



Chaos to Clarity: The FinOps Imperative for Data, Analytics, and AI

Charting a Path to Value Creation in the
Dawn of a Data-driven Insight Renaissance



A Generational Opportunity for Growth Built on Data

The era of data-driven decision-making has arrived, presenting a significant economic opportunity. Organizations are increasing investment in data, analytics, and AI, recognizing these three tightly intertwined proficiencies as the primary drivers of today's efficiency and tomorrow's innovation.

From an economic perspective, the impact of these drives is remarkable. AI workloads are projected to contribute nearly \$20 trillion to the global economy by 2030. This potential is fueling substantial market growth. The data intelligence platform market on its own is expected to reach \$222.1 billion by 2029, growing at a compound annual growth rate (CAGR) of 22.4%. To capitalize on this, 55% of companies plan to increase their data and analytics purchasing over the next 6-12 months. This spending is sharply focused on the foundational layer, with 49% of practitioners specifically planning to increase investment in data warehouse and lakehouse solutions¹.

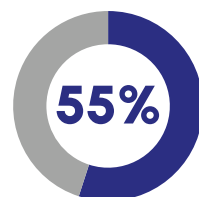
While this investment is necessary to support emerging workloads like agentic AI, it also introduces a critical challenge. The same elastic infrastructure that enables innovation can lead to uncontrolled costs. This raises an important question for leadership: How can organizations navigate the complexities of this new landscape to create measurable, sustainable value? The answer lies not in slowing down, but in gaining control. They must first understand and embrace the concept of FinOps as the essential compass for charting a successful course through today's complex data and AI landscape

Figure 1: Global Data Investment Trends

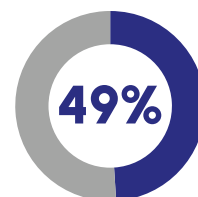


Data Intelligence Platform Market

Projected to reach
\$222.1 B by **2029**



of organizations increasing
Data & Analytics spending



investing more in Data
Warehouses & Lakehouses

Source: Futurum Research, 1H 2025 Data Intelligence, Analytics and Infrastructure Market Sizing and Five-Year Forecast

¹ Futurum Research, 1H 2025 Data Intelligence, Analytics and Infrastructure Market Sizing and Five-Year Forecast

