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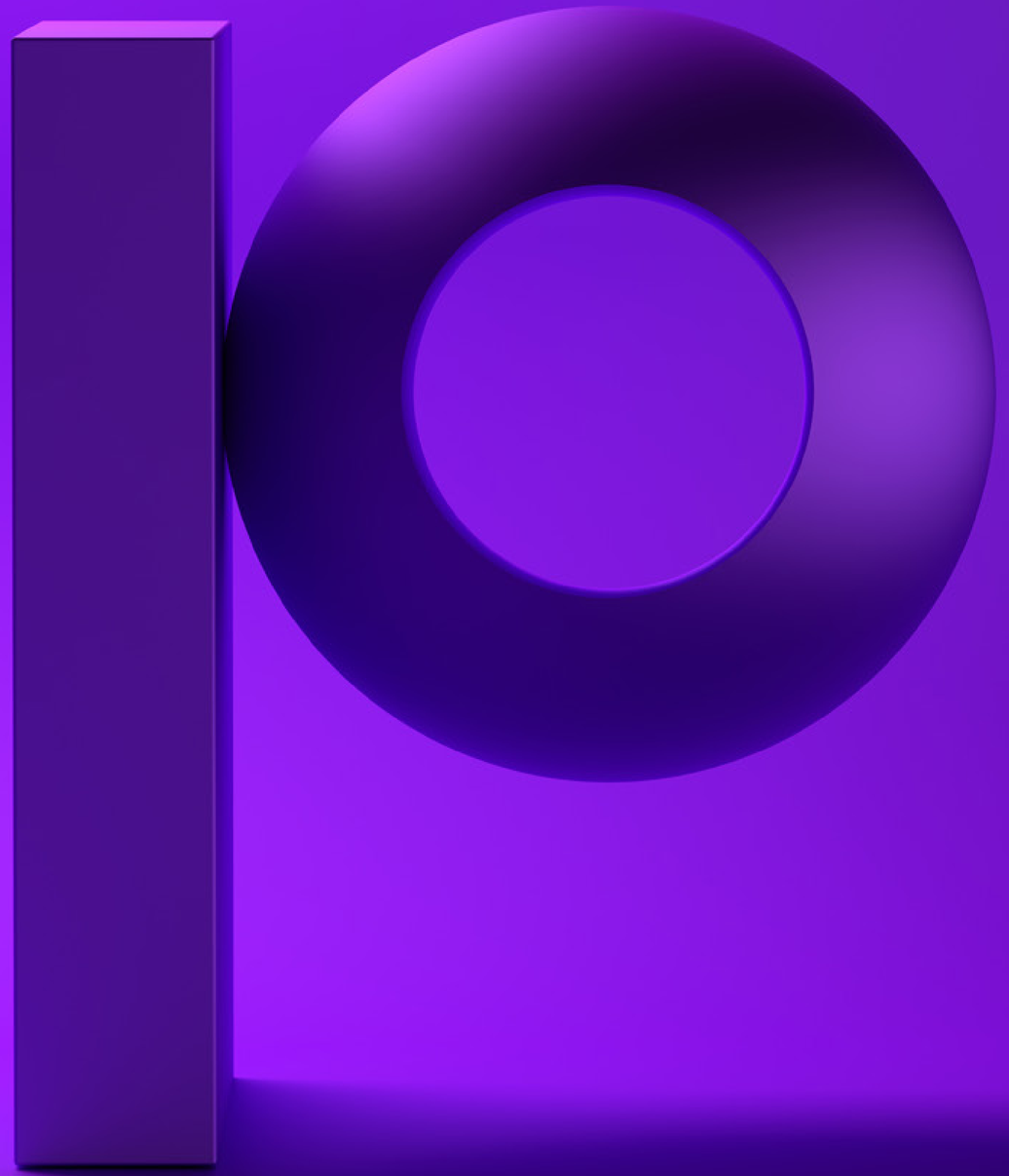
4 Keys to Improving Data Quality



The hidden barriers to becoming AI ready

AI isn't just the future—it's now. Organizations are racing to embed it into operations, drive insights, and generate new value. But speed alone doesn't guarantee success. True AI readiness requires one thing first: trust in your data.

