

The intelligent enterprise advantage:

Turning data

into trusted, AI-driven decisions

Capgemini  ×  ×  snowflake

Executive summary

Enterprises are under unprecedented pressure to make faster, better decisions in a world defined by supply chain volatility, geopolitical risk, and rapidly shifting customer expectations. Yet most organizations remain constrained not by a lack of data — but by data they can't trust.

Traditional approaches that separate ERP core systems from analytics platforms create latency, complex integration, data duplication, and fragmented governance resulting in data that may look correct technically but is not by default reliable for downstream consumption by AI or analytics. Even modern data and AI platforms, and the organizations that implement them, still follow this outdated pattern.

The window for enterprise AI authority is getting smaller every day. Those leading through streamlined transformations are moving faster by ensuring the data driving their AI initiatives are business-ready.

The opportunity — and the obligation — is to close the loop. Not just to analyze what happened, but to simulate what could happen, recommend what should happen, and automate the next best action with human oversight where it matters. This is where AI Agents become transformative: not as a technology layer, but as an operational capability grounded in data you can act on.

The newly announced integration between SAP Business Data Cloud and Snowflake enables the foundation to close this critical data gap. Through SAP Snowflake, an SAP solution extension, and SAP Business Data Cloud Connect for Snowflake, enterprises can now combine semantically rich SAP data with Snowflake's unified data, AI, and collaboration capabilities through bidirectional, zero-copy data sharing — creating a single, governed, AI-ready business data fabric spanning SAP and non-SAP data without costly replication and latency.

But technology integration alone does not make AI real; Business-Ready Data does. As part of Capgemini's Insights and Data business line, Syniti ensures that SAP and non-SAP data is of high quality, accurate, governed, and aligned to business outcomes before it powers analytics, AI models, or automated decisions.

On this foundation, Capgemini clients can access their full technology potential and realize their desired outcomes sooner — with less risk, greater trust, and technology solutions that scale and flex with their business.

In the following pages, you'll see the power of SAP and Snowflake zero-copy integration at work. First, through a hypothetical lighthouse supply-chain use case, then to an enterprise-wide use case portfolio, and finally we'll share a walk through of the solution architecture, Capgemini's role, and the straightforward simplicity of our pragmatic engagement blueprint.



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01.

Lighthouse use case: risk-aware supply chain and production planning

| 1.1 The business challenge

Consider a global manufacturer with multiple plants across several regions, a diversified supplier base, and contracts with large customers across Europe, the Americas, and Asia. The company's core operational data—customer orders, production orders, bills of material, routings, inventory, and logistics documents—reside in SAP S/4HANA and connected systems. Yet many external factors heavily influence the feasibility and profitability of its plans: geopolitical crises, trade restrictions, port congestions, labor strikes, and severe weather events.

In such an environment, production planning and material flow decisions are often based on incomplete information. Planners work with periodic snapshots, spreadsheets, and isolated risk signals that reach them late. When disruptions occur, the company reacts with expedited shipping, manual rescheduling, overtime, or excess safety stock, driving up costs and undermining service-level commitments.

1.2 Target solution vision

The new SAP Business Data Cloud–Snowflake integration enables a different approach to planning and execution that enables proactive planning and risk mitigation, keeping costs in check and helping manage customer expectations.

