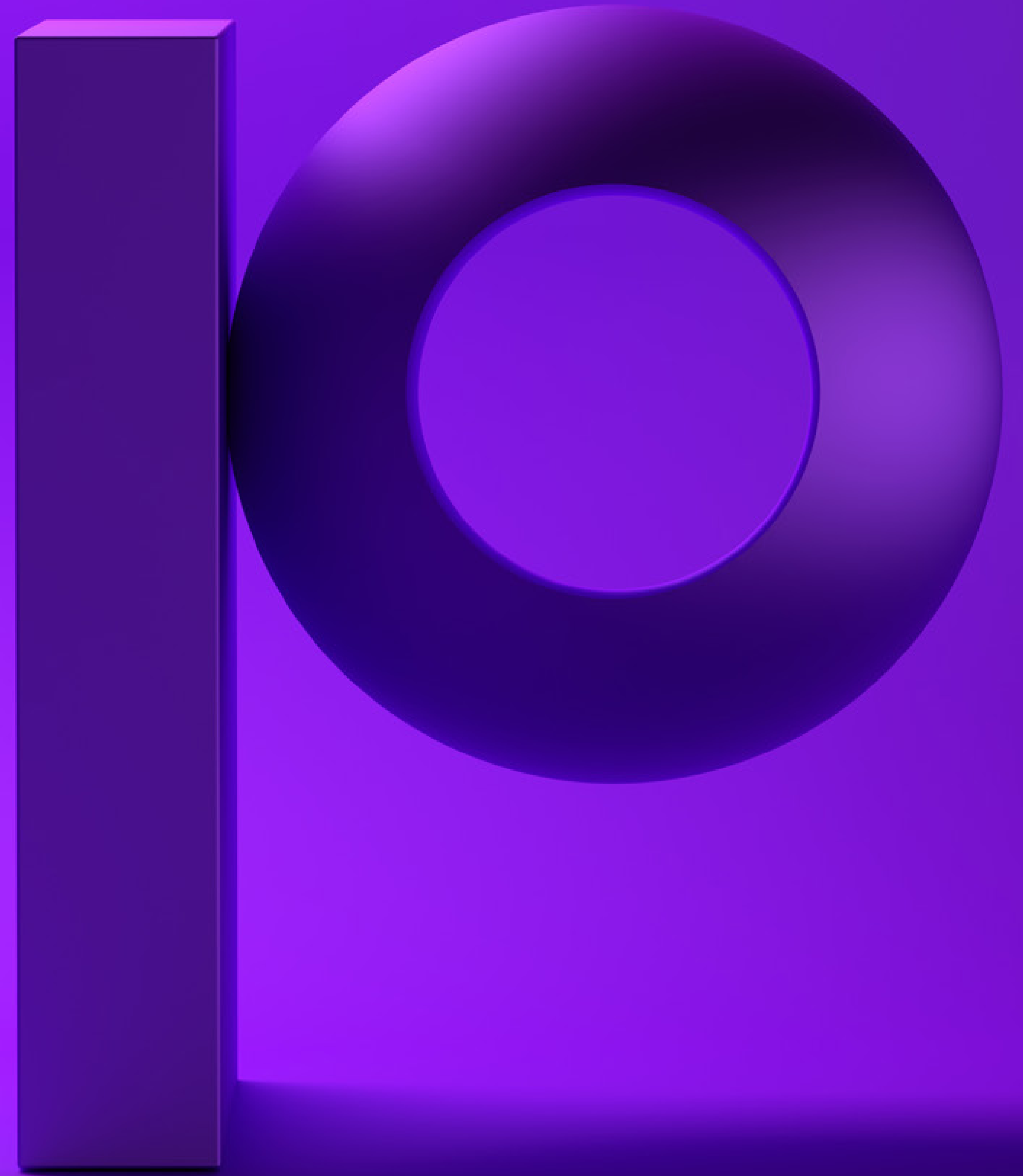


precisely

Validation and Enrichment: Harnessing Insights from Raw Data



Introduction

In today's fast-paced global economy, where consumers are accustomed to getting what they need virtually at a moment's notice, failed deliveries or improper billing due to poor quality data results in a loss of business. Without complete and reliable data, companies may rely on guesswork or partial information, leading to poor decision-making, hampering market analysis, and slowing growth opportunities.

