Modern | Modern Data 101 Community

The Modern Data Report 2026

The Data Activation Gap

Research from the Modern Data 101 Community.

Table of Contents

About

The Modern Data Report 2026: *The Data Activation Gap* is our second annual survey of the Modern Data 101 community, conducted between October 2025 and January 2026. This year more than 540 members participated, spanning 64 countries and 29 industries, including financial services, manufacturing, healthcare, retail, technology, and government, and have an average of over a decade of experience.

This year's survey focused on a persistent challenge: why organizations that have invested heavily in leading data platforms still struggle to reliably support analytics, AI-driven use cases, and day-to-day decision-making. Responses were analyzed across roles, regions, and use cases to identify patterns that consistently surfaced, regardless of industry or maturity.

What emerges most clearly is not a lack of tools or ambition, but an ongoing pattern of complexity and fragmentation. Many organizations have assembled powerful platforms, yet these systems rarely operate as a cohesive whole. Context is distributed across disconnected tools, creating friction precisely when data needs to flow into decisions and operations.

This report identifies the barriers data practitioners encounter daily, including discovery friction, missing context, and conditional trust, and the capabilities they identify as most critical to overcoming them. It is a call for enterprises to move beyond accumulating tools and instead focus on building the foundations that allow data to be reliably put to work.

About Modern Data 101

Modern Data 101 is a community and publication for anyone who works with data, including team leaders, platform builders, and data analysts. In a world of countless tools, trends, and templated thought leadership, we slow things down to ask deeper questions: Why was this actually built? And what business problem can it solve? We explore architecture, semantics, and organizational design, the invisible foundations that determine whether or not data works within an organization.

The Data Activation Gap: Enterprise Data in Practice

2026

Executive Summary

The Challenge of Activating Data

Enterprises are accumulating more data and deploying more powerful data platforms than ever before. Yet the ability to activate that data, to put it to work across decisions and applications, is not keeping pace. The result: teams spend more time finding and validating data than using it, and nearly half say they can't fully trust the data they use for business decisions.

The pattern shows up everywhere: 89% say finding data is a top-3 time drain, with 34% ranking it as their #1 time-consuming activity. Meanwhile, 62% rank actual analysis as their last priority. It's what they spend the least time on. When we asked about metric alignment, 84% said they encounter conflicting versions of the same metric usually or sometimes, with 36% experiencing this usually or always. **For AI, that barrier is even more pronounced: 68% say their data isn't clean or trustworthy enough for AI operations.**

This isn't about organizations lacking tools or investment. Many of the people we surveyed work with some of the latest and currently most popular data platforms, along with sophisticated BI tools and emerging AI capabilities.

The challenge isn't capability, it's activation: making data trustworthy enough to act on, discoverable enough to find quickly, and contextual enough to use confidently at the moment decisions need to be made.

When data can't activate, there is a cost. Respondents report 66% experiencing productivity loss from constant reconciliation and rework, 54% seeing inflated operational costs, 52% citing strategic missteps from bad or delayed data, and 47% linking poor data directly to revenue loss.

Why Data Can't Activate: The Three Barriers

1. Discovery: Finding Data Dominates the Work

89% of respondents cite finding the right data as a top-3 time drain, with 34% ranking it as their #1 activity. Discovery isn't just a pre-step. For some it's become a major activity.

What creates discovery friction:

- **71%** cite too many sources/versions of the same data as a top-3 barrier
- **67%** point to missing or outdated documentation
- **61%** struggle with poor naming conventions
- **60%** lack discovery tools that surface what exists

How this blocks activation, especially with AI**:** Even when decisions are ready to be made or AI models are ready to run, teams can't locate the right data quickly enough. **Respondents told us 36% are unable to trigger operational decisions with AI, and 34% have AI and data systems that don't connect.** These are infrastructure gaps that prevent data from flowing into action when it's needed.

The dependency loop compounds the problem. When discovery is broken, questions are routed specialists. Data teams become bottlenecks rather than enablers. Nearly half of respondents (47%) report having to redo work within the last month due to data issues, with 69% experiencing rework within the last quarter.

2. Context: When Meaning Doesn't Travel with Data

Even when teams find the data, 57% struggle to interpret it because of missing definitions, context, and shared meaning. Data may be technically accessible, but without business context embedded at the point of use, confident activation remains out of reach.

How the context gap shows up:

- **59%** report "too many tables, not enough documentation" as their primary platform challenge
- **53%** have no easy way to trace data lineage
- **37%** cite "lack of business context" as the single biggest platform gap

For AI systems, context isn't just helpful, it's essential. AI needs context to distinguish between metrics that sound similar but mean different things, to understand when data is appropriate to use versus when it's stale, and to interpret results in ways that trigger the right actions. Currently, 35% of respondents report they can't build feedback loops between AI models and live data because the semantic layer needed to interpret and act on results doesn't exist.

What practitioners are asking for:

- **74%** want freshness and quality indicators embedded with data
- **69%** need lineage visibility
- **62%** want verified or certified tags
- **49%** want clear owner visibility

These aren't requests for smarter algorithms or more dashboards. They're requests for trust signals that travel with the data itself, signals that answer: Is this current? Where did it come from? Can I rely on it?

3. Trust: When Confidence Is Conditional

Even when teams find data and understand what it means, 46% told us they cannot completely trust it for business decisions. Trust varies by metric, by source, by context. This creates friction at the exact moment action needs to be taken.

The trust problem is most visible in metric conflicts. 84% encounter conflicting versions of the same metric usually or sometimes, with 36% experiencing this usually or always. Teams often assume they're aligned on definitions until a critical decision surfaces the differences. One respondent described it as investigating "multiple truths" every day.

For AI specifically, 68% say their data isn't clean or trustworthy enough for AI, while 65% report data lacks the clarity or business context needed. This creates a paradox: data quality is a known issue, yet only 30% use AI for automated data prep or cleaning.

How this blocks activation: When trust is conditional, decisions slow down. Data gets validated manually, checked against other sources, or hedged with intuition. Respondents told us this contributes to measurable business impact: 52% report strategic missteps (wrong decisions, missed pivots, slow reactions) due to bad or delayed data, and 47% cite missed revenue opportunities linked to data quality issues.

The good news: practitioners already know what would help. 80% identified a semantic layer with standardized definitions as the #1 AI enabler, ranking it above AI-assisted tools, unified platforms, or faster processing. Another 81% rank strong governance in their top 3 platform requirements.

How These Barriers Compound

These three barriers don't operate in isolation. Respondents told us they create organizational friction that blocks activation even when technical capabilities exist:

- **37%** cite prioritization delays as their biggest blocker working with data teams
- **25%** struggle to share clear requirements
- **24%** point to the absence of shared definitions

The pattern: Without shared definitions (24%), teams can't articulate clear requirements (25%), which creates prioritization bottlenecks (37%) and forces constant rework (69% within a quarter). The data foundation issues cascade into organizational dysfunction.

While culture and change management are often cited as primary barriers to AI and data adoption, the survey revealed something more specific:

It's not that people resist change or can't adapt. It's that the data infrastructure doesn't support the workflows needed to activate data. Teams want to move faster, but they encounter structural barriers built into the complexity of enterprise data stacks.

What Would Change With Better Data Foundations

We asked practitioners what would improve most with faster, more reliable access to high-quality data:

1. **87%** say speed of decision-making (40% rank it #1)
2. **78%** say confidence in decisions
3. **66%** say business KPIs

The sequence matters. Speed and confidence unlock first. These are decision mechanics. Business outcomes follow once teams can trust data enough to act on it without hesitation.

What practitioners want from a converged platform:

- **84%** rank unified access to all data sources in their top 3 features
- **72%** want self-service without IT dependency
- **81%** want strong governance (definitions, lineage, compliance)

These aren't convenience features. They're the foundations of activation, the infrastructure that would let data flow from storage into decisions and operations without the friction that currently exists. Notably, 77% of respondents believe a converged platform would be valuable, with nearly 40% calling it "extremely valuable." The demand is clear. So is the opportunity.

Closing the Gap

We have an increasingly clear picture of what's blocking data activation. We also know what practitioners say would unlock it.

What emerged: a need for increased convergence. When we asked about platform value, 77% said a converged approach would be valuable, with 40% calling it "extremely valuable." The message is clear—practitioners don't want more isolated tools or more complexity. They want what's currently fragmented to work together.:

- **Unified access to all data sources** (82% rank in top 3)
- **Semantic layers with standardized definitions** (80% cite as #1 AI enabler)
- **Strong, consistent governance** (81%)
- **Self-service without IT dependency** (72%)
- **Faster access to trusted data** (66%)
- **Automated metadata management** (65%)

The gap between where organizations are and where they need to be isn't mysterious. Data professionals know exactly what they need: systems where discovery works without institutional knowledge, where context travels with data across platforms, and where trust is embedded at the foundation.

What's missing isn't another tool, it's a unifying set of capabilities that bring these requirements together, *so data can be reliably put to work across analytics, applications, and AI to power operations and decisions that create value.*

Business Stakes

of Data Quality, Timeliness & Convergence

Business Increasingly Depends on Data

Which business KPIs depend most on data?

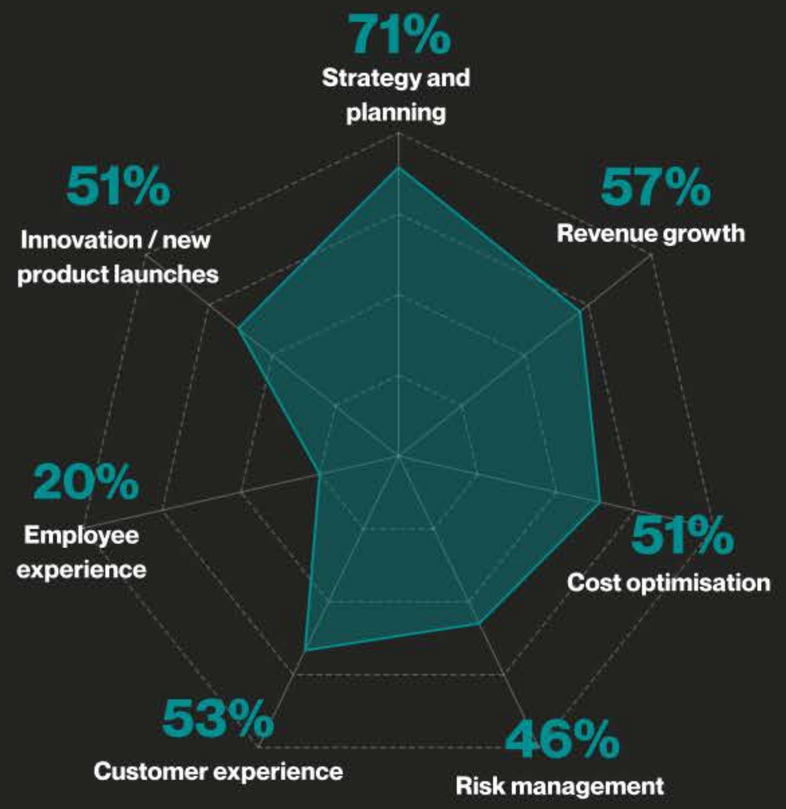
Data is now woven into business performance, raising the bar for how reliably it must work.

71%
Strategy and planning (growth, vision setting, resource allocation)

57%
Revenue growth (sales, marketing effectiveness, pricing)

53%
Customer experience (personalisation, support, retention)

Which outcomes are most directly impacted by data?