The SAP and Snowflake Approach

Unified internal view of reality

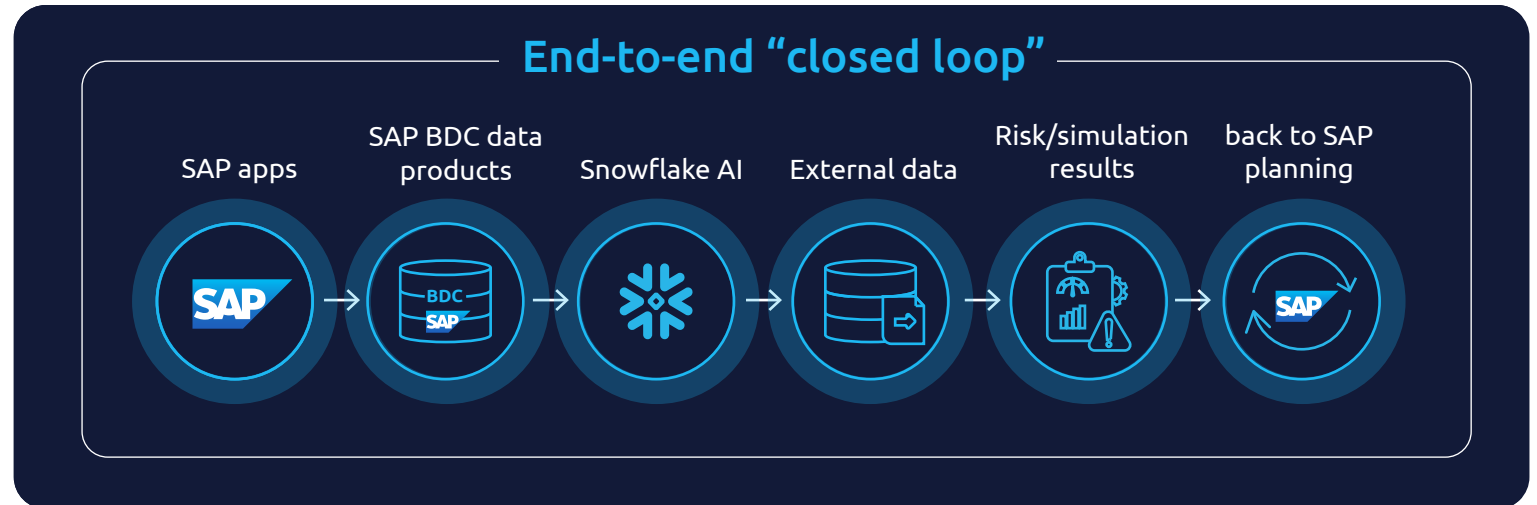
SAP Business Data Cloud (SAP BDC) creates and aggregates semantically rich Data Products from SAP systems, such as customer contracts and orders, plant and material masters, production orders, and inventory positions. This provides a governed, curated view of the internal supply chain state, updated in near real time.

Integrated external risk picture

Snowflake ingests and consolidates non-SAP and external data, including product telemetry, logistics events, carrier and port status, macro-economic indicators, news feeds, and weather data. Using its AI capabilities, the manufacturer can deploy models that predict delays, supply disruptions, and demand shifts, and simulate the impact of these events on material flow and production plans.

Closed-loop, AI-driven recommendations

Predictions and recommended scenarios generated in Snowflake are shared back as Data Products accessible through SAP Business Data Cloud. SAP planning applications and digital assistants can then surface risk scores, scenario metrics, and recommended actions directly to planners within their usual workflows. Joule Agents can be triggered to implement the simulated scenarios into the standard processes. E.g. create a new production plan, trigger a maintenance order or supply new raw material from a different supplier.



1.3 Example scenarios

1 Weather-driven logistics disruption

A severe storm is forecasted for a region hosting a major seaport, with high likelihood of port closure or heavy delays. Weather, geospatial, port data feeds along with other operational data assets land in Snowflake, where AI models flag likely disruptions on specific dates and routes. By combining this with SAP Business Data Cloud data on open sales orders, shipments, and plant capacities, the system identifies which customer deliveries and production plans are at risk.

The system proposes alternative routing, repositioning of inventory, or shifting production between plants, along with estimated impacts on cost and service levels. Planners use SAP-embedded applications, Insights Apps or copilots to review scenarios, compare trade-offs, and approve the preferred plan, which is then executed through standard SAP processes.

2 Geopolitical event impacting suppliers

Geopolitical tensions escalate in a country where Tier-2 suppliers provide critical components. External risk signals and sanctions data along with supplier sentiment scores are processed in Snowflake and mapped to suppliers, parts, and bills of material using SAP Business Data Cloud's Supplier and Material Master Data Products. The system simulates potential lead-time extensions, capacity losses, as well as cost changes, and generates recommended mitigation plans, such as activating alternative suppliers, changing sourcing splits, or re-sequencing production.

