



The Data Advantage

Why systems of record will
decide the AI race

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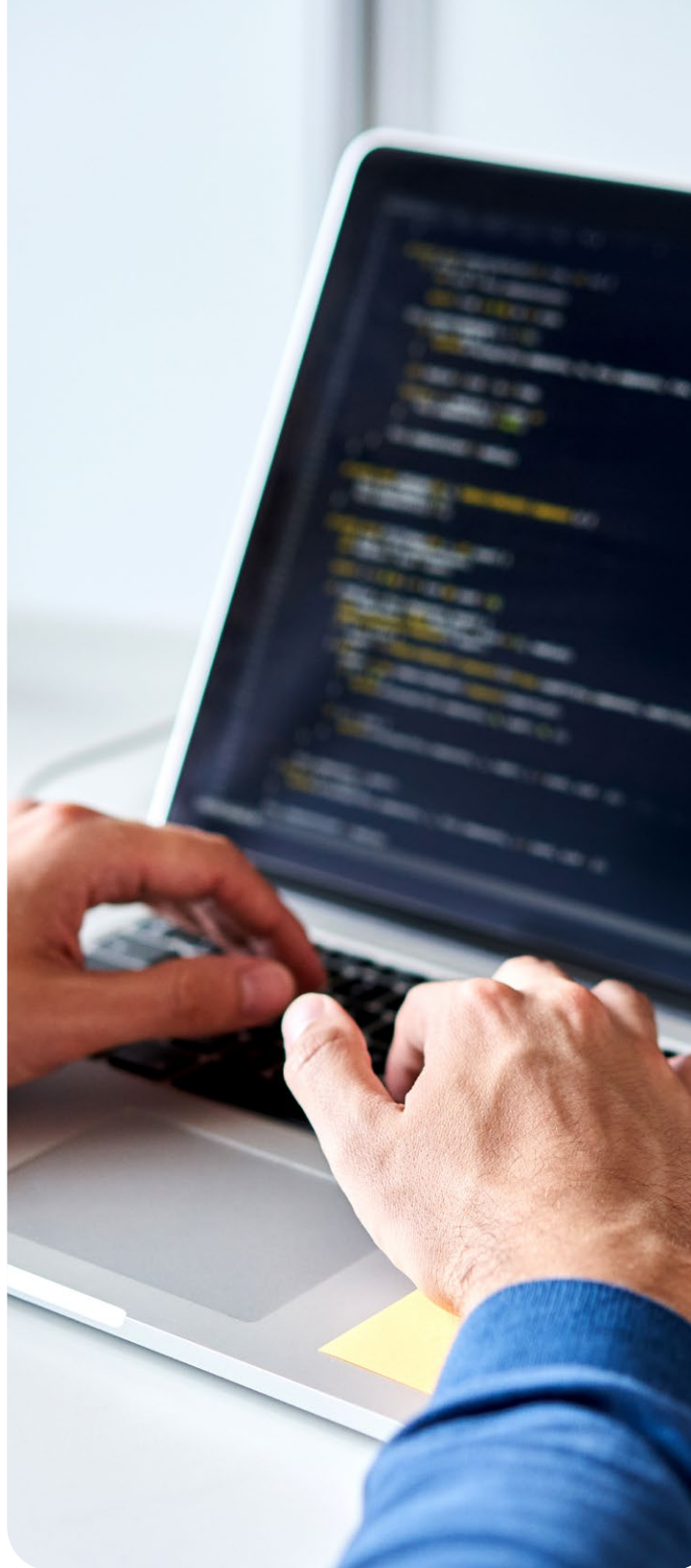
Introduction

AI has become a strategic priority across financial services. Yet a significant gap exists between AI adoption and AI readiness. While most organizations have moved AI into production, only 32% fully include mainframes as primary targets for AI value even though 52% view them as an AI advantage. This disconnect highlights one of the biggest obstacles to scaling AI successfully.

The reason isn't a lack of access to models. It is a lack of access to trusted, connected, operational data.

For the last three years, the AI conversation centered on models. Today, competitive advantage is increasingly determined by what those models can access. The quality, governance, accessibility, and business context of the data inside your systems of record will separate organizations that successfully scale AI from those that struggle to move beyond isolated use cases.

This paper explores why the next phase of AI competition will be won not by model selection, but by data differentiation.



The great AI shift

The shift underway is simple to describe but significant in its implications: organizations are moving from AI experimentation to AI operationalization.