Data is the lifeblood of modern businesses, driving decision-making, strategy development, and operational efficiency. However, the effectiveness of data-driven initiatives relies heavily on the quality and integrity of the underlying data. In this ebook, we delve into the crucial data validation and enrichment process, uncovering the challenges organizations face and presenting solutions to simplify and enhance these processes.



Data validation

In an ideal world, your company would have access to reliable and consistent data that provides meaningful context to answer the most pressing questions businesses are asking. The need for high quality data feeding agentic and other AI systems is increasing. In the [2026 State of Data Integrity and AI Readiness report](#), 51% cite data quality as the most common data integrity priority.

How can your business ensure data integrity as you scale AI and transform raw data into meaningful insights?

Increasing data quality is the most prevalent need every company faces today; how can a company trust its data if it is incomplete, inaccurate, or provides no business value? Data validation helps to improve:

Accuracy: Identify and rectify inaccuracies within the data by comparing the entered or imported data against predefined rules, such as data type, range, or domain constraints; validation can flag errors, such as incorrect values, missing information, or inconsistent data formats.

Completeness: Ensure that all required fields are populated and contain the necessary information. By checking for missing or null values, validation helps maintain data completeness. Incomplete data can lead to skewed analysis, hinder decision-making, and affect the reliability of data-driven applications. Does the first name have a last name attached?



Consistency: Enforce consistency by verifying that data elements are in harmony with each other and follow defined relationships or dependencies. For example, if you have a title for a contact in the marketing system, then you would it would be consistent to have the same title for that contact in the sales system. Consistent data supports reliable reporting, analysis, and application functionality.

Conformity: Validation ensures data adheres to predefined standards, regulations, or business rules. It helps identify data not complying with specified formats, patterns, or validation rules. This is particularly important in scenarios such as data integration, where data from various sources must conform to a unified structure or standard. Enforcing data conformity reduces errors, enhances interoperability, and facilitates data exchange.

Error Prevention: Prevent errors at the data entry or import point. Validating input against predefined rules can prompt users to correct mistakes, improving data quality from the outset. This proactive approach minimizes the chances of data inconsistencies or inaccuracies downstream and reduces the effort required for data cleansing and correction later on.

In the same 2026 State of Data Integrity and AI Readiness report, 96% of data leaders report their organizations invest in location intelligence and third-party data enrichment. One of the biggest challenges in keeping organizations from effectively using location data for decision-making is that address data needs to be standardized, verified, and fit for purpose. When internal data systems aren't connected, they are not collecting all the information a business needs and need to be organized in the manner required for analytics. That means that maintenance and enhancement processes are complicated, they're complex, prone to errors, and very lengthy. A business can't react as it wants to due to slowness, and it often can't deliver the services and features that their customers expect to see from an organization, putting their overall growth at risk and threatening critical goals as a business.

Transforming raw data into actionable insights is challenging for many organizations across industries. But the need to turn that issue around has never been more vital, thanks to a digital landscape that increasingly values context and personalization, and often more than clean and validated data is needed to rise to the challenge.



The Power of Data Enrichment

What makes data enrichment so powerful? It allows your business to dive deeper into customer insights, which empowers more informed decisions, optimized business processes, inspired product innovation, and personalized marketing messages. But what is data enrichment, exactly? It's the process of enhancing your data by appending relevant context from additional sources – improving its overall value, accuracy, and usability.

Companies generate vast quantities of first-party data about their customers and their operations. But businesses also depend on external third-party data to learn more about their customers so they can create rich omnichannel marketing campaigns and help sellers take the next best action. Or, for example, they use external data to help evaluate business risk, ensure compliance, make informed planning decisions, or select the right location for stores, restaurants, and infrastructure.

The uses of enrichment data are virtually unlimited. The challenge is finding the right data and data sources for meeting your business goals. Whether you are using third-party data for business intelligence dashboards, problem-solving, analytics, or AI applications, your results will depend on the quality of the data you use or the data providers you select.

As with data validation, high-quality data enrichment aims to enable access to trusted data throughout the organization. But data professionals spend about 80% of their time finding, prepping, and managing data today. That leaves only about 20% of the workday for applying data to business operations: running models to illuminate risks and opportunities, creating efficiencies, enhancing the customer experience, and improving business outcomes.