Source: Modern Data 101

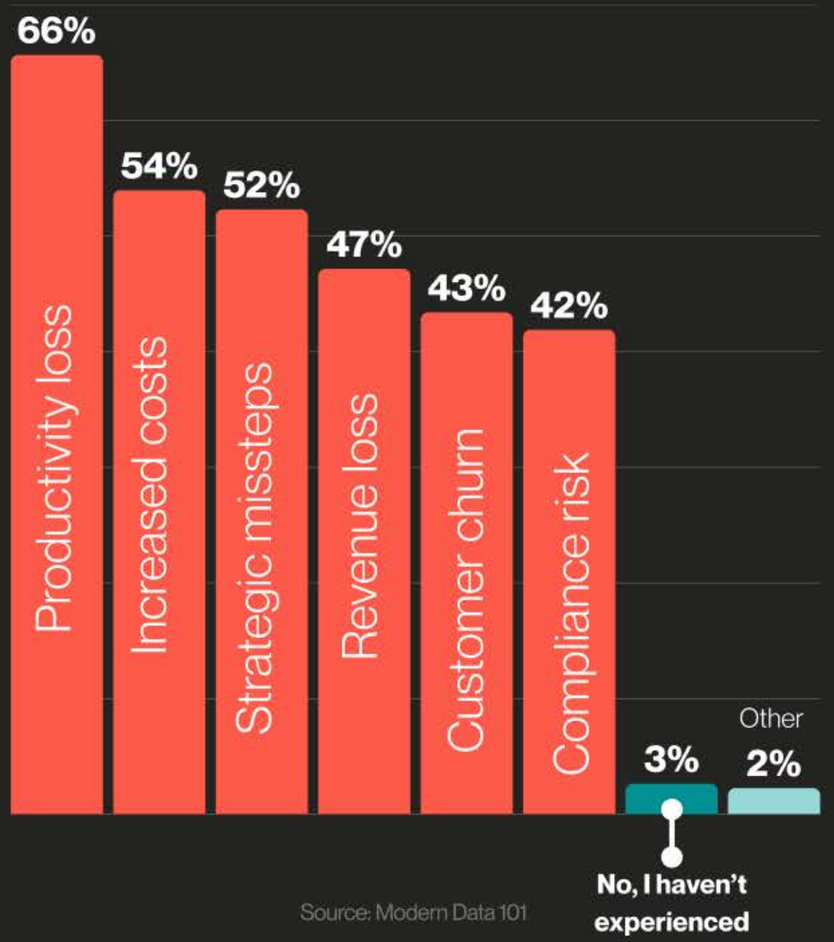
Cost of Bad Data

Which business KPIs are affected the most?

Bad or delayed data carries a measurable and compounding cost across the business. In our survey, **66%** of teams reported significant productivity loss from **constant reconciliation and rework**, while 54% pointed to inflated operational costs from inefficiencies like **supply chain delays and resource waste.** 52% experienced strategic missteps like wrong decisions, missed pivots, or slow reactions, and 47% linked poor data to direct revenue loss through missed opportunities and incorrect forecasts.

Customer impact was equally severe: 43% saw churn or degraded experiences from broken personalisation or service delays. Even compliance isn't spared, with 42% citing regulatory exposure due to unreliable data. Only 3% said they hadn't felt any impact, a number that underscores the universal cost of getting data wrong.

Where was bad or delayed data the root cause of a negative business outcome?



Source: Modern Data 101

Where Better Data Can Deliver Greatest Impact

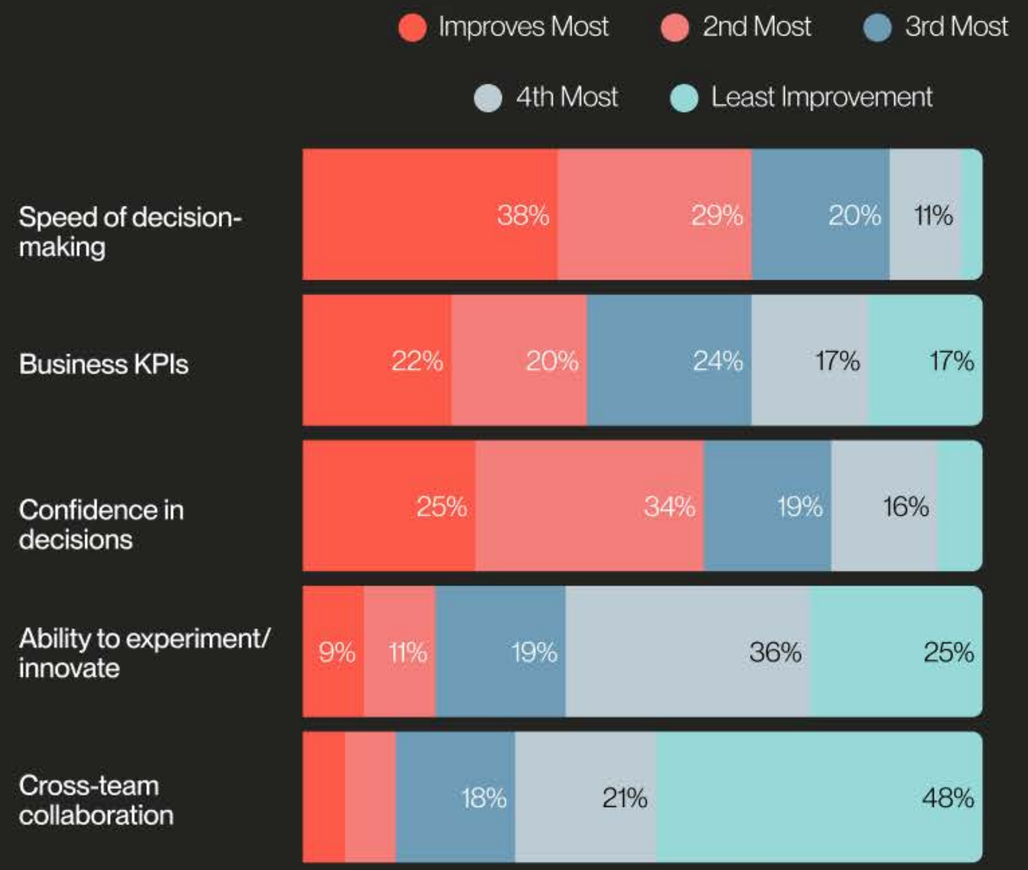
Here are the areas that would improve most with faster, more reliable access to high-quality data.

87%
Speed of decision-making

78%
Confidence in decisions

66%
Business KPIs

Rank what would improve most if you had faster and more reliable access to high-quality data?



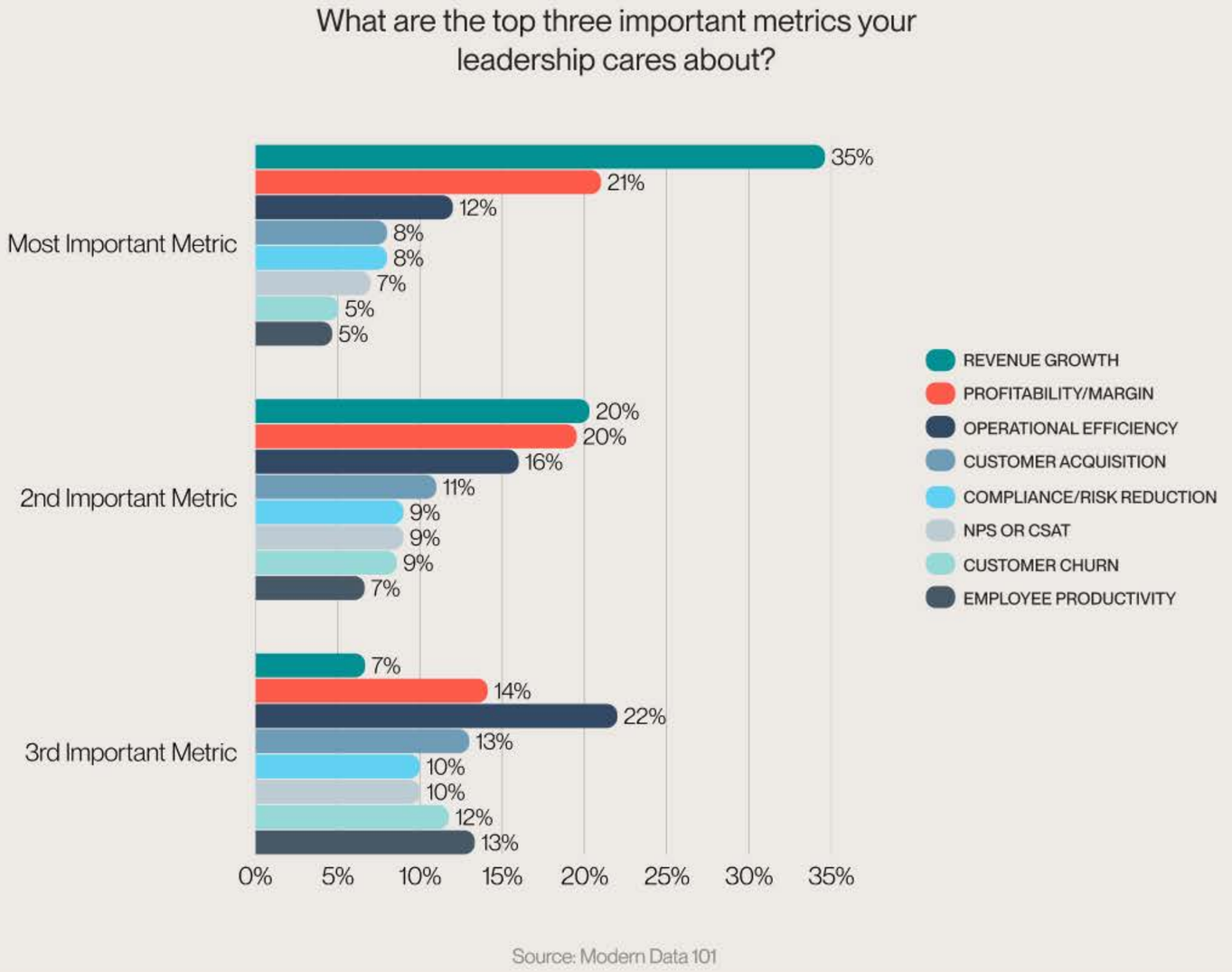
Source: Modern Data 101

Metrics that Matter

Unsurprisingly, leadership focus remains firmly anchored in financial outcomes, with revenue growth emerging as the single most important metric, ranked first by one-third of respondents. Profitability and margins consistently follow, holding strong positions across first and second ranks.

Beyond pure financials, operational efficiency gains prominence as a third-order priority, signaling leadership's concern with execution, cost control, and time-to-market.

Customer acquisition cluster in the middle, while customer sentiment metrics like NPS or CSAT remain secondary signals rather than primary decision drivers. Notably, compliance, risk reduction, and employee productivity trail financial and operational metrics, suggesting they are viewed as necessary guardrails rather than strategic north stars



Source: Modern Data 101

Impact Overview

Data → Decision → Outcome

Source: Modern Data 101

Leadership Metrics

What Executives Optimise For

- 35% → Revenue growth (ranked #1)
- 21% → Profitability / margin
- 12% → Operational efficiency

Business Outcomes

Most data-dependent KPIs

- 71% → Strategy & planning
- 57% → Revenue growth
- 53% → Customer experience

Decision Mechanics

What improves first is decisions, then outcomes

- 87% rank speed of decision-making in top 3 benefits
- 78% rank confidence in decisions in top 3
- Nearly 40% rank speed as #1

Data Quality & Availability

When data breaks, everything above it fractures.

- 66% → Productivity loss
- 54% → Increased operational costs
- 52% → Strategic missteps

AI Readiness

The Foundational Gaps

Enterprise Data Isn't AI-ready

AI can't reason over data that humans themselves can't rely on.

