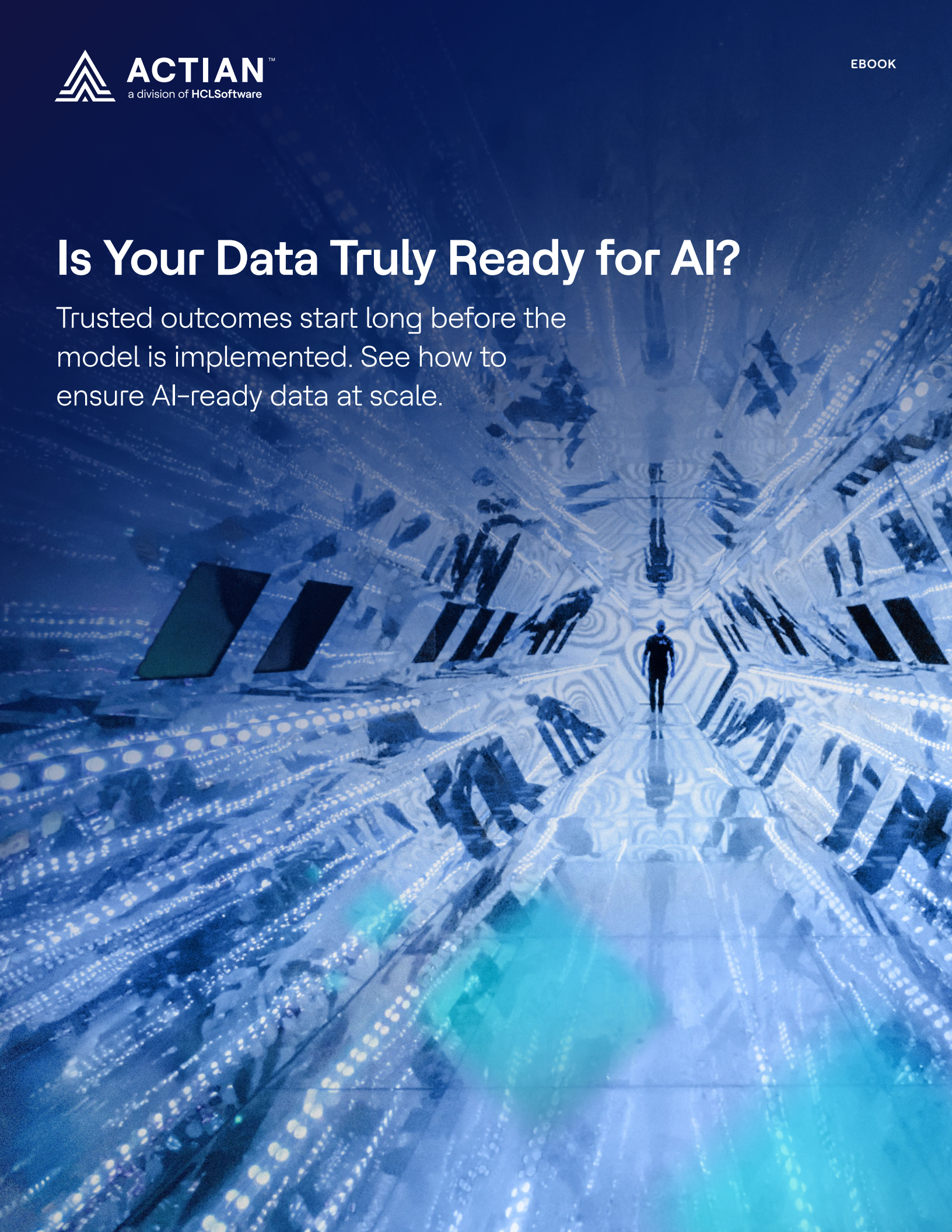
EBOOK

Is Your Data Truly Ready for AI?

Trusted outcomes start long before the model is implemented. See how to ensure AI-ready data at scale.



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Executive Summary

Most organizations now have some form of AI in play, such as chatbots, copilots, recommendation engines, and AI agents. While stakeholders may be enthusiastic about the launch, there's a harsh reality waiting underneath the excitement. Many of these projects will never deliver the intended value.

In fact, Gartner predicts that through 2026, organizations will abandon 60% of AI projects unsupported by AI-ready data.

The reason is not model failures or missing algorithms. It's much more straightforward. AI is only as trustworthy as the data that feeds the model. That means if the data is messy, incomplete, biased, or poorly governed, the AI output will be as well. This goes back to the classic rule "garbage in, garbage out," and with AI, it happens faster and more convincingly than with other applications.

This eBook explores what happens when AI runs on "bad" data, what AI-ready data really means, how to deliver it for AI agents and other use cases, and how Actian helps organizations build a foundation they can trust.

