

Snowflake Intelligence: Unlocking Enterprise AI Value

Whitepaper



Abstract

As enterprises grapple with the explosion of structured and unstructured data, the need for intelligent, scalable, and secure platforms has never been greater. Snowflake Intelligence emerges as a transformative solution, enabling organizations to unify data, accelerate AI adoption, and democratize insights across business functions. This white paper explores the challenges enterprises face in operationalizing AI, how Snowflake's native intelligence capabilities address them, and what it means for the future of data-driven decision-making.

Introduction: The data-AI convergence imperative

The global data sphere is projected to exceed 394 zettabytes by 2030. Yet, most enterprises struggle to convert this data into actionable intelligence. Traditional data warehouses, while robust for reporting, fall short in supporting modern AI workloads that demand real-time processing, unstructured data handling, and scalable compute. The convergence of data and AI is no longer optional; it is a strategic imperative.

Snowflake, long known for its cloud-native data platform, has evolved into a powerful intelligence engine. With the introduction of Snowflake Cortex and native support for AI/ML workloads, the platform now empowers organizations to build intelligent applications, automate insights, and drive innovation — all within a governed, secure environment.

Challenge: The AI adoption bottleneck

Despite the hype around AI, most enterprises face significant barriers to adoption:

- **Data silos and fragmentation:** Disparate systems and formats hinder unified analytics
- **Lack of scalable infrastructure:** Traditional platforms can't handle the compute demands of modern AI
- **Talent shortage:** Data science expertise is scarce, making it difficult to operationalize models
- **Governance and compliance risks:** AI initiatives often bypass governance, creating security and regulatory concerns
- **Slow time-to-insight:** Lengthy data preparation and model deployment cycles delay business value

These challenges create a gap between AI ambition and execution. Enterprises need a platform that abstracts complexity while enabling secure, scalable, and intelligent data operations.

Why Snowflake Intelligence?

Snowflake Intelligence bridges the gap between powerful enterprise data and the non-technical business users who need fast, actionable insights.

- **Data democratization:** It allows anyone in an organization to ask complex questions in plain language and receive immediate, understandable answers, eliminating bottlenecks created by reliance on data experts for every query.
- **Speed and efficiency:** By providing instant answers and visualizations, it accelerates decision-making. Tasks that previously took hours can now be completed in seconds.

- **Unified governance and security:** It operates within the secure Snowflake perimeter, automatically enforcing existing access controls and data masking policies. Users only see the data they are permitted to access, ensuring compliance and data privacy.
- **Deep insights:** Its "Deep Research Agent for Analytics" goes beyond simple data retrieval to analyze data, uncover trends, and explain the "why" behind business metrics, generating more reliable and comprehensive insights.
- **Actionability:** Agents can be configured not only to provide insights but also to take actions, such as sending notifications, updating records in other systems, or triggering workflows.
- **Semantic views:** Leverages semantic views, which map business concepts (e.g., "sales", "product name") to underlying technical data, helping the LLM understand how to query the data effectively and generate accurate, context-rich results.
- **Transparency and trust:** For every insight, it provides citations from original data sources (documents, SQL queries) and shares the steps the agent took to generate the answer, building user trust.
- **Visualizations:** Users can easily turn generated answers into meaningful, ready-to-use charts and visualizations.

What is Snowflake Intelligence?

Snowflake Intelligence is an intuitive, conversational interface, accessible via a dedicated portal (ai.snowflake.com). It acts as an always-on "thought partner" for business users. Key components and features:

- **Natural language interface:** Users interact with data by conversing in natural language, similar to chatting with a colleague.
- **Data agents:** Powered by AI agents that orchestrate across both structured data (tables, records) and unstructured data (documents, images, conversations) within Snowflake.
- **Cortex AI integration:** Built on top of the Snowflake Cortex suite of AI features, including Cortex AISQL (for natural language to SQL generation), Cortex Analyst (for querying structured data), and Cortex Search (for extracting insights from unstructured data).
- **Fraud detection and risk assessment:** Financial institutions can use Snowflake Intelligence to analyze vast amounts of transactional and communication data in near real-time. Agents can detect risky patterns, analyze loan applications (unstructured documents), and flag potential fraud faster than manual review processes.
- **Enhanced customer support:** By giving support agents or even end-customers access to a governed, conversational AI, banks can provide instant answers to complex queries about policies, account information, and market trends, improving efficiency and service quality.
- **Compliance and reporting:** Intelligence agents can quickly audit large regulatory filings and internal documents to ensure compliance, track usage, and generate comprehensive reports for regulatory bodies, saving significant time and reducing risk.

Real-world use cases

Snowflake Intelligence can be applied across various industries to drive significant business outcomes.

▲ BFSI (banking, financial services, and insurance)

▲ Manufacturing

- **Predictive maintenance:** Engineers at companies like Siemens Energy use document chatbots built on Cortex AI to get instant answers from hundreds of thousands of technical manuals and operational reports, reducing equipment downtime and speeding troubleshooting.
- **Supply chain optimization:** Manufacturers can analyze inventory levels, supplier performance, and demand forecasts by asking natural language questions, allowing them to react instantly to stock shortages or changes in market demand, thereby optimizing operations.
- **Quality control:** By analyzing unstructured data from images, sensor data, and production line reports, AI agents can identify product defects or process anomalies in real-time, improving overall product quality.