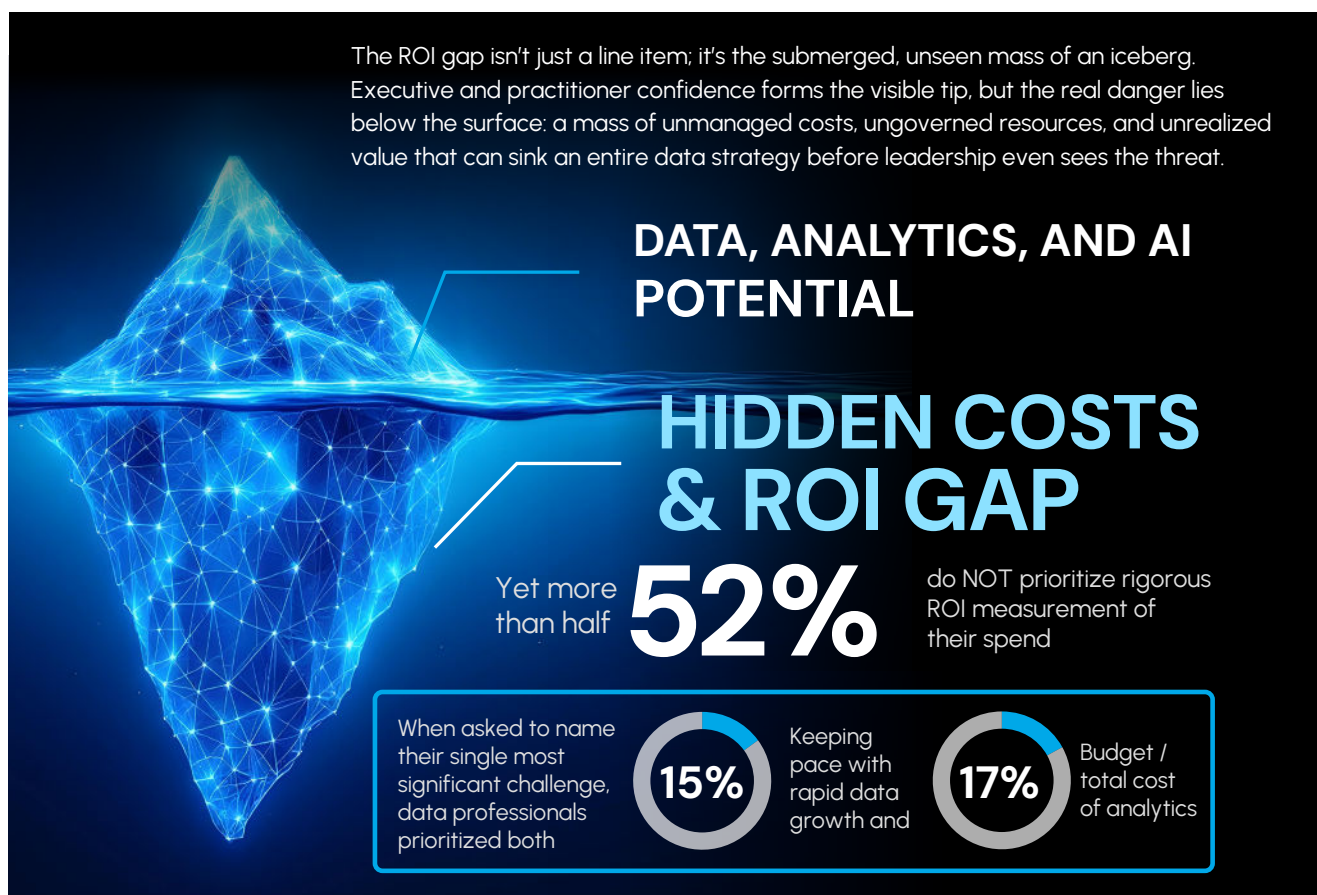


The Hidden Costs & The ROI Gap

While enterprise ambition for AI-driven outcomes is high, the path to realizing value is more complex than many anticipate. There is a sizable gap between the belief in AI's potential and the operational and financial discipline required to manage its costs and maximize its returns.

This can be described as a Confidence Paradox. While 75% of data professionals are confident they can deliver high-quality data, analytics, and AI products, this enthusiasm often masks a foundational weakness. A startling 52% do NOT prioritize rigorous ROI measurement of their spend². This tendency to focus on delivering outcomes first and attributing financial return later results in an ROI blind spot that can undermine long-term competitive advantage. In short, you can't calculate ROI without first building a solid understanding of your costs.