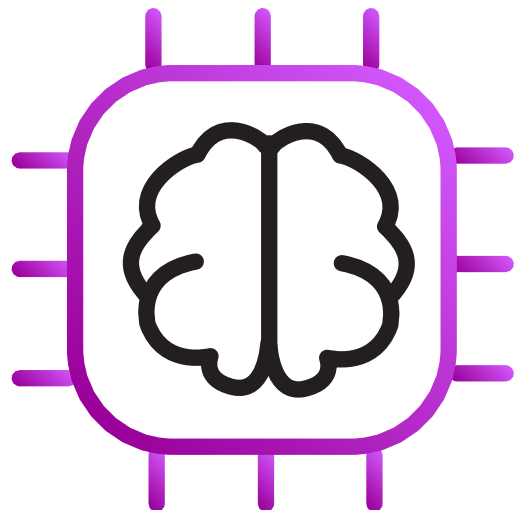
When AI first entered the enterprise agenda, leaders focused on what the technology could do. Could it improve productivity? Accelerate decision making? Automate routine tasks? As adoption matured, attention shifted to selecting the right models and evaluating performance, cost, and capabilities.

Today, a different challenge is emerging. Most organizations have already proven AI's value. Adoption is accelerating, investment is increasing, and many organizations have moved AI into production. Yet 40% report that initiatives stall when they attempt to scale AI across the organization.

The barriers responsible for that slowdown are not model-related. Security and regulatory concerns, integration challenges, data accessibility limitations, and core system complexity now represent the primary obstacles to progress.

That shifts attention to enterprise data and the systems that manage it. Two financial institutions can deploy the same AI model. They cannot replicate decades of transaction histories, operational records, customer interactions, and business context embedded within one another's systems of record.

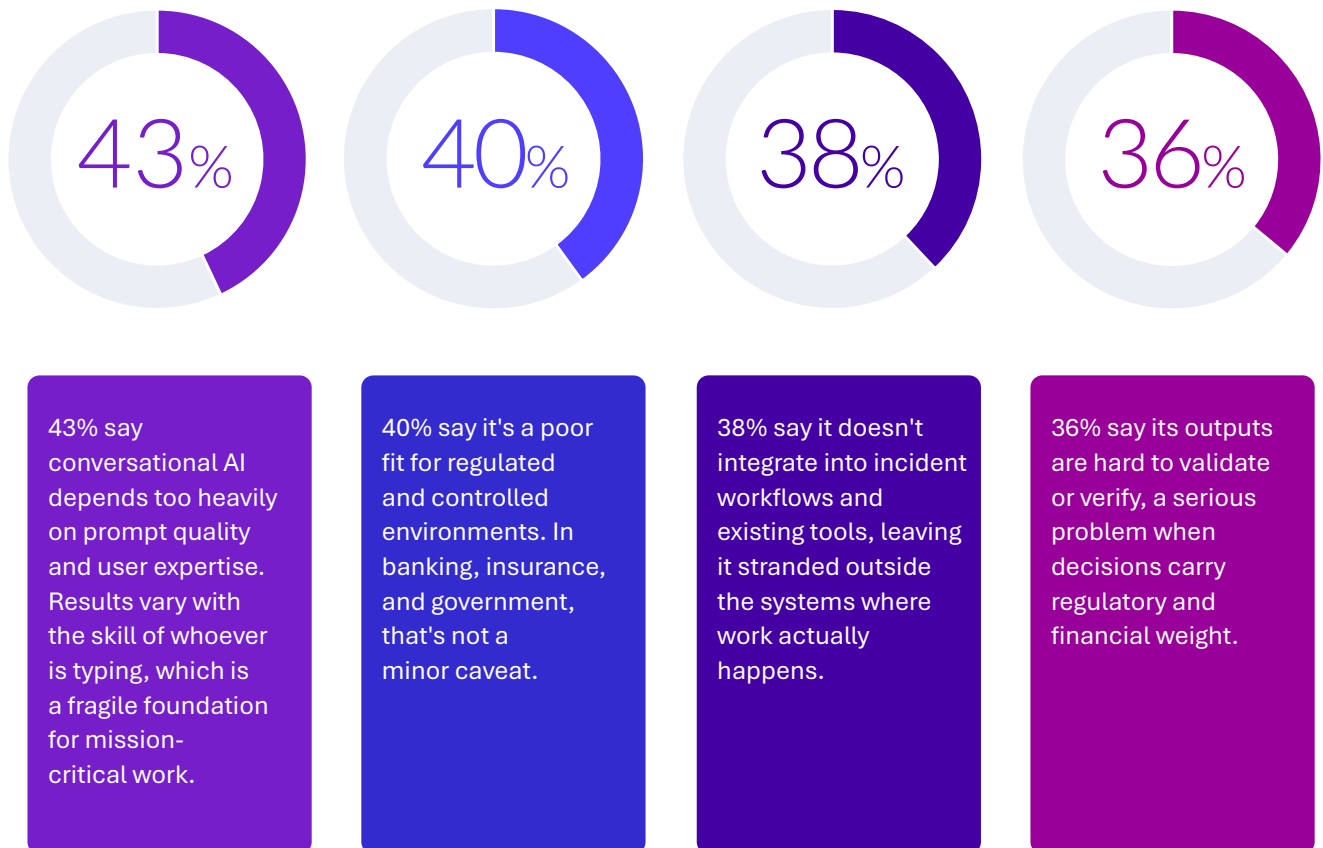
That is where sustainable AI advantage increasingly resides.