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When AI Runs on Bad Data, Every Output is Impacted

When AI and AI agents use unreliable data, organizations experience problems such as:

Wrong answers at scale	For instance, a customer-facing AI assistant cites outdated prices or policies because it's relying on stale data. That creates rework for humans and erodes trust in both the AI and the organization's brand.
Invisible bias	If historical data under-represents certain regions, customer segments, or patient populations, AI will quietly reproduce and amplify those biases in loans, offers, and recommendations.
Broken operations	Forecasting and optimization models trained on inconsistent or poor-quality data misallocate inventory, misprice services, or misjudge risk. This impacts revenue and customer experiences.
Compliance and reputational risk	AI decisions based on incorrect, unverifiable, or undocumented data complicate audits and increase the risk of regulatory violations.

In these examples, the models may very well be sophisticated. At the same time, they're being asked to learn from and act on data that isn't trustworthy.

Key AI Activation Use Cases

AI copilots use real business context	Enable AI copilots for finance, operations, risk, and customer teams that pull information directly from governed data products. Every recommendation is backed by complete, contextualized data, not a best guess based on partial information.
Agentic workflows that execute safely	Build agentic AI that does more than answer questions. It completes tasks. AI agents can explore data models, understand relationships, and act on policies and contracts, reducing risk as they automate more complex workflows.
Real-time insights for frontline teams	View validated metrics, health indicators, and glossary definitions directly in AI assistants, BI tools, and dashboards. Teams benefit from consistent, trusted answers, no matter where they ask the question.

5 Characteristics of AI-Ready Data

Many organizations assume AI readiness is mostly an infrastructure or tooling standard. In reality, AI-ready and production-ready data is about the data itself: how it's structured, governed, enriched, and monitored.

Across industries, AI-ready data is typically described as data that's prepared, structured, and governed in ways that allow AI systems to consume, learn from, and act on it at scale. The data is complete, high quality, contextualized, and managed with clear governance and observability.

In business and technical terms, AI-ready data has five key characteristics:

1. High quality

Data is accurate, consistent, and up to date. Obvious issues, such as missing values, duplicates, or conflicting records, are detected and resolved before they reach models.

2. Governed and compliant

Organizations know who owns each dataset, who can use it, and for what purpose. Sensitive fields are classified and protected, and there is a clear record, or lineage, showing where the data came from and how it has been transformed.

3. Contextual and semantic

Data is not just raw tables and columns. It is enriched with meaning such as business terms, relationships, and hierarchies. A knowledge graph can connect related concepts such as "customer," "account," and "order" across systems.

4. Observable

Data teams can see how data behaves over time. Observability gives organizations the ability to continuously monitor data pipelines and datasets for anomalies, drift, and breaks so they can fix issues before they impact downstream AI decisions.

5. Accessible and secure

Data is discoverable by both business domains and machines, and access is governed. AI systems and data users can access the information they need without constant IT involvement, and sensitive information is protected with appropriate policies.

If any of these characteristics are missing, organizations may still be able to prototype a model. The drawback is that they will struggle to move confidently from proof of concept to reliable, scalable production.

Activate AI with Trusted Data

Organizations don't need to rip and replace their existing tech stack to innovate with AI. The Actian Data Intelligence Platform helps maximize existing investments while activating AI across the business by:

Turning existing datasets into reusable data products	Wrap data lakehouse tables, data warehouse views, and operational data into governed products that are immediately consumable by AI agents and business units.
Exposing trusted data to AI agents and applications	Use MCP Server and open integrations to feed governed, production-ready data into copilots, chatbots, and decisioning engines.
Increasing adoption of organizations' current tools	Give users a unified place to discover, understand, and trust data, then access it directly for AI.

The result is faster time to value for AI projects, less rework, and a higher return on data, cloud, and AI investments.

Why AI Agents Raise the Stakes

AI was step one. The next wave is AI agents, which are systems that not only answer questions, but also take actions on users' behalf. Actions can include looking up information, answering questions, triggering workflows, or updating records.

AI agent use cases include:

- **Collecting information** from a data catalog about all customers that meet specific parameters.
- **Calculating churn risk** and recommending retention offers.
- **Creating a task** in the customer relationship management (CRM) system, such as sending an email.

If the AI agent is working with incomplete, low quality, or poorly governed data, it can make bad decisions autonomously. The decision-making can occur across multiple systems at once.

Gartner predicts over 40% of agentic AI projects will be canceled by the end of 2027 due to escalating costs, unclear business value, or inadequate risk controls. Weak data governance is a major driver of that risk. AI agents must be deeply aligned with the organization's business logic, data flows, and policies, or else they can move quickly in the wrong direction.

That alignment is impossible without AI-ready data.

5 Steps to Build a Practical Roadmap to AI-Ready Data

The good news is that organizations do not need to create or fix everything, everywhere, all at once to achieve AI success. They can start by treating AI-ready data as a journey with five clear steps.

Step 1

Start with a high value, high risk use case.

Select a specific AI initiative where quality and trust clearly matter. For example, this can be an underwriting model, a collections assistant, or an AI agent that supports compliance reporting.

