

# Closing the GenAI Data Gap

To ground generative AI (GenAI) with enterprise data, choose the right tool for the job.



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What is the top reason that prevents your organization from using more structured data in its GenAI initiatives?



n = 624; Source: IDC's *Global GenAI Technology Trends Survey 2024*, July 2024

To deliver powerful GenAI-fueled capabilities, enterprises know they will need to leverage their data. But tapping enterprise data, which may be structured, unstructured, or semi-structured, isn't simple. Effectively accessing the data depends on the GenAI use case. Choosing the right tool for the job is critical to deploying capabilities that best serve customers and deliver targeted business outcomes.

Structured data — such as valuable information stored in systems for customer relationship management, enterprise resource planning, and billing — has a unique set of challenges, since it's timely, may have sensitive and personally identifiable information data, and is likely retained in separate data stores.

Approaches for retrieving structured data to GenAI apps include using LLM agents to directly access

and query the systems that collect and store the data, querying data lakes or data warehouses that contain data moved from disparate sources, or connecting to data management platforms where data has been prepared for GenAI: unified, cleansed, protected, and organized for real-time access.

Every approach will require the implementation of text-to-SQL conversion to effectively access the required data from the data store.

The right approach depends on the application's requirements and the data that fuels it. When evaluating options for making structured data available to GenAI apps, consider the following factors.

## Security/Privacy

The level of risk when deploying a GenAI application can be significant and may lead to serious legal and reputational consequences. How and where you store data and the techniques you use to access it impact risk exposure. Sensitive private information such as customer Social Security numbers requires even more controls in place. Carefully assess data storage options, implement governance policies and data security guardrails, and ensure the decisions made match the risk tolerance of the company and the application.

## Timeliness of Information/Data

Data freshness matters in applications where the end user requires responses that access recent data. But not all GenAI application architectures allow for access to up-to-the-minute information. Examine the application's tolerance level for data freshness, and select storage and access techniques accordingly.

## Cost

When it comes to making data ready for GenAI apps, there are costs associated with moving, cleansing, querying, and organizing data. Evaluate how an application's architecture and data requirements

impact cost, and examine how changes to data, required queries, and the frequency with which an app uses an LLM may also impact cost.

## Scale

Data volume and the number of concurrent end users impact cost and application performance. When scaling from pilot to production, the number of users will grow dramatically, as will the volume of data queries. Anticipate scale requirements when selecting data storage and retrieval products.

## Quality/Reliability

The output of a GenAI application must be accurate and useful, and it must be delivered quickly. Model choice and tuning and deployment decisions are important, but so is the choice of data storage architecture.

## Recommendations

Where structured data resides is one of many decisions impacting the reliability, performance, and security of a GenAI application. However, it's an important one that you should consider carefully to deliver the capabilities that drive business value.

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