Figure 2: The Confidence Iceberg



Source: Futurum Research, CIO Insights Global Survey, Q2 2025

The Foundational Hurdles to AI Success

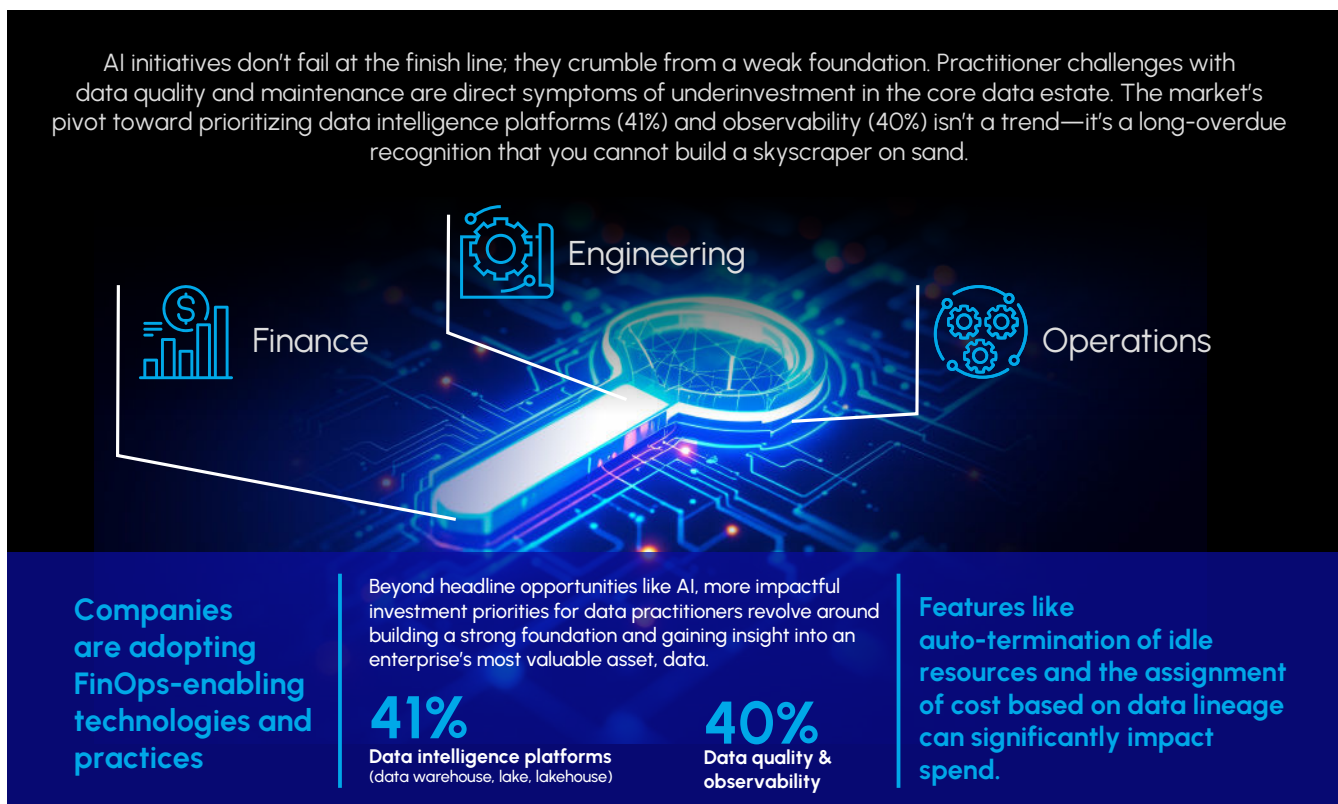
Why do so many data, analytics, and AI initiatives stall or fail to scale? The problem is rarely the AI model itself, but rather a lack of organizational oversight and operational rigor surrounding the underlying resources that fuel those initiatives.

Cost, while sometimes overlooked in high-level strategy, is a pressing operational hurdle for those on the front lines. Cost management is so overlooked that when asked to name their single most significant challenge, data professionals prioritized "Keeping pace with rapid data growth" (17%) and "Budget/total cost of analytics" (15%). Of course, these foundational challenges must be addressed.:

- The most significant source of dissatisfaction with modern data stacks is data quality, trust, and governance (20%), a leading reason for project failure.
- Data professionals report being occupied by maintenance over innovation. Nearly half (47%) spend over 50% of their time maintaining and organizing existing data assets rather than creating new value.

Beyond immediate challenges, the first impactful investment priorities for data practitioners themselves revolve around building a strong foundation: 41% for data intelligence platforms (warehouses, lakes, lakehouses) and 40% for data quality & observability³. These foundational investments directly address several functional weaknesses that impede AI success. With this foundation in place, only then can practitioners set their sights on the further goal of actively managing costs through the rigor of FinOps. Cost management must be a high priority for AI success, or ROI will be uncalculable and costs will be unchecked.

Figure 3: The Foundational Imperative



Futurum Research, 1H 2025 Data Intelligence, Analytics, and Infrastructure Decision Maker Survey

Without a framework connecting costs to outcomes, these foundational hurdles become persistent, rendering projects unsustainable and unworthy of continued funding.

³ Futurum Research, 1H 2025 Data Intelligence, Analytics, and Infrastructure Decision Maker Survey

The Solution: FinOps, Your Blueprint for Success

To overcome these hurdles, organizations need a new approach that integrates operational observability with financial control. FinOps (e.g., Financial Operations) provides this blueprint. It is a collaborative discipline involving finance, engineering, and operations to monitor, control, and optimize cloud spending in real-time, enabling teams to deliver value within budget.

For data intelligence platforms, FinOps becomes a critical discipline. The heavy resource consumption of AI and big data workloads in a complex, shared cloud environment can lead to significant, unexpected costs without proper management. FinOps provides the necessary framework to govern these elastic resources—leveraging features like auto-termination of idle resources and cost assignment based on data lineage—to ensure cost control without limiting the agility they provide.

The Three Pillars of FinOps in Action

FinOps strategies are based on three core pillars that work together to provide financial control and operational efficiency for data, analytics, and AI workloads.