Decision-makers can see which customer contracts and product lines are affected, evaluate financial and operational impacts, and choose mitigation strategies that best protect revenue, margins, strategic relationships, and customer satisfaction.

3

Demand spike from a strategic customer

A strategic customer significantly increases orders for a high-margin product range. Sales and order data from SAP Business Data Cloud is combined in Snowflake with geospatial, market, and behavioral data to characterize the demand pattern. AI models assess capacity and inventory constraints, simulate trade-offs across customers and regions, and suggest a portfolio of actions—e.g., reprioritizing production, temporarily relaxing service levels for lower-priority segments, and adjusting replenishment policies.

Within SAP planning tools, planners see suggested production sequences, material allocations, and service-level implications, allowing them to quickly align operations with commercial priorities.

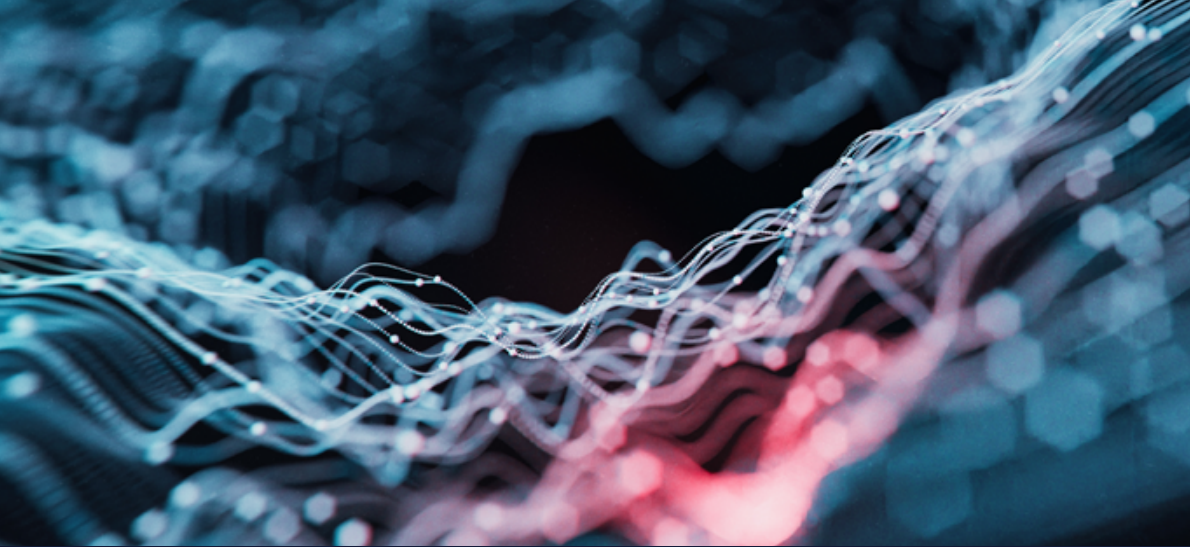




1.4 Business outcomes

While results depend on the individual organization, we have seen clients achieve the following:

- ▶ Shorter re-planning cycles—from days to hours—by giving planners near real-time, context-rich scenarios instead of manual error-prone and unreliable reports.
- ▶ Lower logistics and inventory costs through earlier detection of risks and proactive fact-based plan adjustments.
- ▶ Higher service levels and stronger adherence to customer contracts by prioritizing decisions based on actual business impact.
- ▶ Increased planner productivity and higher quality outcomes, as standard SAP tools surface AI-generated insights rather than forcing users into parallel tools and spreadsheets.



02.

Broader use case portfolio enabled by combination of SAP and Snowflake

Beyond the lighthouse scenario from above, the SAP Business Data Cloud and Snowflake foundation supports a wide portfolio of AI-driven use cases across the enterprise.

2.1 Intelligent supply chain and operations

The zero data copy functionality between SAP and Snowflake allow near real time simulations and predictions on a combined dataset, With AI agents to actively trigger workflows and create proactive insights that reflect in actions on the system of records we are able to:

- ▶ Optimize **dynamic safety stock procedures** that adjusts inventory levels based on external risk indices, just-in-time inventory, demand signals, and lead-time variability.
- ▶ Enable **sustainability-aware planning** incorporating emissions factors and alternative transport or sourcing options to balance cost, service, and sustainability goals.