We know that trusted data is the fuel for brilliant AI outcomes, and that starts with integrity, quality, and context. Without these, AI systems don't empower—they mislead. If your data is inconsistent, incomplete, or biased, your AI becomes unreliable, amplifying errors and undermining confidence—fast.

Here's the reality: poor data quality isn't just an inefficiency—it's a barrier to AI itself. In the past, organizations accepted messy data as a cost of doing business. Not anymore. In the AI era, that mindset is untenable. AI demands high-integrity data from day one.

And here's where the opportunity lies: AI isn't just shaped by the quality of your data—it also raises the expectations for it. As organizations expand their use of AI, they must elevate how they manage, govern, and trust the data that supports it. Becoming AI-ready means building a resilient foundation where data quality isn't a bottleneck—it's a competitive advantage.

In this eBook, you'll discover how to dismantle the obstacles of poor data quality and organizational mistrust. You'll get practical guidance on building a foundation of governance and AI-powered quality—and insights into how that foundation enables scalable, confident AI across your enterprise.

Key #1: Value Alignment

Focusing investments and work efforts on goals that actually matter to the business is basic common sense. In other words, there has to be a valid business case. As noted earlier, data quality management efforts have suffered in many organizations because pulling together a really compelling business case for dealing with the problem is not easy.

Just identifying the sources of quality issues can be a maddening chase to hunt down a moving target. Then figuring out steps to remediate the cause can be elusive, especially in cases where the data issues seem to occur almost randomly or sporadically. And finally, there is the challenge of getting people and departments to take on responsibility for cleaning up and maintaining data quality.

The first key to driving improvements in data quality is to focus on what poor data quality is costing you. This is especially critical as organizations pursue AI readiness. When business outcomes are increasingly influenced by AI-driven insights and decisions, the stakes of poor data quality become more visible—and more costly.

That's why the most effective starting point is to highlight the business impacts of data quality problems and make them clear to everyone involved. The critical path here runs through aligning data quality initiatives with current, high-visibility metrics—those that are already being measured and reported at the business level.

In other words, start with "why." Why does poor data quality matter to the KPIs that executive leaders actually care about? Why is fixing it not a side project—but a core enabler of trusted insights, compliance, and AI performance?

The next step is a coordinated effort to capture the impacts, rather than the causes, and to pull those impacts together into an understandable narrative. Often, this is something sponsored and/or driven by C-level executives, whose job performance is measured by overall organizational performance and results. Then, from within that broader set of impacts, identify those that are likely to be causing the most damage financially. Doing so sets the stage for everything that follows.

Once there is awareness and agreement at the executive level, the same core messages need to be delivered across all functions in the organization, with attention to presenting the nature and costs of the impacts in terms which are relevant to their jobs and responsibilities.

The key result needed from all these efforts is gaining informed buy-in at multiple levels, not just for the dream of better data quality, but more importantly for the commitment to getting it done.

The goals of getting everyone on the same page about data quality and gaining buy-in to actively drive improvements are also core tenets of data governance. And they are not the only ways that data quality and data governance mirror each other. In the simplest terms, data governance involves building a framework of policies, processes, and standards for how an organization manages its data for the purpose of delivering better better outcomes - including AI outcomes.

So, whether or not your organization has an official data governance program in place, it is helpful to adopt a bit of a structured data governance mindset when addressing data quality problems. It's not just about fixing data—it's about making sure data can be trusted to fuel the business strategies that matter most.

"Companies need to do three things: democratize access, empower data-driven decision making with proper tools, and integrate data governance and data quality management into every decision-maker's role."

Key #2: Visibility and Accountability

Having gained agreement that, in fact, data quality is a real and costly problem, the next step is to make the sources and impacts of poor data quality clearly visible. In other words, work on identifying specific examples of data quality problems and assessing how serious or costly they truly are. As before, it is critical to avoid the 'blame game,' working instead to reward, and even celebrate the discovery and evaluation of example data quality problems.