Visibility: Tracking Usage and Spending The first step is to see exactly where money is going. This requires a robust system of resource tagging for clusters, jobs, and users to clearly allocate costs to specific teams, projects, or cost centers. With this information, companies can implement chargebacks and showbacks, which together can drive organizational accountability – a must-have for multi-tenant deployments. Platforms like Databricks provide this through high-granularity system tables and AI/BI dashboards, enabling accurate cost attribution and true insight into the ROI of every initiative. Dashboards can serve as a useful base level of visibility, but companies should not stop there. They must put those analytical insights to work.



Optimization: Right-Sizing Resources and Reducing Waste After spending is visible, the focus can shift to efficiency. This involves using compute policies to control instance types and cluster sizes, ensuring resources match business needs. Features like auto-termination of inactive clusters prevent budget leakage from idle resources. The strategic adoption of serverless compute offers the optimal balance of cost and availability, leveraging intelligent workload management and auto-scaling to dramatically reduce total cost of ownership (TCO). Furthermore, tools that help optimize queries and use data lineage to decommission legacy pipelines are critical for systematically eliminating waste. But there's one more step companies can take to scale these efficiencies across their warehouse and broader data estate.



Automation: Streamlining Cost Management Finally, automation transforms cost management from a reactive chore into a proactive, continuous process. This includes dynamically adjusting cluster sizes based on real-time demand and setting up proactive budget alerts to prevent overspending before it happens. By enforcing cost attribution tags and establishing continuous monitoring, organizations can build automated guardrails that empower teams to innovate safely within financial constraints. With these powerful automations, companies can focus on building outcomes rather than maintaining underlying assets.

Table 1: Activating FinOps on Databricks

Pillar	Key FinOps Platform Capabilities
Visibility	Implement Tagging: Apply tags to clusters, jobs, and users for precise cost attribution. Query System Tables: Access granular billing data and query history to analyze cost-per-query for SQL workloads. Use Dashboards: Monitor usage by workspace, SKU, and user at a glance.
Optimization	Enforce Compute Policies: Control instance types and cluster sizes to prevent waste. Leverage Serverless: Migrate to serverless compute to lower TCO and optimize resource use. Tune Workloads: Use Predictive Optimization and Unity Catalog lineage to improve efficiency and decommission unused assets.
Automation	Enable Auto-Scaling: Match compute resources to workload demand in real time. Set Budget Alerts: Proactively notify teams to prevent cost overruns before they happen. Automate Policies: Mandate cost allocation tags on all serverless workloads to ensure consistent tracking. For example, customers can automate enforcement of compute & serverless policies for new resource provisioning requests. Implement Query Timeouts: Automatically terminate long-running or runaway warehouse queries to prevent resource monopolization.



FinOps: The New Operating Model for Leadership

Ultimately, FinOps represents a profound cultural shift from financial ignorance to a business imperative. True success with data, analytics, and AI comes when organizations foster a culture of financial accountability and empower teams with the tools to manage their own impact. With operational metadata properly tagged and attached to the appropriate budgets, companies can empower a broader set of stakeholders to work together, refining and optimizing their operating model.