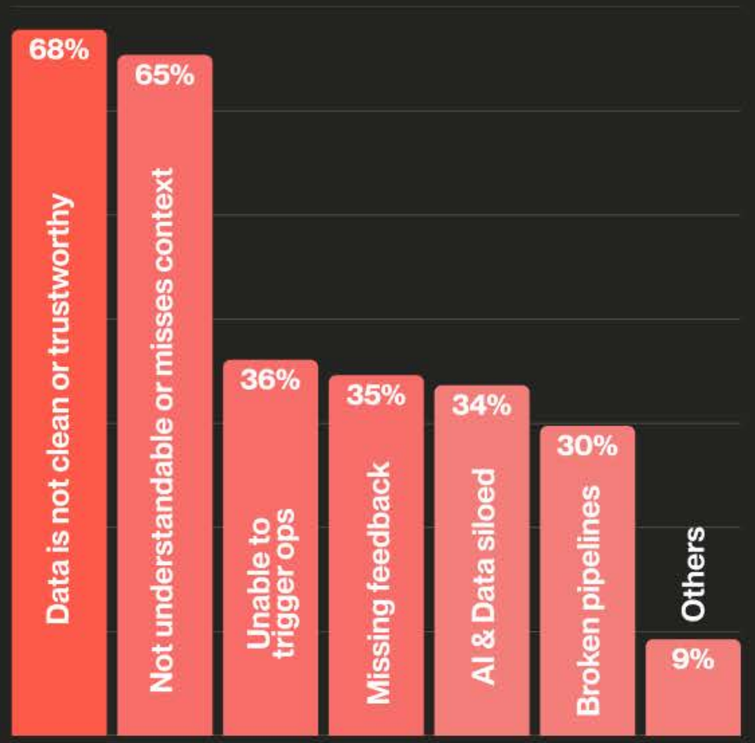
Nearly 68% of respondents say their data is not clean or trustworthy, while 65% report that data lacks clarity or business context.

This combination reveals how AI readiness is less about advanced models and more about whether data is both correct and comprehensible. Without those two, AI outputs remain speculative at best.

The secondary struggles cascade from this foundation. Over a third of teams are unable to trigger real operational decisions (36%) or build feedback loops between AI models and live data (35%), keeping AI insights disconnected from action.

Another 34% point to silos between ML/GenAI systems and the data stack, while 30% still wrestle with slow or broken pipelines. Together, these signals suggest that most organisations are stuck in an "analysis-only" AI phase where insights exist, but execution, learning, and continuous improvement remain structurally out of reach.

What are your struggles when trying to make enterprise data AI-ready?



Source: Modern Data 101

Actual Use of AI

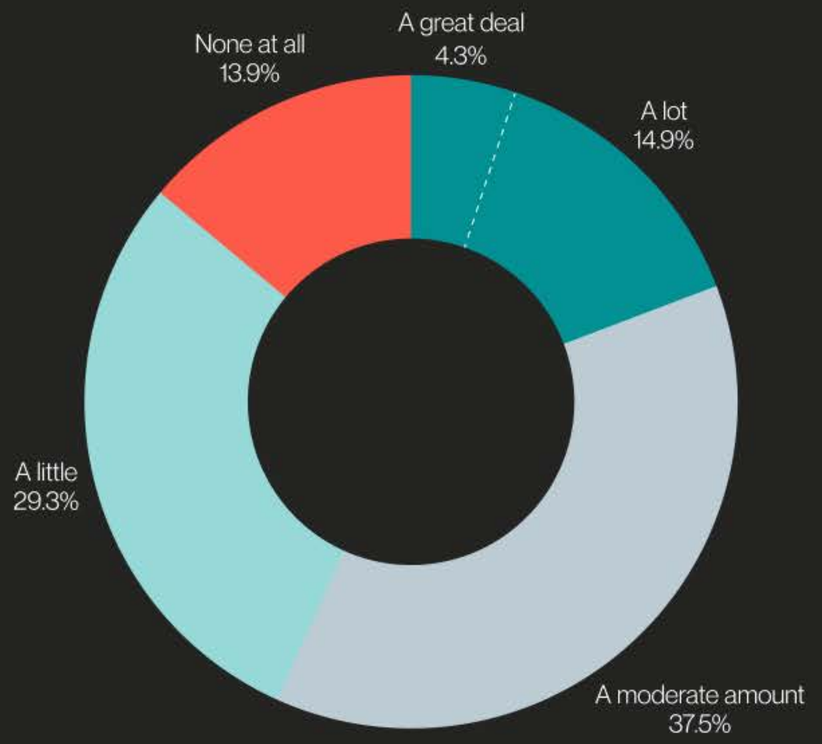
Frequency of Adoption Runs Low

AI in analytics is present, but shallow. Most teams are experimenting at the surface layer rather than embedding AI deeply into how data actually flows and decisions get made.

While 82% of respondents report using AI features to some extent, only 19% say they use them a lot or a great deal.

The majority sit in the middle: 38% using AI a moderate amount and 29% only a little, signalling cautious adoption rather than operational reliance. This pattern becomes clearer when you look at what AI is being used for.

Have you used AI-related features in your analytics or BI tools?



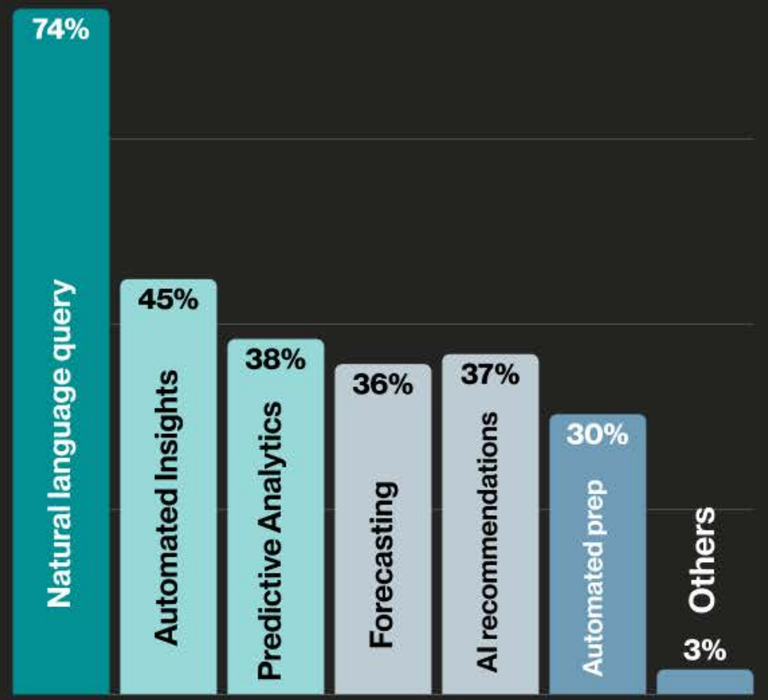
Source: Modern Data 101

AI Usage Is Stuck at the Surface

Nearly three-quarters (74%) say they use natural language querying, making AI primarily an interface improvement. Usage drops off for more structurally transformative capabilities: automated insights (45%), predictive analytics (38%), recommendations (37%), and forecasting (36%).

Only 30% use AI for automated data prep or cleaning; the very layer that would make all other AI outputs more trustworthy. In short, AI is helping teams ask better questions, but it hasn't yet been trusted to fix the data, close the loop, or drive decisions.

If yes (to using AI related features), what kind of AI features have you used?
(Select all that apply)



Source: Modern Data 101

Top 3 AI Enablers

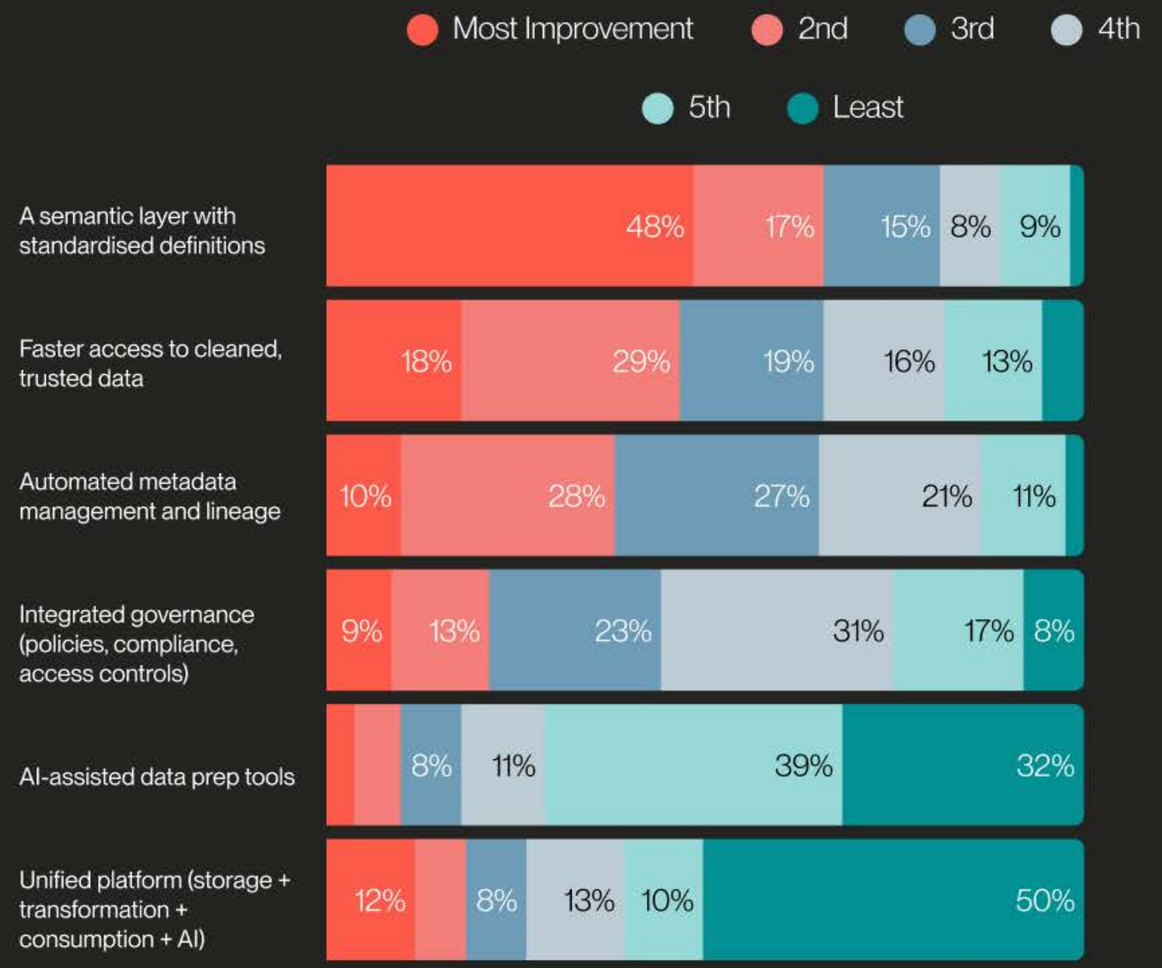
Cumulatively, these aspects are among the top three most-enabling features for enterprise AI:

Teams prioritize foundations over features: semantic layers, trusted data access, and metadata management rank highest, while AI-assisted tools and unified platforms rank lowest.