▲ Healthcare

- **Clinical data analysis:** Healthcare providers can securely analyze vast patient records, research papers, and clinical trial data using natural language queries to identify treatment trends, assess patient outcomes, and support research efforts.
- **Operational efficiency:** AI agents can help manage staffing, resource allocation, and patient flow by analyzing operational data and providing insights instantly to hospital administrators, saving labor hours and improving service delivery.
- **Drug discovery and research:** Researchers can use Snowflake Intelligence to quickly synthesize information from thousands of research documents, accelerating the drug discovery process by identifying relevant data points that would be difficult to find manually.

Guide to set up Snowflake Intelligence and start using it

Snowflake Intelligence is a ready-to-use, standalone application, so no extensive infrastructure setup is required. The core steps involve data preparation and configuration within your existing Snowflake environment.

1. **Ensure data is in Snowflake:** All structured and unstructured data you want to query must reside within the Snowflake AI Data Cloud, which often involves migrating data using tools like SnowConvert AI or using features like Snowflake Openflow for data ingestion.
2. **Define a semantic model (optional but recommended):** To ensure highly accurate and business-context aware answers, define semantic views that map technical table/column names to business-friendly concepts (e.g., "sales" instead of "tx_amt").
3. **Configure Cortex Search (for unstructured data):** For analyzing documents (PDFs, text files, etc.), configure Cortex Search services to create a searchable index or use features like AI_EXTRACT for schema-aware extraction.
4. **Access Snowflake Intelligence:** Navigate to the dedicated portal at ai.snowflake.com. The service is also available via integrations with external platforms such as Microsoft Teams and Microsoft 365 Copilot.
5. **Leverage built-in governance:** Snowflake Intelligence automatically inherits your existing Snowflake Horizon security and governance policies (Role-Based Access Control, data masking, etc.), so users only see authorized data.
6. **Start conversing:** Begin asking questions in natural language. The agent will process the query, determine the necessary steps (generate SQL via Cortex Analyst, search documents via Cortex Search), execute the tasks, and present a trusted, cited answer.

For developers, the Cortex Agent APIs and the managed Model Context Protocol (MCP) server enable building custom, context-rich AI agents and integrating Snowflake Intelligence capabilities into existing applications.

Best practices

- **Begin with high-impact use cases:** Start with a specific business scenario that can demonstrate immediate value, rather than attempting to overhaul all analytics workflows at once.
- **Ensure data quality:** The quality of the insights depends on the quality of your data. Ensure your data is well-structured and clean.
- **Empower users:** While the interface is intuitive, training users to phrase effective questions can yield more accurate, actionable results.
- **Leverage existing assets:** Snowflake Intelligence can import context from other BI tools, such as Tableau, helping jump-start and improve semantic models.

What sets Zensar apart in your Snowflake journey

Zensar's ZenseAI platform accelerates Snowflake modernization initiatives by providing Gen AI-powered tools to transform legacy ETL and EDW workloads. Data accelerator runs natively on the Snowflake Data Cloud, automating code conversion, metadata harvesting, and dynamic pipeline generation for migrations from SAS, SSIS, Ab Initio, Informatica, and BODS. Pre-built Snowflake data models, workflow templates, and industry-specific KPIs help reduce time-to-market by 30%-40%. Gen AI and agentic AI capabilities enable multi-agent orchestration, intelligent recommendations, and tailored AI solutions, empowering faster migrations,

improved data quality, and highly scalable transformation programs for Snowflake customers.

Summary: The future of intelligent data platforms

Snowflake Intelligence represents a paradigm shift from data storage to data activation. By embedding AI capabilities directly into the data platform, Snowflake empowers organizations to:

- Democratize access to insights
- Accelerate AI adoption without infrastructure complexity
- Ensure governance and compliance at scale

As enterprises navigate the next wave of digital transformation, platforms like Snowflake will be instrumental in turning data into a strategic asset, not just for analytics, but for intelligent decision-making.



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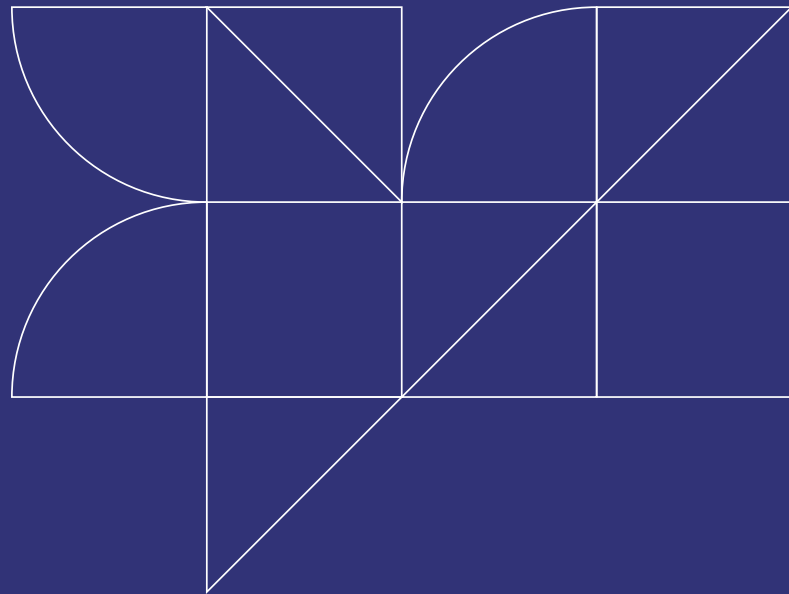
Industry: Data and AI Solutions

Sources:

[Snowflake for AI | Enterprise AI Services](<https://www.snowflake.com/en/product/ai/>)

<https://www.snowflake.com/en/product/snowflake-intelligence/>

<https://zensar.com/tech-services/artificial-intelligence/zenseai/zenseaidata>



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