For that use case, organizations should:

- Identify the critical datasets involved.
- Define what "good enough" data looks like in terms of freshness, completeness, and accuracy.
- Document which decisions or actions will be taken based on the AI output.

This gives organizations a focused target for their readiness efforts.

Step 2

Centralize and enrich metadata

Metadata is data about data and can include table descriptions, owners, quality indicators, and relationships. Most organizations have metadata scattered across corporate wikis, spreadsheets, and tools.

An AI-ready environment requires a unified data intelligence layer where:

- Business terms and assets are connected.
- Lineage shows how data flows from sources to models and changes over time.
- Policies are attached to the data assets being governed.

The Actian Data Intelligence Platform uses a federated knowledge graph to identify relationships between data assets across the entire company ecosystem. This turns metadata into a living, navigable map of interconnected data relationships that both humans and AI can easily understand.

Step 3

Make data quality and observability continuous

Traditional data quality programs often rely on periodic checks and manual reports. AI requires a more dynamic approach.

With modern data observability, organizations:

- Monitor data pipelines and datasets in real time.
- Automatically flag anomalies in volume, distribution, or structure.
- Detect data drift, changes in the statistical properties of data over time, before it silently degrades AI performance.

Actian Data Observability capabilities are designed for AI-ready data. The solution offers complete data coverage and automated anomaly detection so hidden errors cannot quietly corrupt AI models.

Step 4

Embed governance and guardrails from the start

Data governance for AI is not just about access control. It is about ensuring that the data feeding AI models is trustworthy, well documented, and traceable so organizations can explain and audit AI decisions.

That means organizations need to ensure:

- Clear ownership and data stewardship for critical data assets.
- Policy-driven access controls for sensitive fields.
- Documented data lineage that shows the source and transformations over time.
- Defined retention and usage policies for AI training data.

When performed well, governance does not slow innovation. It gives leaders the confidence to scale AI, knowing there are guardrails in place.

Step 5

Connect AI agents directly to governed context

Organizations need a safe way for AI assistants and agents to tap into governed data and metadata without bypassing all the controls that organizations have put in place.

This is where the Model Context Protocol, or MCP, comes into play. MCP is an open standard that lets AI agents connect to external tools, such as a data catalog, to understand data context instead of hallucinating answers.

For example, the Actian MCP Server acts as a secure bridge between AI tools such as Claude or ChatGPT and the trusted metadata in the Actian Data Intelligence Platform. It supports governed functions, such as finding the official definition of a business term or locating certified datasets, so AI agents can use the data catalog for answers.

Go From AI-Ready to AI Activated

Actian's approach to AI-ready data spans three stages of data intelligence:

Discover	Find, understand, and classify data across complex environments.
Trust	Apply governance, quality, and observability so data is reliable and compliant.
Activate	Turn that data into production-ready fuel for AI agents, copilots, and applications.

The Actian Data Intelligence Platform helps organizations deliver governed, high-quality data for AI. This helps ensure dependable data that organizations can rely on for AI and other use cases.

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How Actian Delivers Production-Ready Data for AI

Actian champions a simple idea: when data has the required quality, AI becomes dramatically more powerful and trustworthy.

The Actian Data Intelligence Platform delivers AI- and production-ready data. It offers:

- **A federated knowledge graph** to optimize metadata and capture real-world relationships between data assets, business concepts, and policies.
- **Real-time data quality and observability** to continuously monitor data health and detect issues before they impact downstream AI use cases.
- **Data products supported by data contracts** to ensure each AI-ready dataset has clear ownership, service level agreements, and usage rules.
- **The Actian MCP Server** brings governed, high-quality enterprise data directly into AI assistants and agents through the Model Context Protocol.

Together, these capabilities ensure AI agents have the right data, the right context, and the proper guardrails to deliver accurate, explainable outcomes. Because the Actian platform is designed to work across on-premises, cloud, and hybrid environments, organizations can modernize their AI data foundation without replacing existing systems.

Don't Just Build AI. Make Your Data Ready for It.

Most AI failures are not really AI failures. They're data failures in disguise. If organizations are struggling to move beyond proofs of concept, or if stakeholders don't trust AI-driven recommendations, the question to ask, is not "Which model should be used?" Instead, the question should be, "Is the data truly ready for AI?"

Actian helps organizations answer "yes" with confidence by providing enterprise-ready data intelligence with the cataloging, governance, observability, and MCP powered connectivity needed to deliver AI-ready data at enterprise scale. For organizations that are ready to turn AI from a strategic experiment into a reliable partner, the journey starts with data.

About Actian

Actian empowers enterprises to confidently manage and govern data at scale. Organizations trust Actian data management and data intelligence solutions to streamline complex data environments and accelerate the delivery of AI-ready data. Designed to be flexible, Actian solutions integrate seamlessly and perform reliably across on-premises, cloud and hybrid environments. Learn more about Actian, the data and AI division of **HCLSoftware**, at **actian.com**.

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