This step is especially critical for AI initiatives. AI systems depend on transparent, trustworthy data. If the root causes of quality issues are hidden, AI models will inherit those flaws, making outcomes unreliable and trust harder to sustain.

Encouraging and rewarding such discoveries helps to set a pattern for the future. Your efforts now to "clean up" data will be wasted if it is regarded as a one-time, fix-it-and-forget-it program. Once you clean up your data and adopt data-driven decision making as your standard way of doing business, you cannot allow data quality to slip or degrade over time.

Instead, following data governance best practices, data quality management needs to be fully operationalized, baked into your business processes and the habits of everyone in the organization. If you hope to get everyone to commit to maintaining data quality over the long term, the initial efforts need to be a net positive experience and the ongoing processes and tasks need to be wrapped up in a positive feedback/ reward loop.

On a practical level, it is most efficient and effective to fully involve the people most familiar with the data, the ones who work with it on a daily basis. They may not be able to evaluate how costly or deeply rooted any given quality problem is, but they can point your data management specialists to the problems that cause them the most grief and give them better insight into the real impacts of the issues. In the end, there is no more powerful positive reinforcement than seeing one's concerns being addressed.

It then becomes the responsibility of data management specialists and departmental leaders to evaluate those findings and to determine two things: How much each issue is probably costing the organization and what the definition of "fixed" would look like. But the key at this juncture is to get everyone actively involved in the process of identifying truly problematic issues and making that process a positive experience.

"Managed correctly, data governance fades into the background, almost ceasing to be perceived as a separate discipline within the company. Instead, it becomes 'just the way we work around here'."

Key #3: Empowerment

One of the core tenets for successful AI-ready organizations is data democratization. Simply put, data democratization means virtually anyone within your organization has the ability to access and use data to inform their decisions. This requires that, within reasonable limits, regardless of their role within the company, anyone charged with making business decisions has access to the data and the tools they need to do so.

Of course, it is neither wise nor feasible to just simply give employees unrestricted access to data and expect them to make good decisions. At the same time, keeping data locked under fully centralized control perpetuates the same legacy bottlenecks that slow progress. For AI initiatives in particular, striking the right balance is critical: people need access, but the data they use must remain governed and trustworthy.

The answer is to enable collaborative data quality management. The most effective and powerful solutions combine data quality, observability and governance in a unified framework. This allows end users to examine the data they are working with, evaluate it against the data quality standards and records maintained in the data governance systems, and bring questions or concerns to the responsible data manager.

The benefits compound quickly when business users—those who understand the data in context—are empowered to identify and communicate issues. Their input gives data management specialists sharper visibility into problems, while ensuring that governance policies stay relevant to real-world needs.

Empowerment builds momentum when you start by enlisting everyone in the organization to help with identifying clear examples of data quality issues, and then leverage that momentum by enabling them to contribute to the ongoing data quality management process. In doing so, you set yourself up for long-term success.

“Successful data democratization requires high-quality, well-governed data that is it is easy to find, understand and determine its quality and fitness for purpose.”