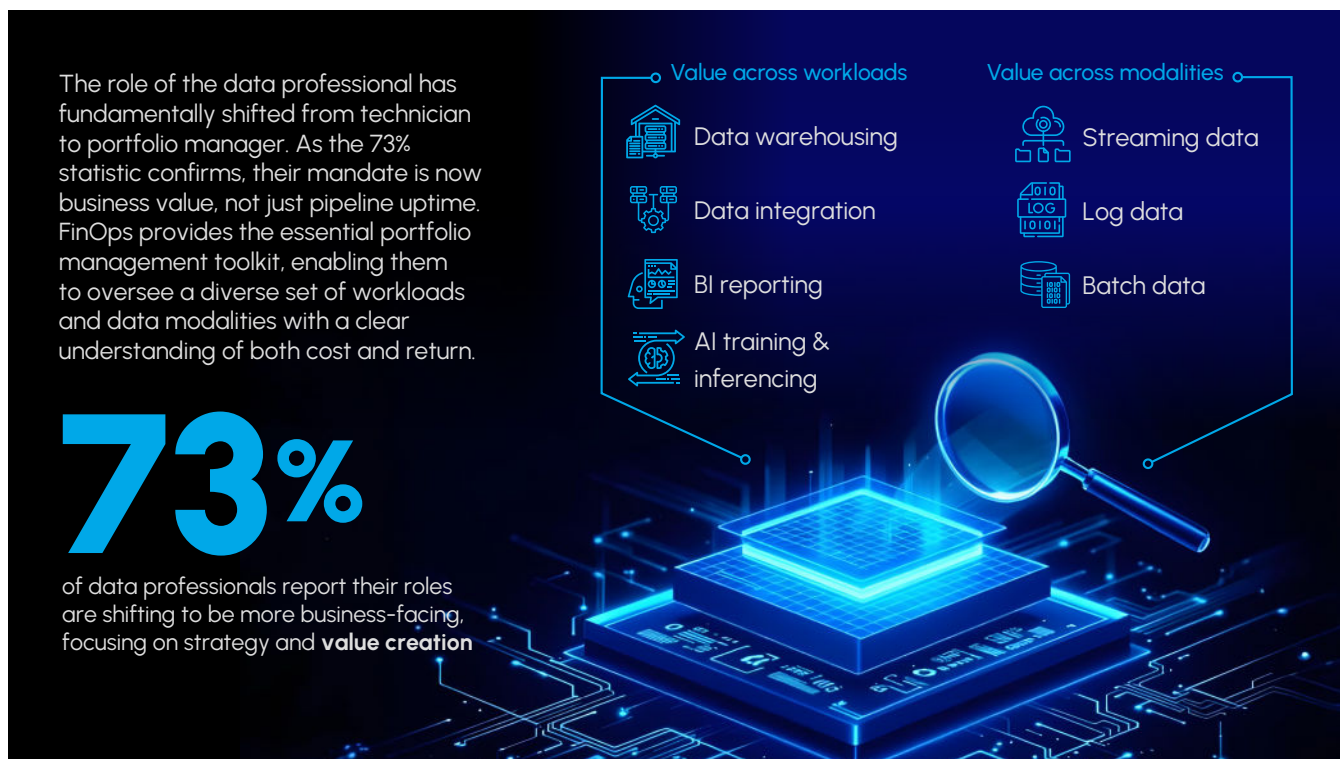
This model also reflects the evolving role of the data professional. With routine technical tasks becoming more automated, their responsibilities are changing. A full 73% report their roles have shifted toward more business-facing activities focused on strategy and value creation⁴. FinOps supports this transition by providing the transparency and tools that allow individuals at all levels to understand and manage their financial impact.

Implementing FinOps: The Path Forward

Adopting FinOps is an ongoing process, not a one-time project. The path begins by forming a cross-functional team of finance, data science, engineering, and cloud operations experts. This team must establish clear ownership and accountability for cloud spending, driven by consistent resource tagging. They should define and enforce cloud cost policies using platform tools to ensure compliance and then implement regular cost monitoring and reporting through shared dashboards to foster a culture of cost-awareness. The goal is to foster a culture of cost-awareness and continuous optimization by regularly reviewing usage, identifying anomalies, and refining configurations.

This framework is vital across all data workloads—from data warehousing and integration to BI reporting and AI training/inferencing—and for all data modalities, including streaming, log, and batch data.

Figure 4: The Modern Data Estate is a Portfolio



Source: Futurum Research, 1H 2025 Data Intelligence, Analytics, and Infrastructure Decision Maker Survey

⁴ Futurum Research, 1H 2025 Data Intelligence, Analytics, and Infrastructure Decision Maker Survey



Conclusion: The FinOps Advantage

As data, analytics, and AI initiatives scale, old IT operating models quickly lose their luster. This presents a stark choice for leadership: either actively manage the financial and operational realities of the data estate to deliver consistent results, or cede ground to competitors who operate with greater discipline. FinOps provides the essential cultural and technological framework to align this ambition with market realities, ensuring that AI's promise doesn't become a casualty of its own unmanaged costs. Ultimately, sustained success will hinge on the ability to manage the entire data and AI landscape as a value-generating portfolio with a clear, defensible line of sight that extends from cost to return.

Important Information About This Report

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Databricks is a unified data and AI platform that brings
together data engineering, analytics, and machine
learning under an open lakehouse architecture. It enables
organizations to collaborate across data, AI, and business
teams to turn raw data into actionable insights at scale.
As enterprises increasingly focus on cost optimization,
Databricks integrates FinOps principles to help teams
monitor, manage, and optimize cloud spend tied to data and
AI workloads. This alignment of performance and financial
accountability allows organizations to balance innovation
with efficiency.

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