Fivetran snowflake®

The ultimate guide to SAP data integration

This ebook provides a comprehensive guide to integrating SAP data with Snowflake AI Data Cloud using Fivetran, empowering your enterprise with enhanced decision-making, operational efficiency and customer satisfaction.

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Executive summary

As organizations plan their migration from SAP ECC to SAP S/4HANA ahead of the 2027 sunset, they face a range of challenges, from data integration to modernizing their infrastructure. While a three-year timeline might feel sufficient, the complexities of selecting the right partners, deployment strategies and ensuring proper training will consume much of this period.

Companies are allocating tens to hundreds of millions of dollars to support this transformation, with leaders looking to leverage cloud-native technologies to enhance their data systems beyond SAP's traditional reporting capabilities. This approach not only reduces the S/4HANA footprint but also saves costs and adds value.

Although SAP is used by 99 of the world's 100 largest companies, integrating SAP data securely into cloud-native systems for real-time analytics is a complex and costly endeavor. The challenge lies in centralizing data outside of SAP systems, as SAP data is often restricted by licensing agreements and locked behind application layers or infrastructure. The vast and intricate nature of SAP further complicates this process, leading to limited operational agility and delays in decision-making due to outdated information.

The strategic value of SAP data

SAP ERP systems are pivotal in orchestrating core business processes, but unlocking their full potential requires overcoming substantial integration hurdles. These systems are often considered crucial to enterprise IT, containing valuable data that can drive strategic decisions and operational improvements. Yet, without real-time access and effective data integration strategies, businesses fail to leverage this asset to its fullest, missing out on critical insights that could propel their operations forward.

77%

of enterprises lack real-time access to ERP data, leading to poor business outcomes and lost revenue.

Source: Dimensional Research

Integrating SAP ERP data with cloud-native systems offers several **strategic advantages:**

Enhanced decision-making: Centralizing SAP data with other business intelligence sources provides a comprehensive view that supports more informed decision-making across all levels of the organization.

Increased productivity: By automating data extraction and integration processes, companies free up valuable resources, allowing teams to focus on strategic tasks rather than manual data handling.

Agility and competitive advantage: Real-time insights enable businesses to respond swiftly to market changes, identify emerging opportunities and avoid potential pitfalls by adapting strategies promptly.

Personalized customer experiences: A deeper understanding of customer data leads to more tailored products and services, enhancing customer engagement and loyalty.

Despite these advantages, many enterprises face **significant challenges** in SAP data integration:

Complexity of SAP systems: The intricate architecture and extensive customization options of SAP ERP systems make data extraction a challenging task.

Volume and variety of data: The vast amounts of data spread across various SAP modules and functions further compound the integration challenge.

Licensing restrictions: SAP's strict licensing terms often limit how data can be accessed and used, adding complexity to the integration process.

Impact on source systems: Effective integration requires minimal disruption to SAP operations, ensuring that core systems continue to run smoothly without performance degradation.

Resource constraints: Developing and maintaining data pipelines requires substantial resources, and finding skill professionals to manage these tasks is often difficult.

A global survey by Dimensional Research found that **99%** of businesses face challenges with SAP data integration, leading to delayed decisions and disruptions to core operations. Additionally, **71%** of companies reported decision-making delays, while **69%** postponed data analysis due to these data challenges.

Applications and use cases for SAP data across industries

Integrating SAP data can transform operations across various sectors — from manufacturing to retail to finance — by enabling:

- **Real-time operational insights:** Up-to-date data improves supply chain management, dynamic pricing and fraud detection.
- **Predictive analytics:** Anticipate market demands and customer behavior, optimizing inventory and enhancing financial planning.