80%
A semantic layer with standardized definitions

66%
Faster access to cleaned, trusted data

65%
Automated metadata management and lineage



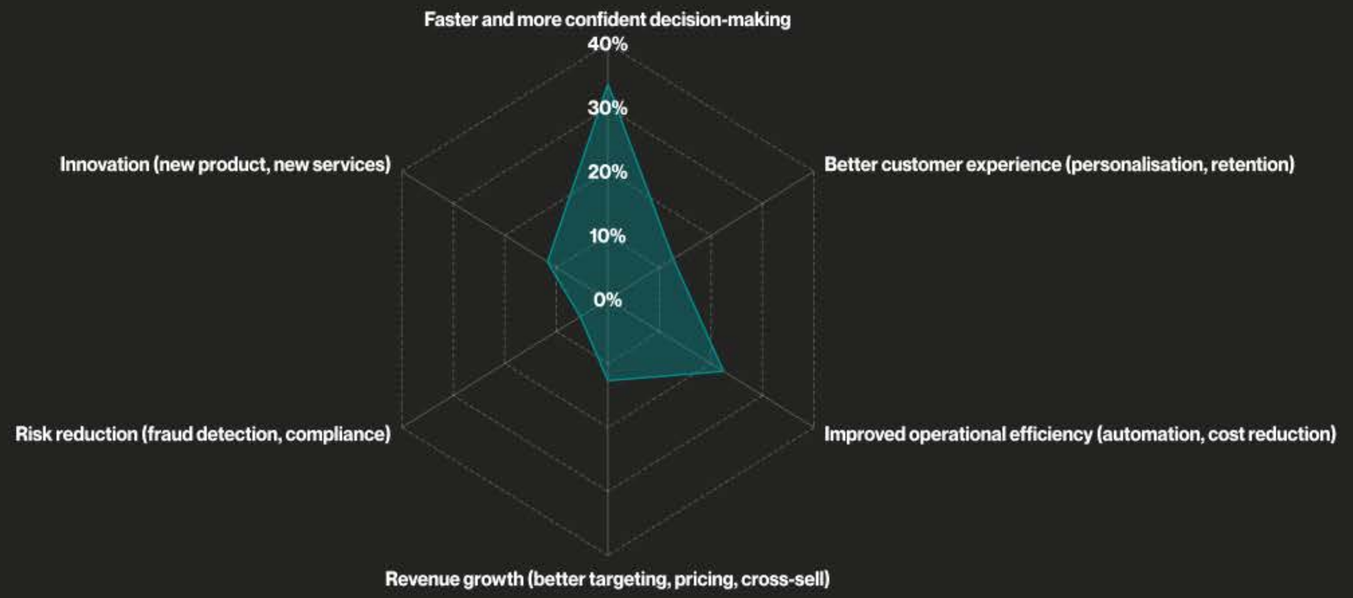
Source: Modern Data 101

Expected Business Returns with AI

The top desired outcome is faster, more confident decision-making (34%), far outweighing any single revenue or innovation bet. Operational gains follow next, with improved efficiency through automation and cost reduction (22%), reinforcing that AI readiness is seen primarily as a way to reduce friction in how the business runs. Customer experience, revenue growth, and innovation each cluster closely behind (~11-13%), suggesting these are viewed as second-order.

These benefits unlock only after decision quality and operational flow improve. Notably, risk reduction ranks lowest (5%), implying that most organizations already treat compliance as table stakes. AI-ready data is expected to accelerate the business, not merely protect it.

What business outcome would you most want to achieve if enterprise data were fully AI-ready?



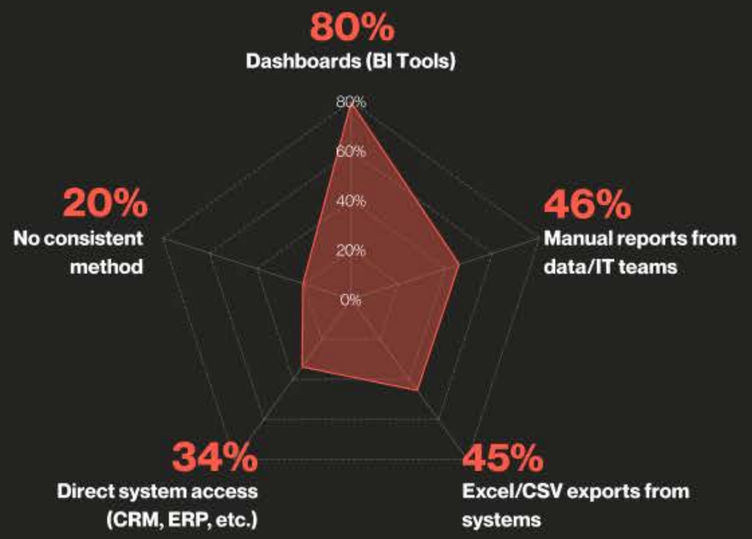
Source: Modern Data 101

Day-to-Day

Reality of Data Consumers

Investigating Multiple Truths Everyday

How are the metrics getting reported today?



Source: Modern Data 101

The Need for Simplicity

The survey shows that despite widespread adoption of dashboards, the reporting environment remains deeply fragmented. Dashboards coexist with manual reports, spreadsheets, and direct system access, creating multiple, parallel paths to the same metrics.

Nearly half of respondents still rely on manual reports or Excel exports, introducing delays, versioning risk, and human dependency into leadership-facing KPIs, while 34% bypass governed layers entirely by accessing source systems directly.

One in five organizations lack a consistent reporting method altogether. This implies reporting layers built on fragmented foundations, where high BI adoption has not translated into convergence, and trust in accuracy, consistency, and ownership of metrics remains fragile.

Satisfaction & Gaps

How satisfied are you with your current data experience?

3.1★

Average Rating

★★★☆☆

What business questions do you wish you could answer but currently cannot due to current data issues?

Summary analysis of open-ended responses:

The largest concentration of responses sits in **Customer Understanding**, Segmentation & Churn, reflecting a persistent inability to form a reliable 360° view of customers across products, touchpoints, and time.

This is closely followed by **Revenue, Profitability & ROI**-related responses, where organisations struggle to link growth, pricing, cost, and investment decisions to trusted data. Another major cluster emerges around Strategy, Growth & Market Intelligence, highlighting gaps in forward-looking insight rather than historical reporting.

Satisfaction & Gaps

Summary analysis of open-ended responses:

Operations & Supply Chain, Forecasting & Scenario Planning, and Risk & Compliance form a substantial segment of the open-ended responses, indicating friction in execution and resilience. A significant volume of responses fall into Data Discovery, Trust, Quality & Meaning, Governance & Ownership, and Integration / Alignment, signalling that many "business" questions are actually blocked by foundational data issues rather than analytical sophistication.

Advanced areas like AI & Automation appear, but far less frequently, suggesting organizations are still constrained upstream.

"Top 5 Open-Ended Response Picks

"We can't predict churn because we don't have a reliable end-to-end view of customer behavior."

"Where is the data, what does it mean, and who actually owns the decision?"

"Critical business questions remain unanswerable because data isn't reliable, integrated, or timely."

"We still can't see the true ROI of our data strategy or the hidden costs behind it."

"Data exists, but it's fragmented, poorly integrated, and lacks a shared language."

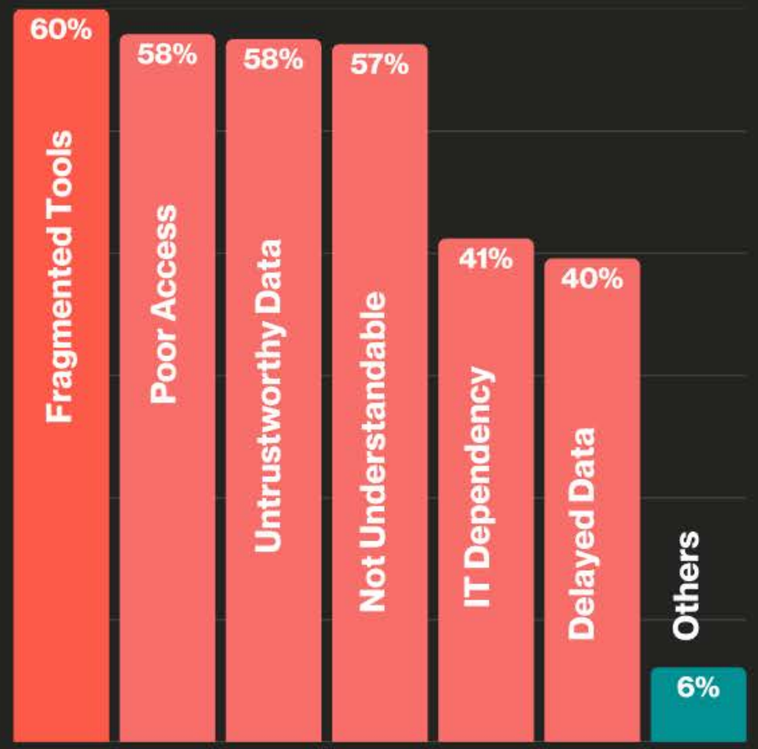
Most Recurring Challenges

Even when data exists, it is often inaccessible, ambiguous, or unreliable at the moment decisions need to be made.

The primary challenges organizations face with data are structural and systemic, rather than analytical. The most cited issue is tool fragmentation, with 60% of respondents reporting that data is spread across disconnected tools, making stitching slow, manual, and error-prone.

Closely following this are challenges related to access, trust, and understanding: nearly 58% of respondents say data is hard to access due to silos and permissions, 58% report persistent accuracy and quality concerns, and 57% struggle to interpret data because of missing definitions, context, and shared meaning.

What are your biggest challenges while working with data?



Source: Modern Data 101

Trust Quotient

You are able to trust the data you use for business decisions?

3.5★

Average Rating

A substantial 46% say they are unable to completely trust the data, suggesting that confidence fluctuates depending on the metric, source, or context.

This middle ground represents a critical risk zone: decisions are still being made, but often with hesitation, manual validation, or parallel checks that slow execution and dilute accountability.

When viewed alongside earlier findings on data quality, access, and fragmentation, these results suggest that trust is conditional rather than institutionalised. Data may be "good enough" most of the time, but it is not consistently reliable enough to serve as a single source of truth, forcing leaders to hedge decisions with intuition, experience, or redundant reporting instead of acting with full confidence.

Data Instability

60% cite tool fragmentation

Multiple parallel paths to the same metric rather than a single source of truth.

Nearly half rely on manual methods

Delays, versioning risk, and inconsistent interpretations across teams.

Nearly half unable to trust their data

Fluctuates by metric and source, forcing teams into manual validation: high cost, slow decisions

52% report strategic missteps

Barriers translate into missed pivots, revenue loss, customer churn, and regulatory exposure.

Need for Convergence

Converging data into governed, product-oriented foundations is a business imperative.

Discovery

The Discovery Challenge

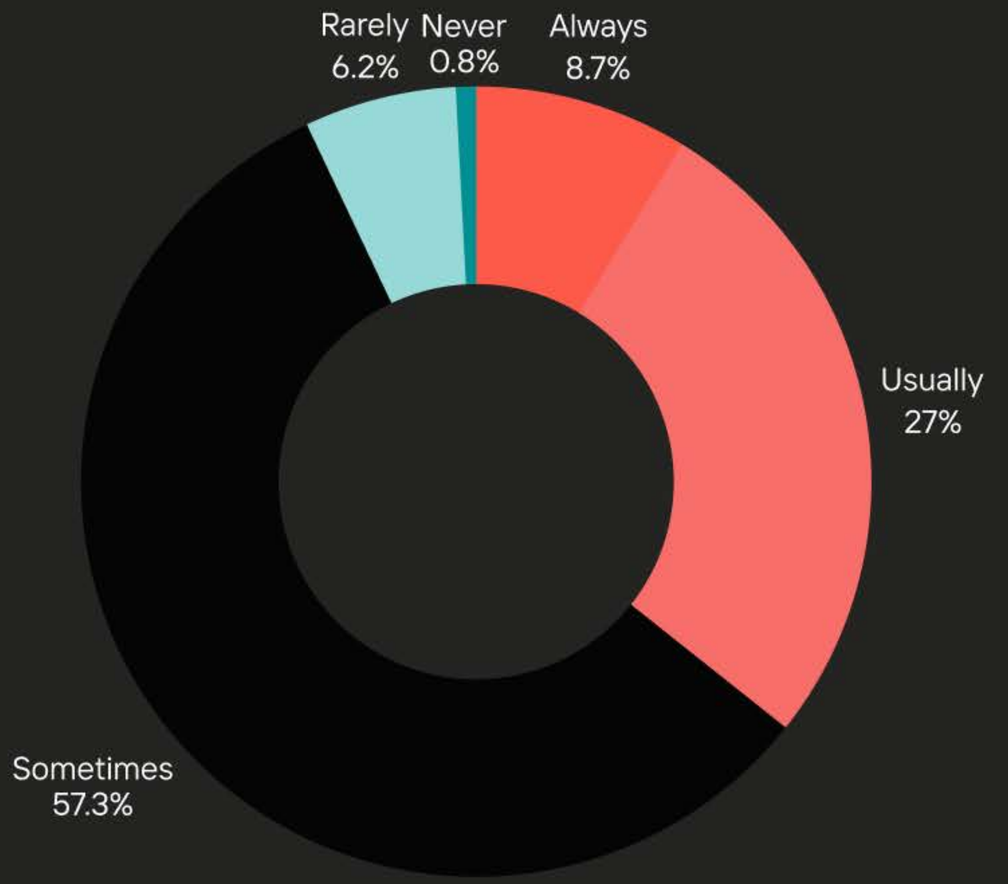
Illusion of Alignment

Gauging the domino effect of poor discovery

At first glance, most organizations appear aligned on their metrics. Yet the survey reveals a more fragile reality. An overwhelming 93% of respondents report encountering conflicting versions of the same metric at least some of the time, with 36% experiencing this usually or always. This indicates that misalignment is not an edge case, but the operating norm.