Why general-purpose AI isn't enough

Among financial services and banking organizations surveyed, leaders consistently identified limitations that prevent conversational AI from serving as a foundation for large-scale operational use. General-purpose, conversational AI has captured the imagination of businesses worldwide, and it's useful for many things. But in regulated, high-stakes operational environments like financial services, it hits real limits, and IT leaders are candid about them.

The research is clear on where general-purpose AI falls short:



There's a deeper issue beneath these findings. General-purpose AI lacks operational context. It doesn't inherently understand how data flows across the organization, where it originates, how it changes over time, or how systems and business processes depend on one another.

The lesson isn't that AI can't help. It's that AI without full accessibility, operational context, explainability, and governance can't be trusted to scale. Closing that gap is a data problem before it's a model problem.





The rise of systems of record

For years, core systems were framed as the thing to escape. The mainframe was cast as legacy baggage. That narrative is now reversing, and the reversal is one of the most important developments in enterprise AI.

The data tells the story. **52% of IT leaders now view the mainframe as an AI advantage**, citing its reliability, data integrity, and transaction quality. Only **22%** still see it as a limitation. That's more than a two-to-one shift in perception, and it reflects a growing recognition that the systems holding the most reliable data are strategic assets, not constraints.

Yet despite growing recognition of the mainframe's strategic value, significant gaps remain. While 52% of organizations view the mainframe as an AI advantage, only 32% fully include mainframes as primary targets for AI value. Another 42% limit inclusion to select use cases, while nearly one quarter still exclude them entirely or are only planning future inclusion.

This disconnect represents one of the largest untapped opportunities in enterprise AI. Organizations recognize that systems of record contain some of their most valuable operational data, yet many still struggle to fully connect those systems to modern AI initiatives.

That's a problem because financial services leaders overwhelmingly believe AI must understand systems of record to deliver meaningful value. Access to transaction data, mainframe-based systems, policy systems, and other authoritative records is viewed as highly important across the board.

The organizations pulling ahead are not bypassing core systems. They're connecting them.



What makes data strategic

Not all data is strategic. A vast lake of raw records won't produce an AI advantage on its own. What turns data into a genuine asset is the surrounding structure that makes it trustworthy, governable, and usable. Five qualities matter most.

01

Context

Data has to mean something. AI needs to understand what a record represents, where it came from, how it's changed over time, and how it fits into the business. Context is what separates a reliable answer from a confident guess.

02

Lineage

You can't act on data you can't trace. This is especially true in financial services. Knowing where data originated, how it moved, how it changed, and who accessed it is essential for auditing and compliance.

03

Governance

Trust in AI depends on controlling the data that feeds it. The research bears this out plainly: **88% of organizations say auditability — clear logs of inputs, actions, and outputs — is very or extremely important**, and **85%** say the same about human oversight and policy-driven controls. Governance isn't a brake on AI. It's the condition that lets AI move reliably into production.



What makes data strategic

04

Relationships

Value also lives in the connections between systems. Correlating data across mainframe, distributed, and cloud environments reveals patterns that isolated data sets can't.

05

Historical transaction data

The record of what actually happened, sometimes over years, is one of the most valuable AI inputs an enterprise holds. It's how models learn the difference between normal and anomalous, expected and exceptional.

This is where Rocket® DataEdge™ comes in

DataEdge helps organizations discover, connect, govern, and access data across mainframe, distributed, and cloud environments while preserving the context, lineage, and relationships that make enterprise data valuable. Rather than forcing organizations to choose between modernization and systems of record, DataEdge helps make trusted operational data AI-ready while maintaining the governance and security requirements enterprises demand.