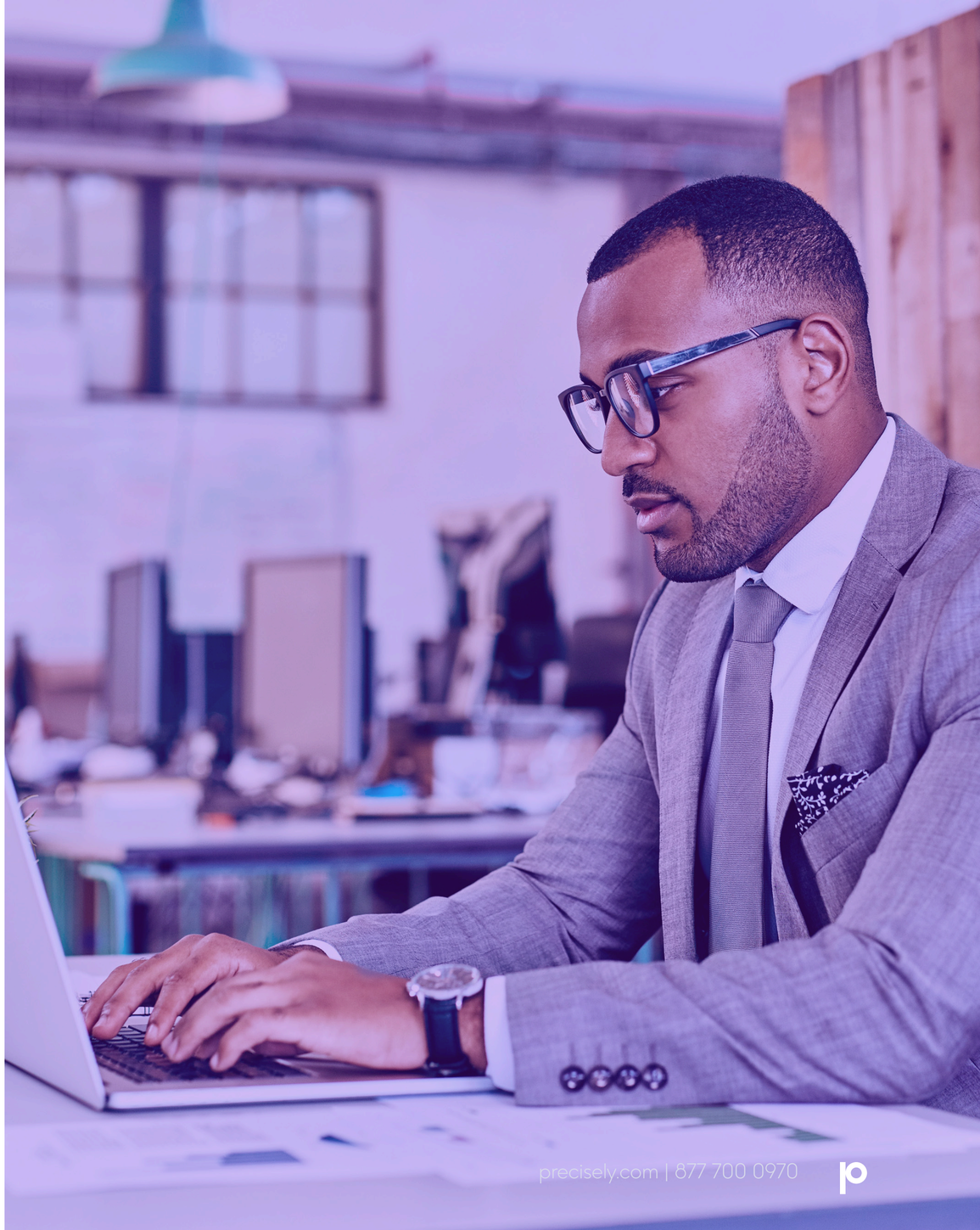
Key #4: Strategic and Tactical Priorities

Your industry and the types of products and services you provide certainly shape the general nature, scope, and sources of your data. But more to the point, your data sets are absolutely unique in the details of their formats, where they are maintained and exactly how they flow between your systems. So, it follows that the details of your most common or most problematic data quality issues will likely be just as unique.

Especially in the early stages of your data quality improvement program, it is vital to balance your efforts between dealing with the resolution of your unique but clearly urgent data quality issues and your goal of building up sustainable and effective data quality management practices for the long term. This balance becomes even more important as organizations pursue AI readiness. AI initiatives often shine a spotlight on immediate data flaws, but they also demand a durable foundation of trusted, well-governed data that can scale with future use cases.

Be careful not to lose perspective, to get into data quality management routines that are too narrowly focused on tactical efforts aimed at resolving this morning's newest problem.