Industry	Use case
Manufacturing	◆ Supply chain management ◆ Optimize inventory and order fulfillment ◆ Predictive and preventive maintenance
Retail	◆ End-to-end visibility of inventory and goods movement across network ◆ Implement dynamic promotions and pricing ◆ Personalized customer experiences
Finance	◆ Financial fraud detection and management ◆ Enhanced FP&A ◆ Personalized financial services marketing

Why choose Fivetran and Snowflake

With businesses struggling to maintain a steady flow of SAP ERP data, the need for a robust solution is clear. The sunsetting of SAP ECC and the consequent migration to SAP S/4HANA presents an opportunity to not only upgrade your ERP system, but also rethink how your data is managed and utilized. Fivetran and Snowflake offer a comprehensive solution to unlock the full potential of your SAP data, enhancing decision-making while ensuring compliance with industry standards and regulations.

Fivetran data movement platform

Fivetran is a fully managed, cloud-based ELT (Extract, Load, Transform) platform designed to tackle the challenges of replicating data from over 700 sources to any cloud-based destination, including SAP to Snowflake, with a 99.9% uptime guarantee. Tailored for various SAP architectures, Fivetran enables efficient, secure and real-time data replication, allowing businesses to make faster, more informed decisions without the hassle of manual integrations.

Fivetran's deep expertise in the SAP ecosystem has led to the development of unique features that simplify SAP integration. Its high-performance, low-impact change data capture (CDC) solutions offer a streamlined approach to handling data from SAP ECC and S/4 HANA systems. The platform normalizes data during ingestion (e.g., converting SAP dates to Snowflake dates), making it immediately ready for analysis.

Fivetran's suite of tools includes specialized connectors and features for license-compliant access and advanced data replication options for your SAP data. This support allows IT teams to focus on strategic initiatives instead of maintaining data pipelines.

Fivetran deployment options:

We offer both SaaS deployment and Hybrid deployment options to meet your business needs for scalable, efficient and reliable data replication.

- SaaS deployment: The platform is hosted in Fivetran's secure cloud environment.
- Hybrid deployment: The platform is hosted in the cloud but data is processed in your secure environment.

Key technical features with both deployment options include:

- Support for Runtime & Enterprise licenses: Fivetran can connect to SAP's application layer on Oracle and HANA rather than directly accessing the database.
- Special SAP data types & tables: Handle cluster/pool tables, support long text, transforming SAP dates, loading CDS Views, SAP archiving support.
- Fast application extraction: Quickly replicate from the SAP application layer into Snowflake. SAP Rise & SAP HEC supported.
- Direct and native integration: From SAP ERP to your destination, whether it's data warehouse, data lake or another destination.

Enjoy these features along with enterprise grade security and support for high-volume throughput.

Snowflake AI Data Cloud

Snowflake's AI Data Cloud helps enterprises manage and leverage data at scale. It provides a single, fully managed platform with optimized storage, elastic compute and built-in governance, powering workloads across any type or scale of data.

Snowflake's flexible compute and storage scaling offers better cost control compared to SAP. By reducing the need for SAP Analytics licenses, organizations can significantly lower their total cost of ownership (TCO) by performing analytics directly within Snowflake.

Once your SAP ERP data is in Snowflake, you can integrate it with your other data sources or use Snowflake's unique data sharing capabilities to enrich this data further. This integration helps eliminate data silos and creates a single source of truth, democratizing access to data across the organization. Snowflake's native integrations promote self-service analytics and AI initiatives by allowing data teams to leverage the BI, analytics and data science tools they are familiar with. This accelerates the discovery of business insights, strengthens analysis of KPIs and fosters AI collaboration, ultimately driving better decision-making to propel the business forward.

Fivetran + Snowflake

The combination of Fivetran and Snowflake provides your enterprise with substantial benefits. You can sync data accurately in real-time or on demand, without manual intervention, while effortlessly scaling to handle growing data volumes. Continuous, high-volume data replication from multiple sources to Snowflake consolidates your data into a single source of truth, ensuring you always have access to the most current data for better decision-making. Automating data pipelines will allow your organization to redirect resources to more strategic tasks. Furthermore, usage-based pricing models of both platforms help optimize your TCO. With robust security measures, including certifications for SOC 1 & 2, HITRUST and PCI DSS, Fivetran and Snowflake ensure your data is fully protected with end-to-end encryption and comprehensive compliance.