The goal isn't simply to move data. It's to make trusted data available when, where, and how AI needs it, securely and at scale. When your data foundation is sound, AI has something real to stand on.

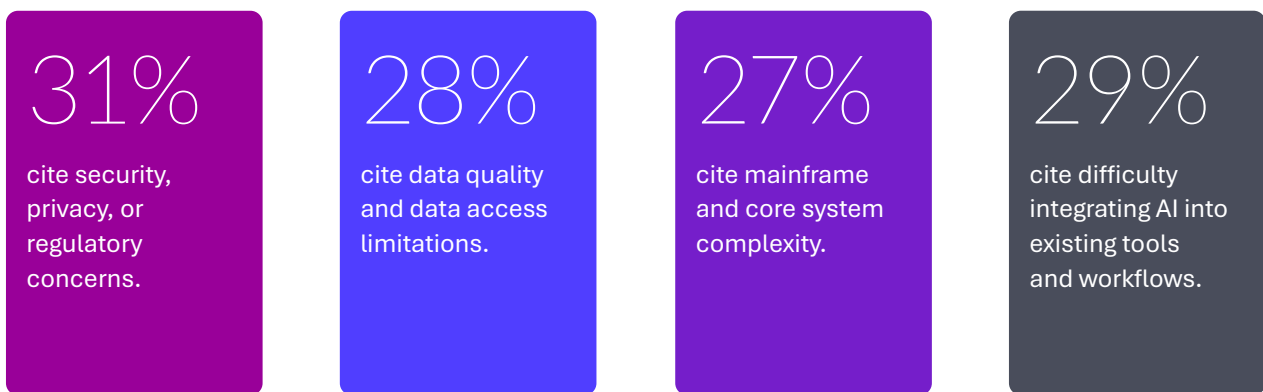


Why AI investments stall

Most stalled AI initiatives don't fail because the AI doesn't work. They stall because the trusted operational data the AI needs is fragmented, hard to reach, or hard to govern.

The evidence points squarely at the data foundation. **40% of AI initiatives stall at the scaling stage** — the moment an organization tries to move from a promising pilot to enterprise-wide production. That's the point where fragmented data and weak integration stop being an inconvenience and start being a wall.

The barriers behind the stall reinforce the pattern:



Read together, a clear pattern emerges. Organizations rarely struggle because of insufficient AI capability. They struggle because trusted data is difficult to access, difficult to govern, or difficult to connect across environments.

Security concerns, integration challenges, data limitations, and core system complexity collectively represent the most significant barriers to AI advancement. The challenge is no longer access to capable AI models. The challenge is ensuring those models can operate with trusted, governed, enterprise-wide data.

In other words, AI initiatives are increasingly constrained by data readiness rather than model readiness.

That's also why trust thresholds are so high before AI reaches production. **46% require strong governance controls and approval workflows** first, and **43% require accuracy proven against historical incidents**. Both are data questions. You can't validate against history you can't reach, and you can't govern data you can't trace.

The takeaway for leaders is encouraging. If AI stalls on data rather than models, then fixing the data foundation is the lever that gets it moving again. And that's very doable.



Building an enterprise data advantage

The conclusion follows directly from the evidence. The first phase of AI competition was about access to models. The next phase is about access to trusted enterprise data. As models become more widely available, the organizations that connect and govern their systems of record will be the ones that scale AI successfully. Building that advantage is practical work, and it's within reach:

Treat systems of record as strategic assets

Your mainframe and core systems hold your most consistent, authoritative data. Bring them into your AI strategy rather than working around them.

Invest in governance and lineage now

Auditability, human oversight, and policy-driven controls aren't obstacles to AI. They're what makes production-grade AI work.

Prioritize integration across environments

The advantage lives in connecting mainframe, distributed, and cloud data. Only this will give you the full picture of your business.

Preserve context and history

Protect the meaning and lineage of data as it moves, and put your historical transaction data to work.

The organizations that do this will scale, trust, and defend AI successfully. That's the real AI advantage, and it's built on a foundation you already have. The task now is to make that foundation trusted, connected, and ready for what comes next.

Discover how Rocket® DataEdge™ can help you unlock the full potential of your data.

Learn more about DataEdge or speak to an expert today to explore how we can support your data modernization journey.

[Learn more](#)



About Rocket Software

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Rocket Software is a privately held U.S. corporation headquartered in the Boston area with centers of excellence strategically located throughout North America, Europe, Asia and Australia. Rocket Software is a portfolio company of Bain Capital Private Equity.



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