The prevalence of "sometimes" (57%) is particularly telling. It suggests an illusion of alignment: teams believe they are working from the same numbers until a decision, review, or escalation exposes subtle differences in definitions, filters, time windows, or sources. By the time conflicts surface, trust and momentum are lost.

How often do you encounter situations where different teams use conflicting versions of the same metric?



Source: Modern Data 101

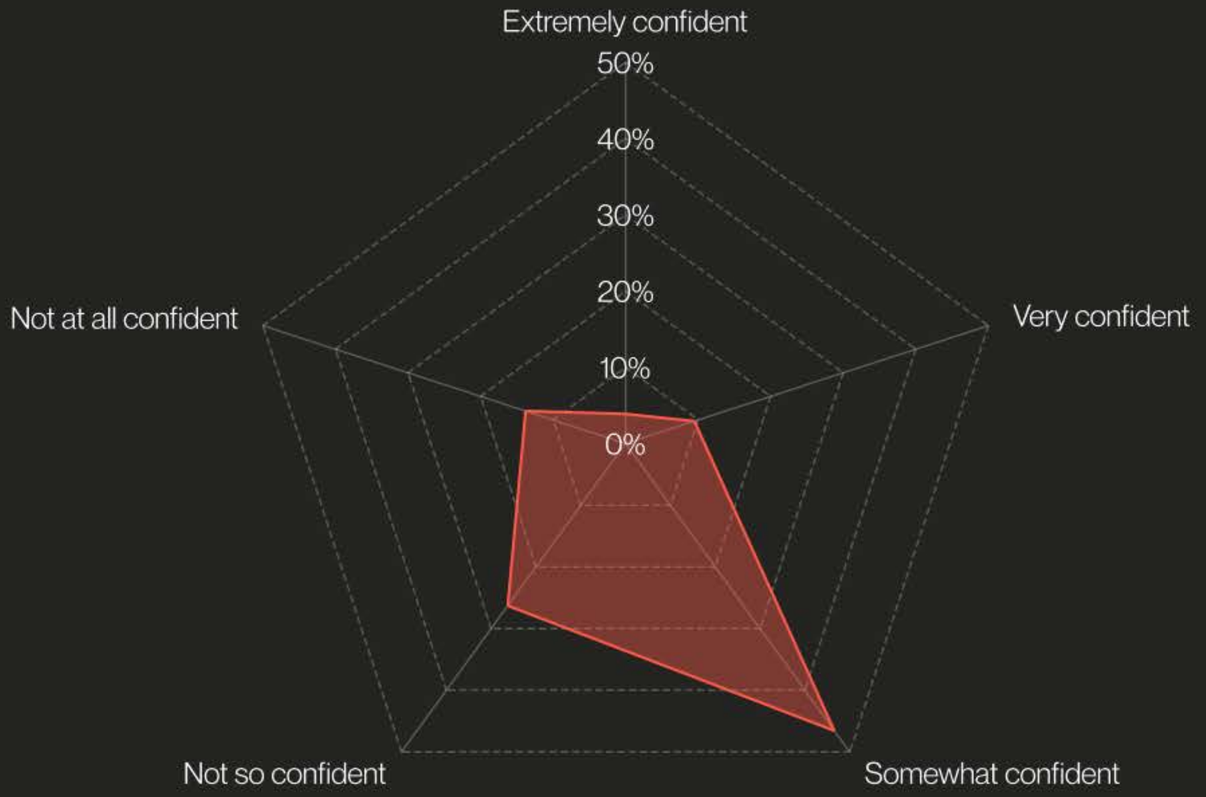
Self-Serve Reality Check

Confidence in finding data without help

Despite years of investment in modern data stacks and self-serve tooling, true independence remains elusive. Only 13% of respondents feel very or extremely confident that they can find the data they need without asking for help.

In contrast, a clear majority operate in a grey zone: 47% are only somewhat confident, while over 40% admit they are not so confident or not confident at all. This distribution reveals that self-serve is more aspirational than operational: users believe data should be accessible, but experience friction when they actually go looking for it.

How confident are you that you can find the data you need without asking someone for help?



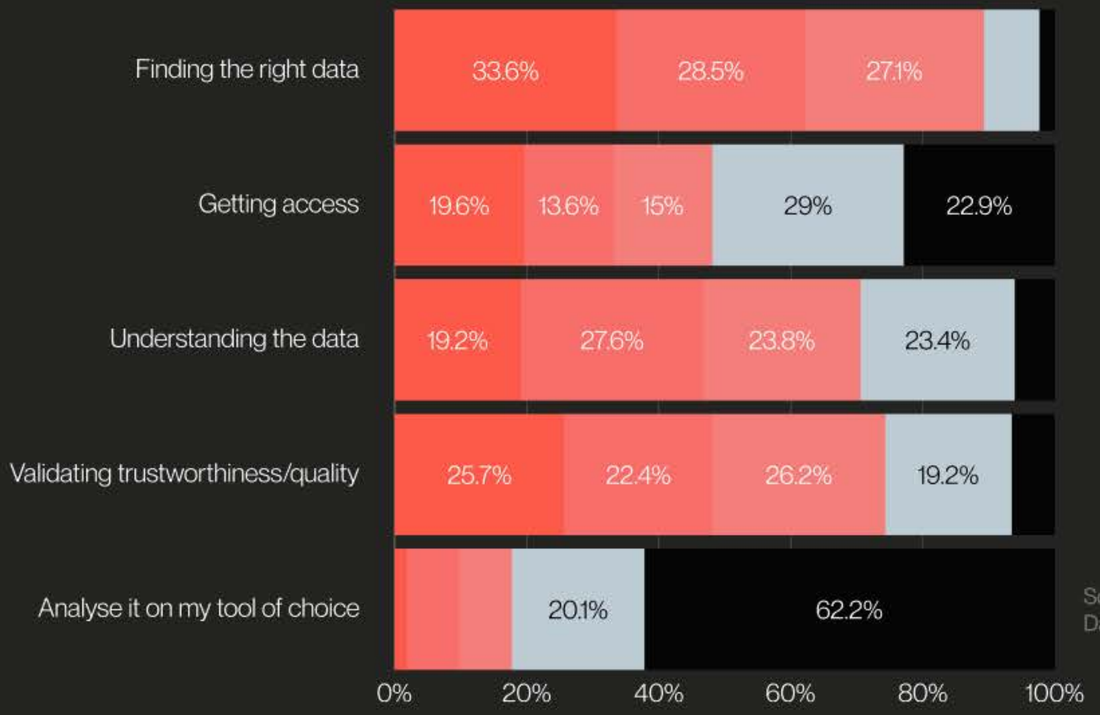
Source: Modern Data 101

Consequence: Discovery Takes the Most Time

Finding the right data is the single biggest time sink, with 34% ranking it as their #1 activity and an overwhelming 89% citing it among their top three time-consuming tasks. Discovery is not a quick pre-step; it is the work. Instead of accelerating decisions, data teams and business users are spending the bulk of their effort locating the correct datasets across fragmented systems and versions.

This burden compounds as users move downstream. Validating data trustworthiness and quality is cited by 74% as a top-three time drain, reflecting the need to double-check freshness, accuracy, and definitions once data is finally found. Understanding the data follows closely, with 71% ranking it in their top three, underscoring how missing context, definitions, and ownership slow progress even further.

Rank parts of working with data that take the most of your time?



Source: Modern Data 101

In contrast, **actual analysis on a tool of choice is deprioritised, with 62% ranking it last.** Indicating the lowest time spent on the root of proper converged solutions.

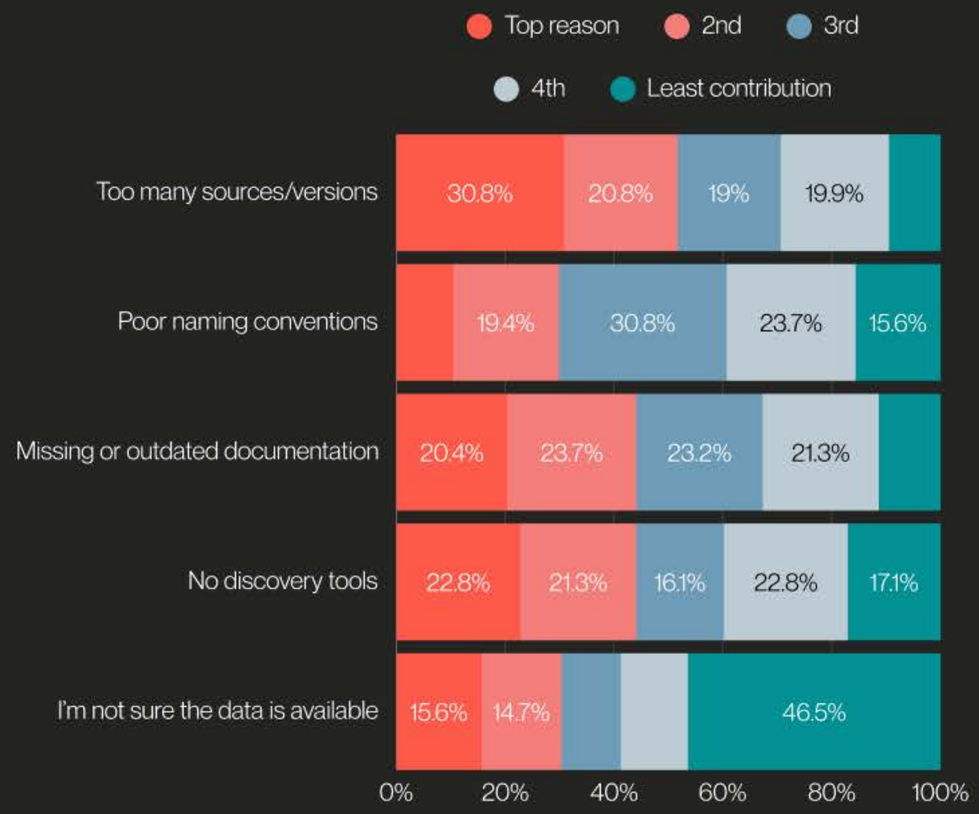
Barriers to Discovery

Sprawl affects 7 in 10 organizations

When respondents are unable to find the data they need, the causes are overwhelmingly structural rather than individual. Too many sources and versions of the same data emerge as the dominant issue: 31% rank it as the #1 reason, and 71% cite it among their top three challenges overall. This points to environments where duplication, parallel pipelines, and metric sprawl make it difficult to identify a single authoritative source, turning discovery into a reconciliation exercise rather than a lookup.

Foundational enablement gaps closely follow. Missing or outdated documentation is cited by 67% among their top three challenges, while lack of discovery tools affects 60%. Poor naming conventions, often dismissed as a hygiene issue, are flagged by 61% as a top-three blocker, peaking as the #3-ranked issue (31%).

Rank the reasons why you can't find the data you need:



Source: Modern Data 101

82%

See gaps in connectivity with governance

82% find that mostly their analytics tools are not well-connected to governance systems.

73%

Consequently discover issues after the fact

73% discover after the fact that the data used was wrong or outdated sometimes, usually, or always.