BUSINESS CHALLENGE

Cemex, a leading global construction materials company, needed to evolve how data was managed across its extensive network of over 1,800 facilities to achieve near real-time insights into its global sales and commercial operations. The company aimed to improve the scalability and flexibility of its data infrastructure, which was predominantly SAP-centric until 2017. They required a system that could handle a diverse range of data—from IoT sensors to supply chain information—and support advanced AI/ML models, all while shifting from daily batch-based data replication to more frequent updates.

KEY OUTCOMES USING FIVETRAN:

Cemex dramatically transformed their data management capabilities with Fivetran and Snowflake, resulting in:

- **Real-time data:** Rapid integration of over 4,000 SAP tables, facilitating real-time data streaming, processing and alerting.
- **Efficiency:** Reduction of data processing time from weeks to near real-time, enabling quick response to market changes and better supply chain management.
- **Automation:** A 90% decrease in the time and effort required for manual data ingestion setup and maintenance.
- **Data democratization:** Enabled 25% of its global workforce, over 10,000 users, to utilize data daily for decision-making, enhancing overall operational efficiency.
- **Sustainability:** Development of a CO2 data model to monitor and calculate emissions across all facilities, supporting Cemex's sustainability efforts and regulatory compliance.

READ THE FULL CUSTOMER STORY →

pitney bowes

BUSINESS CHALLENGE

Pitney Bowes, a global technology company, faced significant challenges with its data management systems, impacting its ability to effectively manage e-commerce, shipping and mailing operations. The main issues included siloed data, lack of scalability and inefficient tech spending, which were exacerbated during the COVID pandemic as online shopping and parcel volumes increased tenfold. This led to delayed package deliveries, affecting service level agreements (SLAs) and increasing reputational risks. Their legacy data infrastructure struggled under the load of handling data operations for 800 million packages per day, resulting in critical delays in data availability for decision-making.

KEY OUTCOMES USING FIVETRAN:

Implementing Fivetran and Snowflake transformed Pitney Bowes' data infrastructure, leading to several significant outcomes:

- **Efficiency in data handling:** Fivetran optimized data processes by replacing custom batch scripts and ETL processes, reducing the time for batch loads significantly (from 31 hours to under two hours for one, and from days to under an hour for another).
- **Real-time data access:** The integration enabled real-time data delivery across all facilities, vehicles and parcels, which was crucial for operational efficiency and meeting SLAs.
- **Predictive analytics and operational dashboards:** Fivetran facilitated the creation of predictive dashboards that improved labor scheduling, parcel volume handling and delivery estimations. This helped mitigate risks and improve delivery accuracy to 93%.
- **New revenue streams:** The improved data capabilities allowed Pitney Bowes to launch a "Guaranteed Delivery" program, leveraging predictive insights to provide delivery assurances and spot potential churn behaviors early.

READ THE FULL CUSTOMER STORY →

Transforming business with SAP data integration

Fivetran and Snowflake provide a comprehensive, high-performance solution for SAP data integration, enabling businesses to move beyond managing data pipelines and focus on uncovering valuable insights to drive meaningful business outcomes.

Book a live Fivetran demo. **If you are already a Snowflake customer, visit Snowflake Partner Connect to activate your Fivetran trial and see how easily you can unlock the full potential of your SAP data.**

Fivetran

Fivetran, the global leader in data movement, helps customers use their data to power everything from AI applications and ML models, to predictive analytics and operational workloads. The Fivetran platform reliably and securely centralizes data from hundreds of SaaS applications and databases into any cloud destination — whether deployed on-premises, in the cloud or in a hybrid environment. Thousands of global brands, including Autodesk, Condé Nast, JetBlue and Morgan Stanley, trust Fivetran to move their most valuable data assets to fuel analytics, drive operational efficiencies and power innovation.

For more info, visit Fivetran.com.

Start your free trial

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snowflake®

About Snowflake

Snowflake makes enterprise AI easy, efficient and trusted. Thousands of companies around the globe, including hundreds of the world's largest, use Snowflake's AI Data Cloud to share data, build applications and power their business with AI. The era of enterprise AI is here.

Learn more at snowflake.com (NYSE: SNOW)