2.2 Finance, risk, and performance management

- ▶ **Continuous planning and forecasting** leveraging SAP financial and operational data with external data in Snowflake, enabling near real-time forecast adjustments.

By accessing live SAP and external datasets without replication, finance teams can continuously recalibrate plans based on actual performance and market signals—improving forecast accuracy and business agility. The zero-copy architecture eliminates latency and reconciliation gaps, enabling truly dynamic, always-current planning and simulations.

- ▶ **Liquidity and working capital optimization** through predictions of cash inflows (bank statements, reconciled to SAP) and outflows based on order, billing, and payment behaviors.

Organizations gain a holistic, real-time view of cash positions by combining internal transactions with external banking data without data movement. This enables more precise cash forecasting and proactive working capital decisions while reducing integration complexity and cost.

- ▶ **Early risk detection** by combining internal exposures with external risk, credit, and geopolitical data, feeding risk scores into SAP risk and compliance processes.

The ability to seamlessly blend trusted SAP data with continuously updated external risk signals allows earlier identification of emerging threats. Snowflake's AI capabilities enable continuous simulations and predictions based on changing input parameters.

2.3 Customer, sales, and service

- ▶ **Customer 360 and churn prediction** by uniting SAP transaction history and service tickets with unstructured data such as call transcripts and external behavioral data.

Businesses can create a richer, AI-ready customer view by integrating structured and unstructured data without duplication, unlocking more accurate churn predictions and personalized engagement.

- ▶ **Intelligent pricing and promotion analytics** using combined SAP and external data to simulate price and promotion impacts on volume and margin.

Real-time access to internal sales data and external market signals enables more precise scenario modeling and faster pricing decisions. With zero-copy integration, organizations can continuously optimize pricing strategies based on current demand, competition, and cost dynamics—driving both revenue growth and margin improvement.



03.

Solution and architecture overview

3.1 Conceptual architecture

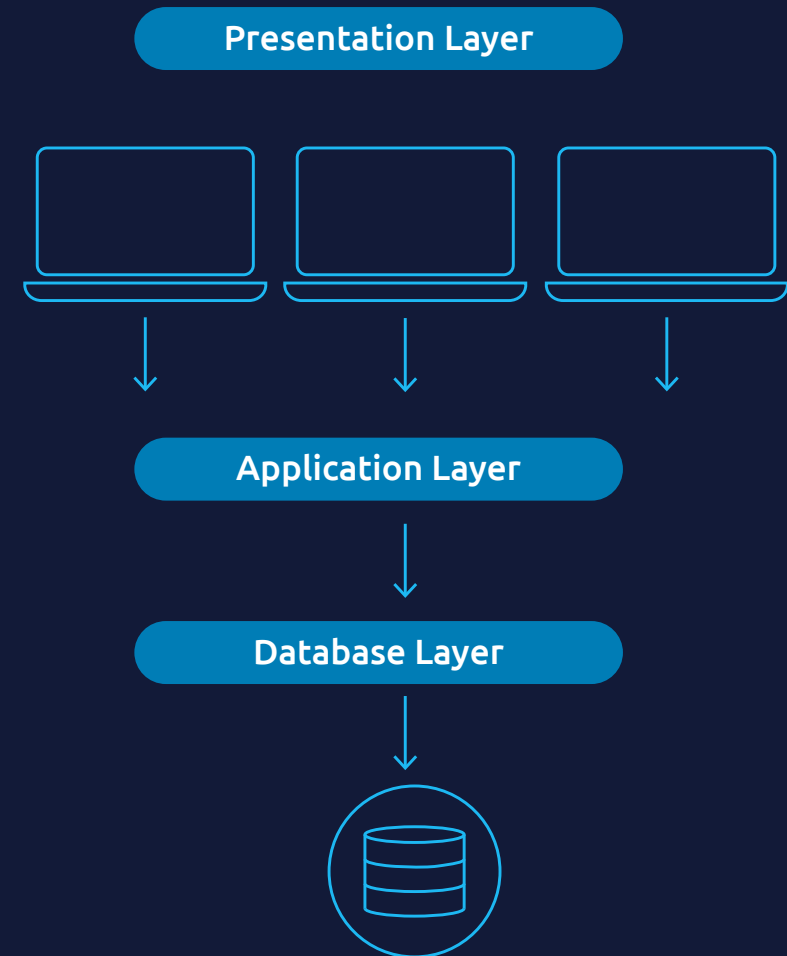
At a conceptual level, the architecture has three main layers:

- 1 SAP Business Data Cloud as the business data fabric
- 2 Snowflake
- 3 Bidirectional, zero-copy integration

SAP Business Data Cloud as the business data fabric

- 1** SAP Business Data Cloud provides a governed, semantically rich layer over SAP applications, turning operational data into reusable data products. These products carry business meaning, e.g. customers, contracts, materials, plants, or cost centers—and governance policies, which can be shared consistently across consuming applications and analytics.
- 2** Snowflake offers a unified platform for data engineering, analytics, machine learning, and generative AI, including components such as Snowpark, Cortex, and external data via marketplace offerings. It is designed as an AI-ready data platform across clouds and regions, enabling teams to build and deploy AI applications and agents at scale.
- 3** Bidirectional, zero-copy integration between Snowflake and SAP, offered as an SAP Business Data Cloud solution extension, and SAP Business Data Cloud Connect for Snowflake provide data sharing between SAP Business Data Cloud and Snowflake. This allows Snowflake workloads to access semantically modeled SAP data in near real time and enables SAP Business Data Cloud to consume AI-enriched results from Snowflake, without data replication.

Standard SAP L1 architecture



3.2 Key architectural principles

The following design principles underpin our approach:

Semantics first

Preserve SAP business semantics (objects, hierarchies, currencies, units) in SAP Business Data Cloud and expose them to Snowflake, instead of rebuilding logic downstream. This improves AI explainability and greatly reduces the time-to-value while building these use cases.

Business-Ready Data as foundation for AI

All data in SAP and Snowflake should be harmonized, quality assured, business process related, relevant and accurate. As opposed to a purely technical data load, the best practice is to follow a Business-Ready Data approach to achieve the right foundation for decision support and agentic AI.

SAP ADMM by Syniti facilitates the data management workstream specifically to achieve Business-Ready Data. Key elements of the SAP ADMM by Syniti approach include a robust data management methodology, an end-to-end data management platform, integration to the SAP Agent-Led Toolchain, and an iterative data validation process with business stakeholders.

Zero-copy by default

Use live data sharing rather than large-scale replication, to reduce latency, cost, and governance complexity. And, more critically, to allow business users to adapt to changing situations as fast as they happen in the real world.

Closed loop into processes

Predictions and insights flow back into SAP processes, not just dashboards. This is essential for turning AI into operational impact and business value.

Open ecosystem

Leverage the full product scope of Snowflake, including the marketplace, data and models as well as SAP's broader analytics and planning portfolio, while maintaining a coherent governance model across platforms.





04.

Why Capgemini is the ideal partner

4.1 Integrated SAP and Snowflake expertise under one roof

Under its Insights & Data global business line, Capgemini has assembled the most sought-after data consultants, cloud engineers and AI specialists in any single organization. Rather than treating SAP and Snowflake as separate technology towers, Capgemini designs and implements unified architectures where SAP Business Data Cloud and Snowflake form a coherent business-ready data fabric. This streamlines the partnership between ERP and data platform teams, accelerating delivery of cross-domain use cases.

Capgemini doesn't just advise — it delivers. With expertise spanning data strategy, enterprise architecture, AI development, and managed services, Capgemini provides the end-to-end ownership that turns technology potential into real, scaled outcomes.

4.2 Global migration expertise and unmatched data quality, powered by Syniti

Business-Ready Data is a non-negotiable requirement for trustworthy AI, analytics, and automation. A leader in enterprise data transformation, Syniti delivers Business-Ready Data through its Data First Approach to ensure enterprise data is aligned to business processes, governed with enforceable rules, and continuously maintained for operational use.