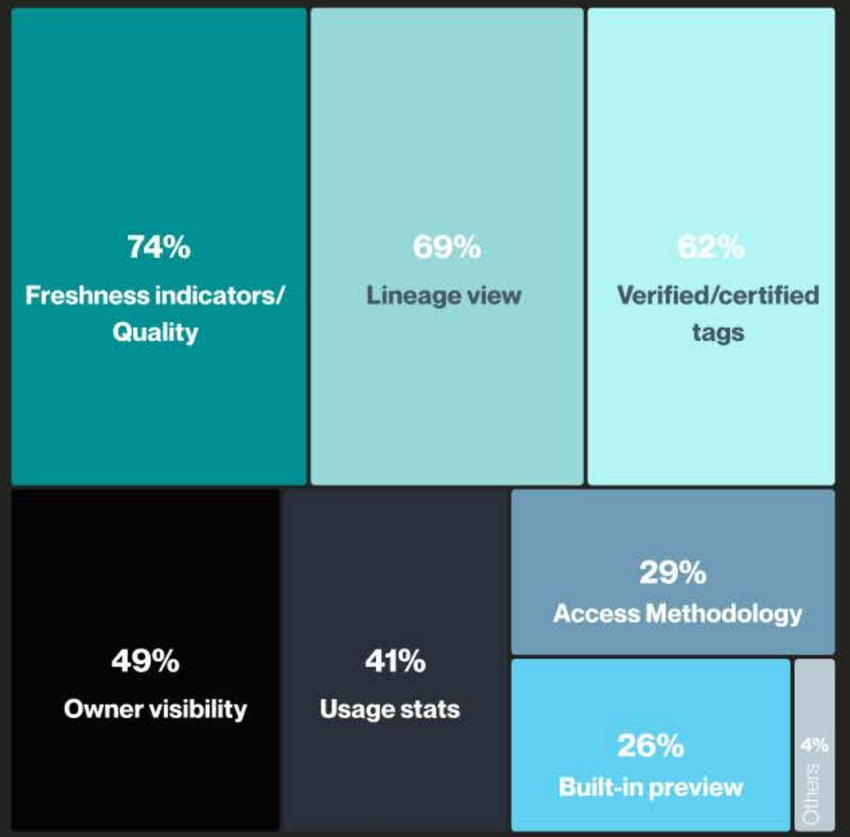
Discovery & Trust Form Two Pillars of Self-Serve

Respondents are not asking for more dashboards or smarter algorithms, but for clear, embedded trust cues at the point of discovery.

Freshness and quality indicators top the list, cited by 74% of respondents, followed closely by lineage visibility (69%) and verified or certified tags (62%). These are foundational signals that help users quickly answer three critical questions: Is this data current? Where did it come from? Can I rely on it? Without these signals travelling with the data across tools, discovery becomes guesswork rather than confidence-driven exploration.

Equally telling are the human and behavioural signals respondents value. Nearly 49% want clear owner visibility, and 41% look to usage statistics as social proof that others trust and rely on the same data.

Which signals would increase your trust in data?



Source: Modern Data 101

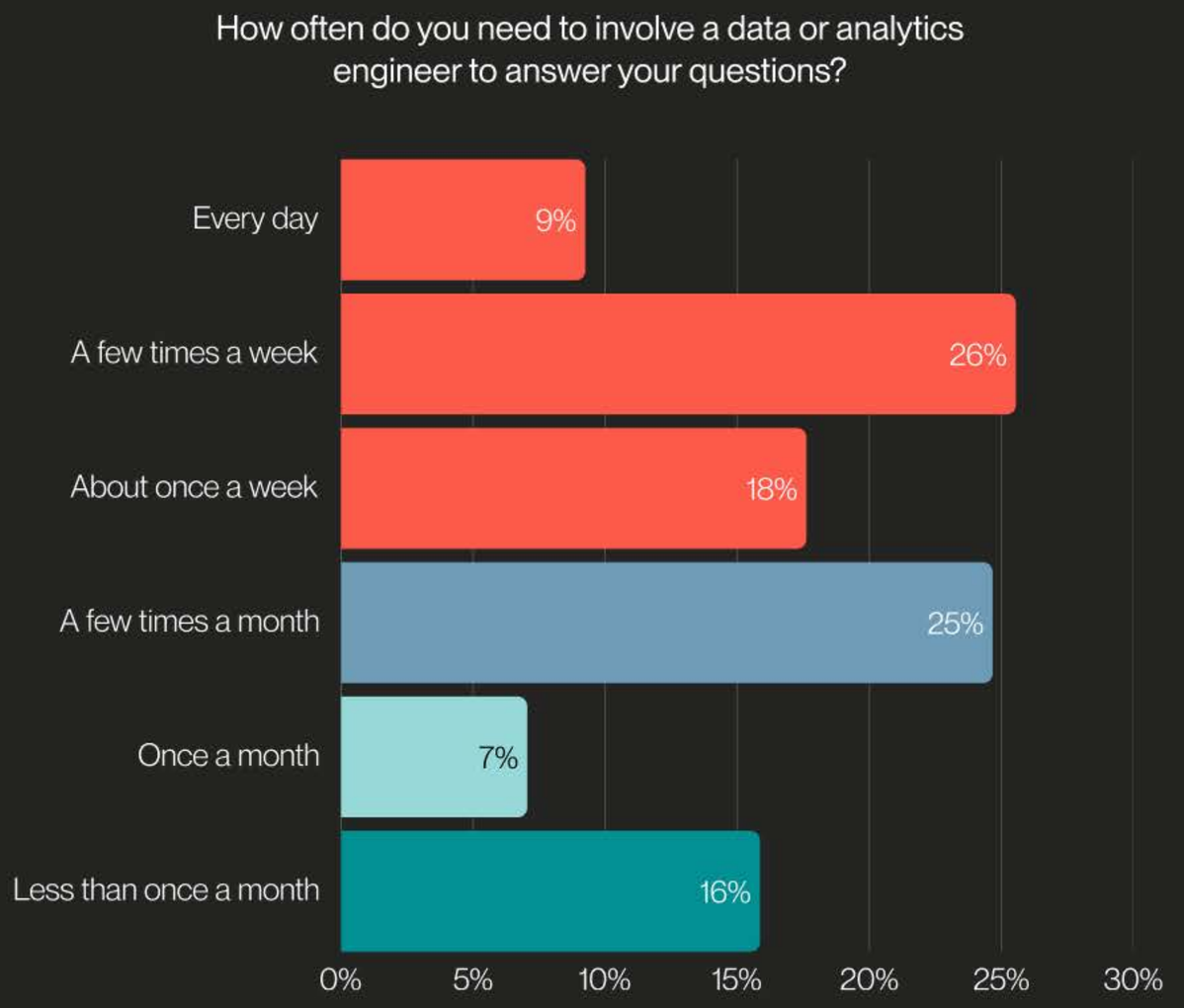
Collaboration

And structural dependence

Self-Serve in Name, Escalation in Practice

More than half of respondents (52%) require engineering support at least weekly, with 35% escalating questions daily or multiple times a week. This level of dependence indicates that many “self-serve” environments still break down at the moment users need certainty, whether due to unclear definitions, missing context, access barriers, or lack of trust in the data they can see.

Even among the remaining respondents, independence is limited rather than absolute. Nearly one quarter (25%) still involve engineers a few times a month, suggesting that routine business questions frequently exceed what current tools and data layers can support on their own. 23% report needing help once a month or less. The pattern reinforces that when discovery, governance, and trust signals are fragmented, organisations compensate by routing questions back to specialists. This slows decision-making and turns data teams into bottlenecks.



Source: Modern Data 101

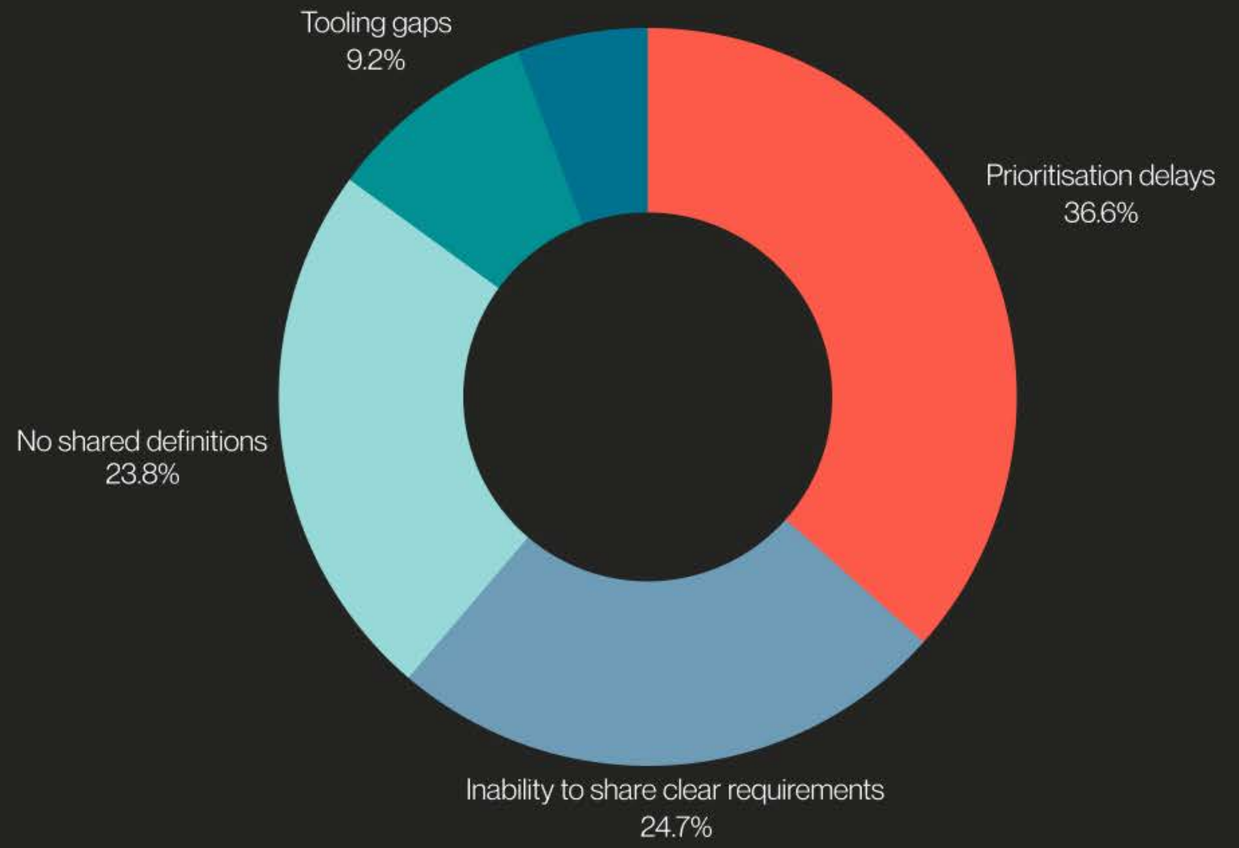
Human-Process Friction

The biggest blocker in working with data teams is not technical capability, but prioritisation. 37% of respondents cite prioritisation delays as their primary challenge, reflecting overloaded data teams forced to triage requests in the absence of clear, shared context.

The remaining blockers reveal a deeper alignment gap. One in four (25%) struggle to share clear requirements, while 24% point to the absence of shared definitions, indicating that many requests fail before they begin because business intent and data meaning are misaligned.

Tooling gaps, while real, trail far behind at 9%, reinforcing a recurring theme across the survey: most friction emerges upstream of tools. Without a common language, shared definitions, and prioritization anchored in business outcomes, collaboration with data teams becomes slow and reactive.

What's your biggest blocker when working with data teams?