What if you could flip those ratios?

What if your staff could easily select, incorporate, enrich, and interact with data — your own, and that developed by third parties? What perspectives would you gain? What business opportunities would you uncover?



Persistent IDs simplify complexities

Data enrichment is critical for enhancing the completeness of data and closing gaps in context. But despite the clear benefits, it has historically been associated with challenges: Lengthy onboarding cycles, difficulty linking multiple external datasets to the same first-party data, and errors that result from manually matching internal records with external data. Moreover, many organizations aren't sure where to start when enhancing their records with location-specific data attributes.

Address data is a great jumping-off point. It establishes a foundation for connecting business records to location-specific data, like local demographics. However, address data is complex and dynamic.

There are over 300 unique address components worldwide, user input can be inconsistent, and addresses are constantly in flux. Fragmented address records can lead to failed deliveries, lost sales, and operational costs—in addition to making data enrichment a daunting task due to lack of a consistent, unified record.

As such, it's important to ensure you're starting from high-quality address data that is:

- Standardized based on regional and international guidelines
- Validated against trusted reference data
- Using autocomplete to reduce errors at the point of entry
- Geocoded to accurately assign latitude and longitude coordinates



When working with a data partner, you want to ensure they have expertise with addresses and use unique, persistent identifiers to consistently distinguish them—even when details like street names or postal codes change. This is essential for managing location-based data and streamlining enrichment; it acts like a fingerprint for addressable locations, resolving ambiguity and inconsistencies, while accelerating integration with external datasets. By connecting addresses to authoritative datasets via pre-linked unique IDs, you can avoid tedious, error-prone matching work and easily scale data enrichment by making the process as simple as a column join.



The Precisely difference

Precisely is a global leader in data integrity, helping organizations ensure their data is trusted, governed, and ready to power advanced analytics and AI initiatives. More than 12,000 customers worldwide — including nearly all of the Fortune 100 — rely on Precisely to create accuracy, consistency, and context across their data ecosystems.

Through its interoperable Data Integrity Suite, Precisely brings together data integration, data quality, governance, location intelligence, and enrichment capabilities to deliver reliable, context-rich data that drives confident decisions, operational resilience, and AI at scale.

Building on decades of data-domain expertise, our products and services enable our customers to spend more time using data to improve business outcomes, and less time sourcing, preparing, quality checking, and updating information.

We believe working with a data provider you trust is vital. We understand this need. We've experienced it ourselves. Our products are built on data from more than 100 partners. Our work evaluating these suppliers saves you the time and complexity of vetting them yourself. The result? Hundreds of interoperable datasets, including customized datasets, are designed to meet your needs. Precisely solutions have multiple delivery and deployment options available to meet your needs. We also recognize you may have an investment in other technologies but rest assured — we can meet your data validation and enrichment needs wherever your data lives, while you continue to leverage your current investments.



To ensure our customers can easily connect their first-party address data with our data enrichment ecosystem, we use the PreciselyID. Our geo addressing solutions append this unique ID to each address, enabling you to match, link, and enrich data with ease to better understand locations, properties, and customers.

Moreover, our network of enrichment datasets is pre-linked via various unique IDs, in addition to the PreciselyID. This makes onboarding and integrating new datasets seamless, enabling you to easily enhance your data with boundaries, demographics, property details, and a wealth of other attributes from Precisely and our extended partner network, which includes Dun & Bradstreet, TomTom, and more leading data providers.

Take your business further with integrated, comprehensive data quality and data enrichment solutions that power bigger and better outcomes.

Transforming data into actionable insights should be simple





About Precisely

As a global leader in data integrity, Precisely ensures that your data is accurate, consistent, and contextual. Our portfolio, featuring the Precisely Data Integrity Suite, brings together software, data, and data strategy consulting services. This unique combination enables organizations to move to Agentic-Ready Data, the highest-quality of data that is integrated, governed, and enriched for AI, automation, and analytics initiatives at enterprise scale. Over 12,000 organizations in more than 100 countries, including 95 of the Fortune 100, trust Precisely to support some of the world's most complex, regulated, and mission-critical data environments. Learn more at www.precisely.com.

www.precisely.com