Syniti delivers Business-Ready Data through SAP ADMM, an end-to-end enterprise data management platform with built-in business and IT collaboration, and the only SAP solution extension for data management.

Through SAP ADMM by Syniti, business leaders realize successful transformations, ongoing data quality aligned to the business and Clean Core, and the trusted data foundation required for analytics and AI use cases.

This completes the third key component of the SAP plus Snowflake ecosystem, where SAP defines business objects and semantics, Snowflake provides scale and AI capabilities, and Syniti ensures that the underlying data is trusted and usable in real business operations. In concert, these enable organizations to move from data access to trusted, business-ready, AI-driven execution — ensuring flexibility, scalability and long-term ROI.





4.3 Industry depth with ready-to-deploy assets

Capgemini has a long track record of delivering successful SAP-centric transformations and data programs across manufacturing, consumer products, retail, energy, life sciences, and financial services. Over time, this has resulted in industry-specific data models, KPI frameworks, and accelerator assets that can be applied to SAP Business Data Cloud and Snowflake initiatives.

In manufacturing and consumer products, Capgemini brings reference architectures for control towers, demand sensing, and integrated business planning that can be re-platformed on the new foundation. These assets reduce time-to-value by providing pre-defined data structures, logic, and dashboards that can be tailored to each client's context.



05.

Engagement blueprint: from vision to value

5.1 A phased journey

Capgemini applies a consistent, pragmatic, phased approach to all SAP Business Data Cloud and Snowflake initiatives:

- 1 Vision and value framing**

A focused workshop with stakeholders from business, IT, and data/AI, alongside experts from Capgemini, SAP, and Snowflake. During this workshop we identify priority domains, shortlist high-value use cases, and define value hypotheses and target architecture.
- 2 Foundation and lighthouse use case**

New technologies often miss the right business cases and mid-term funding commitments. Together with our partners, we establish the core SAP Business Data Cloud and Snowflake connectivity. Apply Syniti's Business-Ready Data approach to profile, cleanse, govern and align priority data objects, ensuring they are ready for business processes and AI-driven decisions. Deliver one or two lighthouse use cases to validate the architecture and demonstrate tangible value with the very first projects. That ensures long-term funding and a basis for success.

3 Scale-out and industrialization

Expand to additional geographies, business units, and use cases, reusing data products and components where possible. Implement robust data governance, MLOps, and FinOps practices to manage data, models, and cost. Embed AI outputs into SAP user interfaces and digital assistants to drive adoption.

4 Operate and continuously innovate

Transition into a managed services model where Capgemini operates the SAP and Snowflake data and AI landscape, monitors models, and continuously refines use cases. Our proven AI Fabric approach results in continuous role outs, revalidation of existing data products and AI scenarios, as well as further innovation with new functionalities and rising demand.

5.2 Success factors and common pitfalls

We have consistently observed three factors that drive all successful projects:

- **Business-anchored sponsorship** that owns value realization, not just platform deployment. Business first, technology second.



- **Business ready data as a core discipline** is a structured approach to preparing data for transformation and AI, brought forward in the lifecycle, ensures data is business-ready, reduces cutover risk, and enables the organization to operate with confidence from day one.
- **Joint ways of working** across SAP teams, data platform teams, and business stakeholders, to avoid siloed decision-making and duplicated efforts.

Common pitfalls include treating the initiative as a pure technology project, underestimating the effort required for data quality and semantics, and neglecting change management for planners and frontline users. Capgemini's experience across multiple large-scale SAP and data programs helps clients proactively avoid these issues.

06.

Conclusion and next steps

The integration of SAP Business Data Cloud and Snowflake's AI Data Cloud marks a decisive step toward a truly unified, AI-ready enterprise data foundation. By eliminating the need and related costs, for complex ETL and data duplication, and preserving SAP semantics across AI workloads, the SAP and Snowflake partnership allows enterprises to move from reactive reporting to predictive and prescriptive decision-making powered by trusted business data.