Source: Modern Data 101

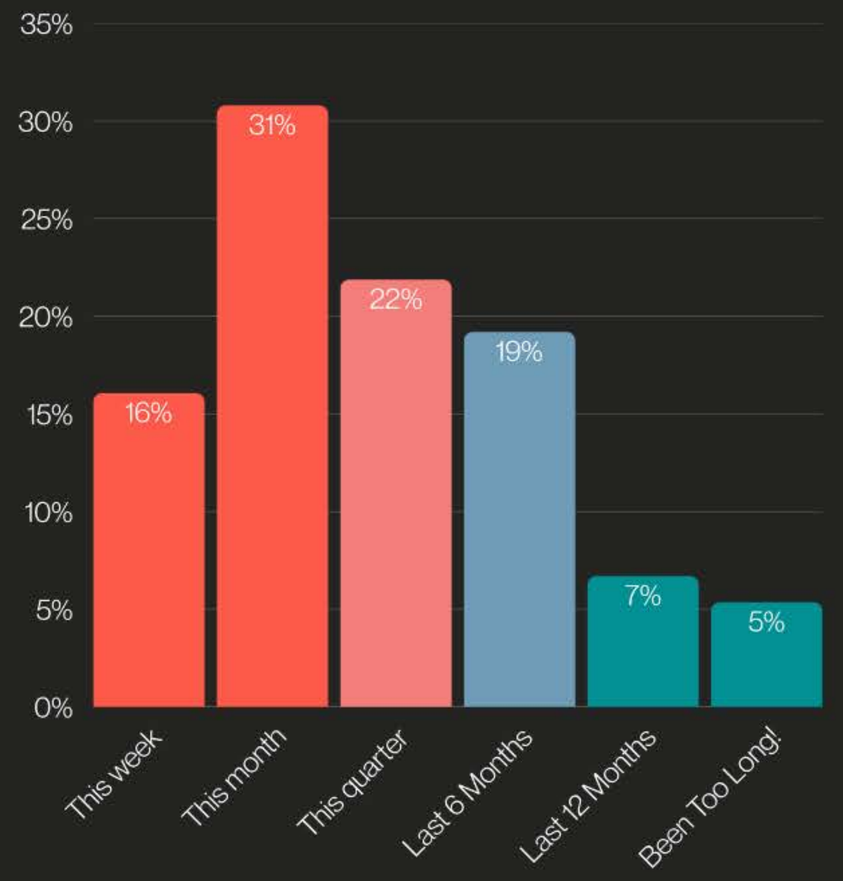
Repeated Human Intervention

Rework caused by data issues is not an edge case, but a recurring operational tax. Nearly half of respondents (47%) report having to redo work within the last month, and almost 69% within the last quarter, underscoring how frequently unstable or unreliable data disrupts progress.

When work must be revisited this often, productivity is drained through duplicated effort, context switching, and loss of momentum: costs that rarely show up on dashboards but are deeply felt across teams.

This pattern reinforces a broader dependency loop. Fragmented data systems, inconsistent definitions, and weak discovery force teams to validate, correct, or rebuild after decisions are already in motion. Instead of accelerating outcomes, data becomes a source of drag, requiring repeated human intervention to compensate for structural gaps.

When was the last time you had to redo work due to data issues?



Source: Modern Data 101

Platforms & Tools

Where They Help & Where They Fail

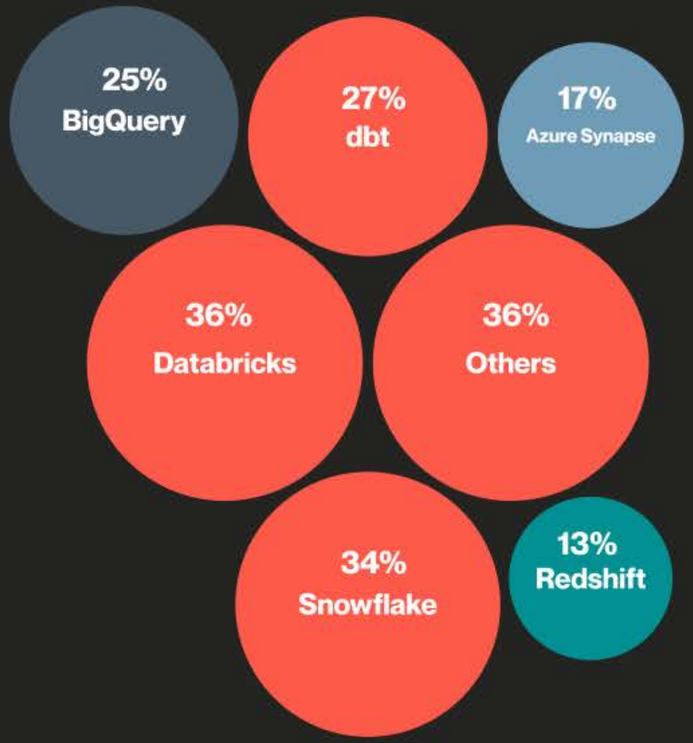
Platform Adoption Landscape

The platform landscape reflects a current generation, but highly pluralistic data stack. Cloud data platforms like Databricks (36%) and Snowflake (34%) lead adoption among respondents, followed by BigQuery (25%), with Redshift (13%) and Azure Synapse (17%) present across a meaningful subset of organizations.

While these platforms represent the current state of the market, no single solution dominates—and each comes with trade-offs in cost, flexibility, and learning curve. With 27% using dbt and 36% selecting "Other" platforms, **the average organization is running multiple platforms across storage, transformation, and analytics, often spanning clouds, teams, or use cases.**

This multi-platform reality explains how the challenge is no longer which platform to adopt, but how to connect these platforms into a coherent, governed, and discoverable system. Without convergence across metadata, definitions, and ownership, even the most advanced platforms remain isolated power tools, strong individually, but weak as a system.

Which platforms do you currently use for data storage, transformation, or analytics? (Select all that apply)



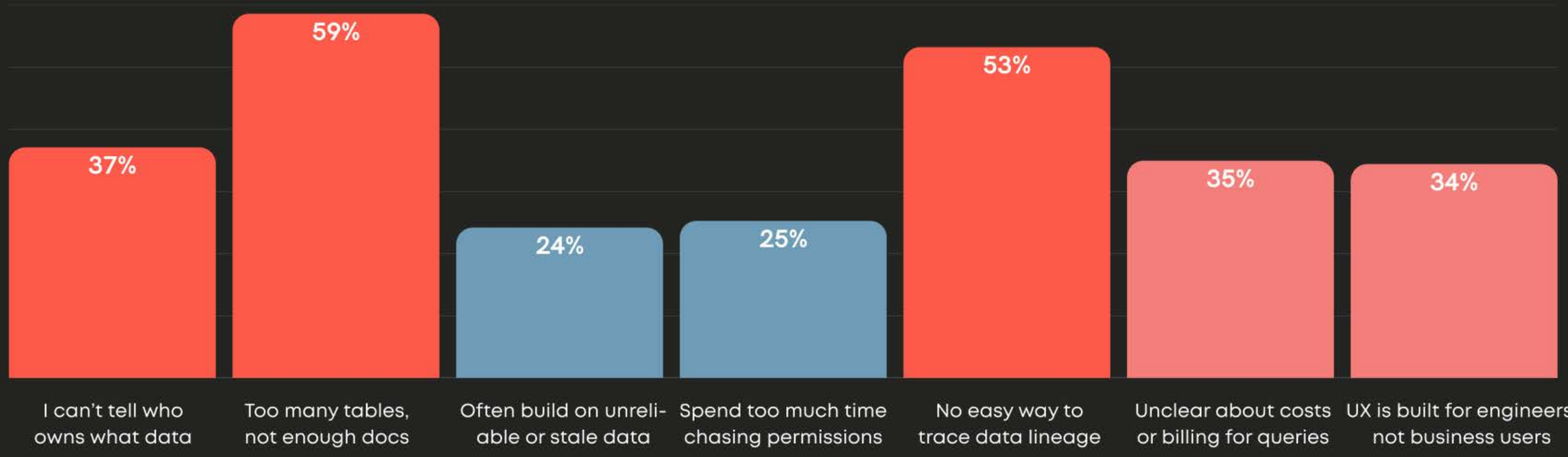
Source: Modern Data 101

Platform Paradox: Powerful Yet Hard to Navigate

Strong platform adoption hasn't solved usability. 59% report too many undocumented tables, while 53% can't trace lineage.

When working with data platforms, which of these statements resonates most with you? (Select all that apply)

Source: Modern Data 101



Platforms Lost in Translation

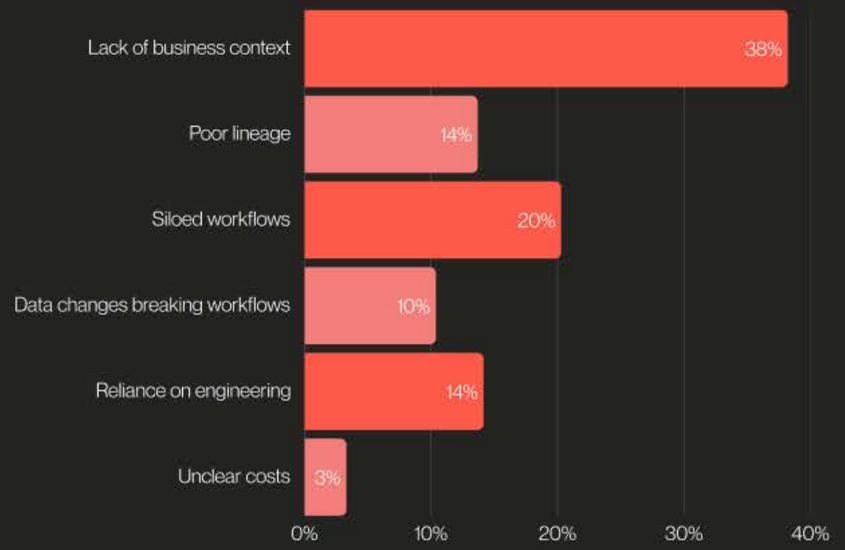
When respondents were asked to identify the single biggest gap in their current data platforms, the answer was unambiguous: lack of business context. 38% ranked this as their top issue. This signals a fundamental disconnect between how data is stored and processed and how it is actually consumed for decision-making.

Data may be technically accessible, but without clear definitions, intent, and relevance to business outcomes, it remains difficult to use with confidence.

Beyond context, the next tier points to fragmentation rather than tooling deficiencies. 20% cite siloed workflows, while 14% highlight continued reliance on engineering to interpret or operationalise data.

Technical issues such as poor lineage (14%) and data changes breaking workflows (10%) remain significant, but they are secondary to the absence of shared meaning. Notably, unclear costs rank last at just 3%, suggesting that users are less concerned about efficiency of spend than about effectiveness of use. The findings reinforce a consistent theme: the primary constraint is not infrastructure or analytics capability, but the lack of a converged layer that embeds business context, ownership, and continuity directly into the data experience

What's the single biggest gap in your current platforms?