Instead, maintain a data governance mindset, dedicating some time to look into and evaluate the most common sources and patterns of poor data quality, even as you prioritize addressing your most glaringly obvious and unacceptable problems. Because as unique as your business and your data may be, they will also surely suffer from many of the same ailments as any other organization.



To help get you started, here are some areas where pervasive data quality problems commonly arise. It is likely that as you review these you will find yourself recognizing themes and patterns appearing within the specific issues your organization is uncovering. For organizations preparing for AI, this exercise is especially valuable. By surfacing both urgent issues and recurring patterns, you not only strengthen today's operations—you also build the resilient data foundation that AI requires.

Data Validation
Maintaining data quality standards at scale is as difficult as it is essential. Format compliance, consistency across systems, and even granular rules — such as how null values are defined and managed—must be continuously checked. Without validation, errors flow directly into analytics and AI models, undermining trust in every downstream decision.

Threshold & Reasonability
Data can be clean, accurate, and complete, but still make no sense. Automated statistical controls are needed to validate all new or updated data against real-world criteria before being accepted. Accepting and using data that is outside of a strictly specified range or that is just wildly different from normal or recently validated values can create costly disruptions and erode confidence in AI outputs.

Data Freshness
Business data is rarely static to customers, logistics, or digital transactions. While the rate of change varies by data type and source, the business impacts of relying on out-of-date data are similar. Capturing data changes in a timely manner generally requires integration with external, third-party systems and data sources as well as between internal systems and data lakes. Without automation, stale data can cripple analytics and mislead AI models that depend on timeliness.

Anomalies and Outliers
Unexpected data changes can wreak havoc on your business when left undetected. Over time, they create costly downstream impacts and data downtime. Data observability capabilities, often enhanced with AI, automatically surface anomalies, outliers, and other unexpected shifts, alerting the right teams before issues spiral into business disruption.

Deduplication and Entity Resolution
The mix of data from clouds, mobile devices, social platforms, and traditional repositories makes duplicate records inevitable. Deduplication and entity resolution ensure that customer, product, and other critical data domains remain consistent and reliable. Without this discipline, personalization, compliance, and AI-driven engagement all suffer.

Reconciliation
Data sets can get out of synch whenever new data is ingested—from external providers, connected systems, or real-time streams. To avoid misalignment, reconciliation processes must verify that incoming data conforms to standards and aligns with existing records. Inconsistent data inputs compromise not just reporting accuracy, but also the quality of AI-driven recommendations and predictions.

Data in motion
As data moves across systems, once-valid information can be transformed incorrectly—or lost altogether. Each step must be monitored to ensure rules are applied consistently and transformations are correct. For example, insurance claims passing through multiple systems must retain accuracy at every stage. Errors here don't just slow processes—they create risks for both compliance and AI models trained on incomplete or corrupted data.

High quality, AI-ready decisions

In the end, successfully adopting and leveraging artificial intelligence and advanced analytics requires trustworthy and democratized data. But that cannot be done without addressing data quality. The best results are achieved by automating and enabling collaborative data quality management, within an active, well thought out data governance framework.

Such a paradigm shift can't be achieved by just implementing advanced software packages and training a core team of data scientists. To unlock the full value of AI and data-driven decision-making, the entire organization must be educated, engaged, and empowered to share responsibility for data quality as an ongoing, mission-critical discipline.

Ready to move from data-driven to AI-ready? Partner with Precisely to assess your current data landscape, identify gaps, and build the governance and quality foundation your AI strategy demands.

Learn more

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About Precisely

As a global leader in data integrity, Precisely ensures that your data is accurate, consistent, and contextual. Our portfolio, including the Precisely Data Integrity Suite, helps integrate your data, improve data quality, govern data usage, geocode and analyze location data, and enrich it with complementary datasets for confident business decisions. Over 12,000 organizations in more than 100 countries, including 95 of the Fortune 100, trust Precisely software, data, and strategy services to power AI, automation, and analytics initiatives. Learn more at www.precisely.com.

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