Capgemini, with its integrated SAP and Snowflake capabilities and deep industry expertise, combines platform innovation with a structured approach to data management. Syniti complements this approach

by bringing data readiness to the forefront of transformation, ensuring data is business-ready, reducing cutover risk, and enabling organizations to operate with confidence from day one. enabling organizations to establish a trusted data foundation and translate this potential to concrete business outcomes.

Together with SAP and Snowflake, Capgemini guides clients from an initial lighthouse use case through to industrialized AI-enabled operations across multiple processes like supply chain, finance, customer, and beyond.

For more information, please contact:



Frank Gundlich

Global Head of SAP Data & AI
Capgemini

Frank Gundlich is a global data and analytics executive with more than two decades of experience shaping enterprise data, analytics, and AI strategies at scale. As Global Head of SAP Insights & Data at Capgemini, he leads large, multi-country teams delivering business-critical transformations across SAP Analytics, data platforms, AI/ML, and performance management. His work consistently bridges strategy and execution—connecting board-level ambition with architectures that work.

Frank is deeply rooted in the SAP ecosystem and has played key roles across advisory, product, and delivery functions at SAP, Datavard, and BASF. He is a recognized speaker at major industry events such as SAP Sapphire, SAP TechEd, and DSAG, and a trusted advisor to CFOs, CIOs, and CDOs navigating data-driven transformation. In the context of SAP Business Data Cloud, Frank brings a pragmatic yet visionary perspective on how enterprises can unlock value through the combined strengths of SAP, Databricks, Syniti, and Capgemini—turning complex data landscapes into governed, scalable, and insight-ready foundations for AI-powered decision-making.



Edy Sardilli

Senior Alliance Director
Snowflake

Edy Sardilli is a senior technology business and ecosystem leader with extensive experience in enterprise cloud, data, and artificial intelligence transformation. Across his career, Edy has held senior strategic business development and alliance roles at leading technology companies, including Google Cloud, SAP, VMware, Cloudera, and Pivotal Software. In these roles, he has supported global enterprises in advancing cloud adoption, modernizing data architectures, and integrating AI-driven capabilities within complex SAP-centric environments.

As an author and thought leader, Edy regularly contributes to industry discourse on generative AI, responsible AI adoption, and enterprise innovation.



Marc Geall

Head of Product Technology & Experience,
Data & Analytics,
SAP

Marc Geall is a senior executive at SAP, currently serving as Head of Product Technology & Experience for SAP's Data and Analytics portfolio. In this role, he is responsible for shaping how SAP data and analytics technologies are designed, built, and experienced, with a strong focus on helping organizations become truly intelligent enterprises.

Marc brings deep cross-industry expertise spanning enterprise software, data platforms, and financial services. Over his career at SAP, he has held several senior leadership roles, including Chief Operating Officer for SAP's Data & Analytics organization, as well as executive positions across strategy, product, and platform organizations. His work centers on connecting business data, advanced analytics, and AI to drive trusted, real-world decision-making at scale.

About Capgemini

Capgemini is an AI-powered global business and technology transformation partner, delivering tangible business value. We imagine the future of organizations and make it real with AI, technology and people. With our strong heritage of nearly 60 years, we are a responsible and diverse group of over 420,000 team members in more than 50 countries. We deliver end-to-end services and solutions with our deep industry expertise and strong partner ecosystem, leveraging our capabilities across strategy, technology, design, engineering and business operations. The Group reported 2025 global revenues of €22.5 billion.

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About SAP

As a global leader in enterprise applications and business AI, SAP (NYSE: SAP) stands at the nexus of business and technology. For over 50 years, organizations have trusted SAP to bring out their best by uniting business-critical operations spanning finance, procurement, HR, supply chain, and customer experience.

For more information, [visit www.sap.com](http://www.sap.com)

About Snowflake

Snowflake is the platform for the AI era, making it easy for enterprises to innovate faster and get more value from data. More than 11,000 companies around the globe, including hundreds of the world's largest, use Snowflake's AI Data Cloud to build, use and share data, applications and AI. With Snowflake, data and AI are transformative for everyone.

Learn more at visit www.snowflake.com