Source: Modern Data 101

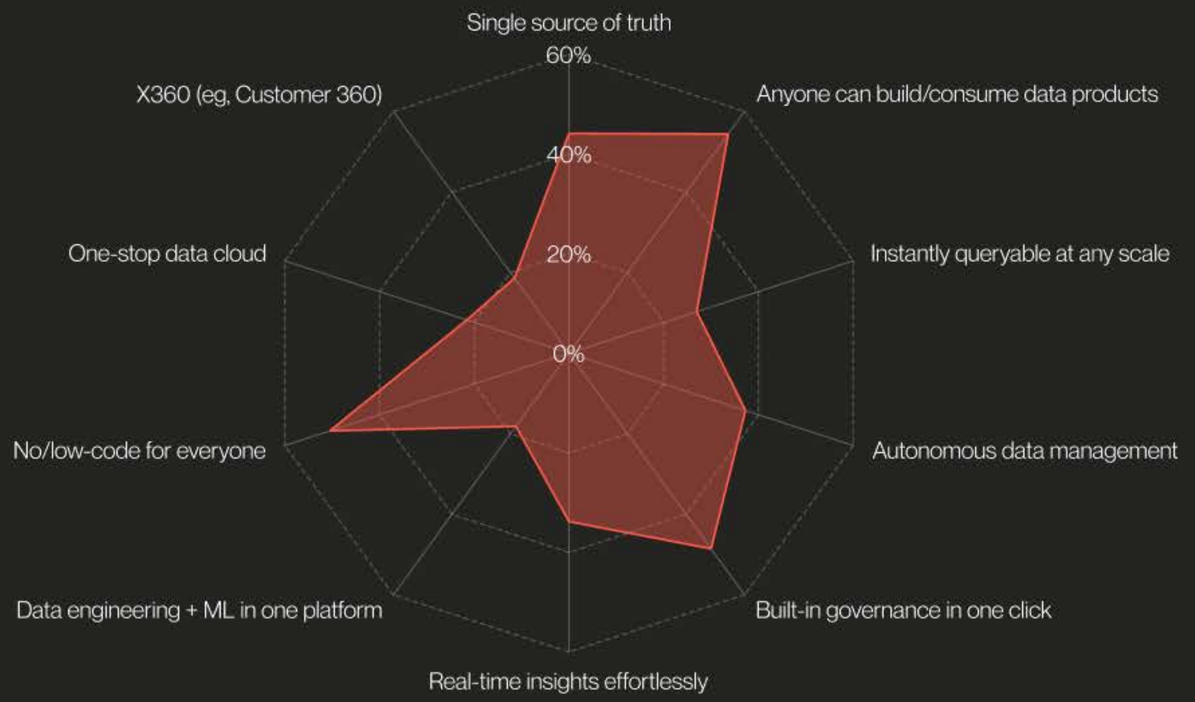
Breaking the Platform Mirage

The most overhyped promises in popular data platforms are the ones that collapse human, organizational, and semantic complexity into a marketing slogan. Respondents are most skeptical of claims that suggest anyone can do everything, instantly, without trade-offs.

The strongest pushback is against “Anyone can build/consume data products” (54%) and “No/low-code for everyone” (51%), signaling fatigue with democratization narratives that ignore skills, incentives, and accountability. Close behind, “Built-in governance in one click” (49%) and “Single source of truth” (44%) reflect disbelief that trust, ownership, and alignment can be automated away.

Even technically ambitious promises like autonomous data management (37%), real-time insights effortlessly (34%), or instant query-ability at scale (27%) are viewed with caution.

Which of these platform promises do you think are the most overhyped? (Select all that apply.)



Source: Modern Data 101

Reality of

Convergence Today

Actual Convergence vs. Realized Impact

Where convergence is happening currently is not always where it delivers the most business impact. Actual convergence is strongest in foundational and engineering-led layers:

- Transformation + Orchestration (43%)
- Storage + Compute (38%)
- Governance + Discovery (38%)

These are areas where tool vendors have invested heavily.

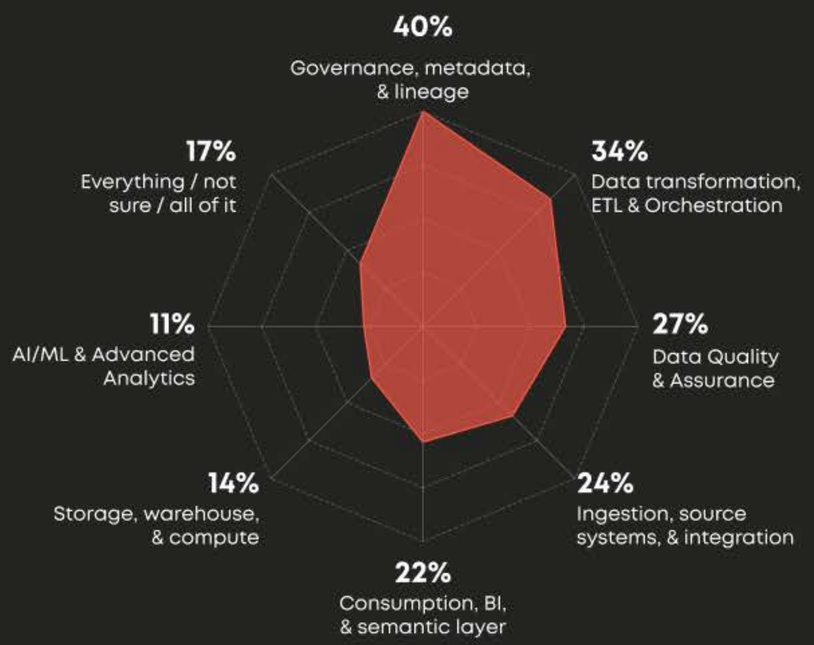
However, when respondents point to where convergence creates the most positive impact today, the picture shifts. Governance + Discovery stands out: Nearly 29% associate it with high positive impact, the strongest impact signal on the chart. This suggests that even partial convergence in discovery, ownership, and trust signals disproportionately improves decision confidence and speed.

Source: Modern Data 101

High Desire for Convergence

Born from Experienced Deficiencies

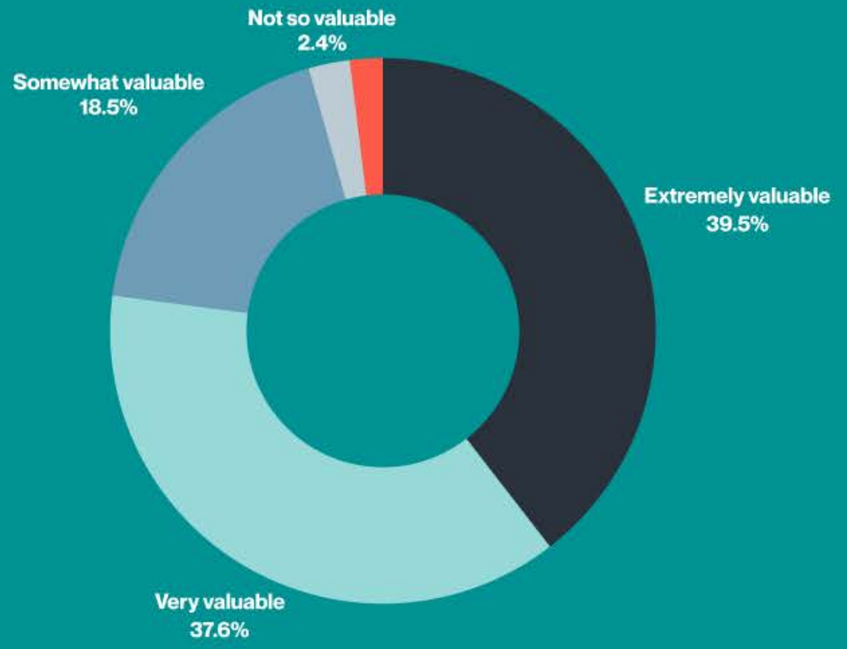
Which part of your stack still feels most fragmented?
(Summary analysis of open-ended responses.)



Source: Modern Data 101

96% find convergence valuable, while 77% strongly believe in its value

How valuable would a converged data platform be for you?



Expectations from Convergence

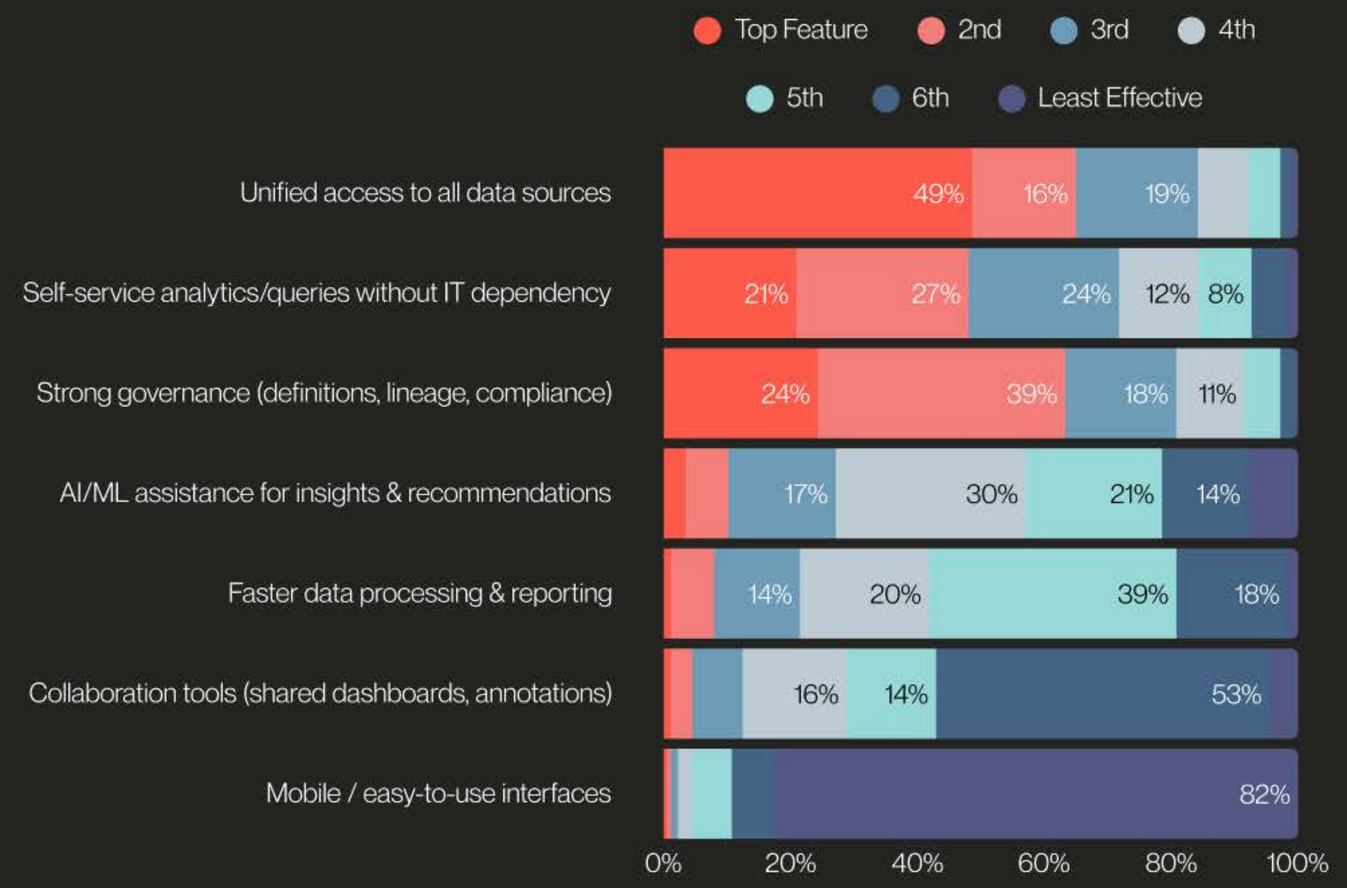
A converged data platform is valued less for intelligence or speed and more for removing friction at the data foundation.

Nearly half of respondents rank unified access to all data sources as their top requirement, while 84% rank it among the top 3 features. Self-service analytics and strong governance also consistently appear in the top three.

Teams want one place where data is reachable, usable without IT dependency, and grounded in shared definitions and lineage. Before anything else, convergence must solve access, autonomy, and trust.

Features often poised as differentiators, like AI assistance, faster processing, collaboration tools, and polished interfaces, trail significantly behind. Shared presentations and interfaces land at the bottom, reinforcing that teams feel blocked by fragmentation instead of presentation.

Rank the features that you would expect from a converged data platform to make your work easier.



Source: Modern Data 101

About the Modern Data Company

The Modern Data Company is redefining data management for the AI era. The company's flagship platform, DataOS, serves as the foundational analytics and AI-ready data layer for any data stack. This unified platform gives enterprises the ability to build and deploy data products, simplify data management, and optimize data costs. DataOS frees teams to focus on driving real value from data, accelerating the journey to becoming a truly data-driven and AI-enabled organization.

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About Modern Data 101

Modern Data 101 is a publication and community for anyone working with data, including data analysts, platform builders, and team leaders. In a world of countless tools, trends, and templated thought leadership, we slow things down to ask deeper questions: Why was this actually built? And what business problem can it solve? We explore architecture, semantics, and organizational design, the invisible foundations that determine whether data works.

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