AXA REACHES NEW HEIGHTS WITH ITS SMART DATA PLATFORM POWERED BY SNOWFLAKE'S DATA CLOUD

INSURANCE

COMPANY AXA Konzern AG

LOCATION Germany

SNOWFLAKE WORKLOADS USED

DATA ENGINEERING | DATA LAKE | DATA WAREHOUSE | DATA SCIENCE | DATA APPLICATIONS | DATA SHARING

In its 200-year history, AXA has become one of the biggest insurance companies in the world, and its reputation as a trusted partner is fundamental to its success. AXA Konzern AG is one of the leading insurance companies in Germany, generating €10.9 billion in revenue (2019) with 8,687 employees. AXA offers holistic solutions for private and occupational provision, health insurance, property and casualty insurance, and wealth management.

STORY HIGHLIGHTS:

Increased ROI
Powered by Snowflake, AXA's Smart Data Platform has experienced an ROI of at least 10%, and it's continuing to increase.

No more data silos
Snowflake's scalability and performance enabled the data science team to migrate their AI and machine learning (ML) workloads to Snowflake, eliminating data silos.

Control over its own data
Snowflake removes concerns for data security and ensures that AXA meets its own high and robust standards, which are more rigorous than government and EU regulations.

CHALLENGE:

Removing data silos and making data accessible to all
AXA has been generating and storing data since 1982, when the company set up its first databases. It has grown extensively over the years, acquiring and merging with other companies to extend its capabilities.

However, AXA had many data silos and data inconsistencies among its legacy on-premises systems. Point-to-point integration led to complex processes as well as data quality and governance issues. AXA's leaders decided they needed to create a future-proof, cloud-based platform as a single source of truth. The goal of AXA's Smart Data Platform was to centralize all of AXA's data across multiple sources, while maintaining high performance and making the platform concurrently accessible to hundreds of users running queries across the business. According to AXA's Head of Data and Analytics Platforms, Moritz Knorr, "In this era of digital transformation, we generate terabytes per month and expect that data volume to continue to sharply grow. Data workloads are getting more demanding with sophisticated ML and AI use cases being implemented."

> As part of our digital transformation, it was important for us to provide all users at AXA with the ability to make data-driven decisions. But that alone was not enough. We needed the ability to granularly manage access permissions to ensure compliance with AXA's demanding data governance standards, and Snowflake met that high requirement."
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> **—MORITZ KNORR,** Head of Data and Analytics Platform, AXA

SOLUTION:

Scalability to serve all data customers
Snowflake's Data Cloud on AWS is now at the heart of AXA's new Smart Data Platform. All raw data is stored in a Snowflake data lake as a landing zone. The data lake allows advanced data users to access any data and support a whole new array of use cases. Low storage costs in the cloud and Snowflake's automated compression

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10%
Value premium increased from Snowflake enabled ML capabilities

make this large data lake cost-efficient. This setup provides near-instant scalability, and the data team can focus on important business tasks because Snowflake requires near-zero maintenance and storage is optimized.

In addition, data is harmonized for a broader audience of consumers across the business. For AXA, Data Vault is the state-of-the-art data modelling framework that provides the most value. Data Vault has many benefits, but to work fluidly, it needs to be based on a high-performance data platform. With Snowflake's multi-cluster shared data architecture and optimized columnar storage format, AXA can use Data Vault while Snowflake's near-instant scaling takes care of the high demand for compute power. "With Snowflake we haven't faced any performance issues. We haven't thought about technical limitations for even a minute, even though we use the performance-hungry Data Vault method," said Knorr.

RESULTS:

Empowering data science workloads
Before, due to infrastructure constraints, risk assessment within actuarial work was limited to classical statistical methods. With Snowflake's separation of compute and storage that scales to any amount of users or data, AXA has started to develop advanced AI/ML models that leverage more data. According to Knorr, "Data Scientists at AXA were skeptical before migrating data and workloads from a manually optimized PostgreSQL database to Snowflake, but Snowflake's performance amazed them. The shift was expected to take months, but with the fast performance with no required tuning, users were quickly onboarded on Snowflake and the move took less than a month."

Today, most actuarial work and data science use cases are done on Snowflake, especially for property and casualty pricing and claims. Snowflake's scalability and performance enticed the data science team to migrate their workloads to Snowflake from external compute resources. Besides model training, Snowflake prevents new data silos from forming and makes it easy for business users to consume and act on ML-driven insights.

> **The most immediate impact from using Snowflake is our ability to enable new ML use cases. We can process more data more efficiently. The gross value added from these new capabilities has increased significantly. The increase in value premium is 10% currently."**
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> **—TINO VAN LESSEN,** Chief Data Officer, AXA

Mitigating security risk while controlling all its data
Snowflake's ability to reduce and mitigate security risk is an important value driver for AXA. "The operation model of Snowflake ensures regulatory compliance end to end and leaves no blind spot that'd otherwise be caused by fragmentation," said AXA's Chief Data Officer, Tino van Lessen.

> **Instead of our previous costly operational and technological efforts to enact high security standards, we're now empowered to reduce security risk through Snowflake."**
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> **—TINO VAN LESSEN,** Chief Data Officer, AXA

As an insurance company with sensitive client data, data security plays a major role for AXA. The company's internal regulations for data protection exceed the strict governmental regulations from the EU and Germany's BaFin. AXA is the sole data controller throughout the entire data lifecycle—a concept which is also core to Snowflake.

In an extensive evaluation, AXA experts analyzed Snowflake's enterprise-grade encryption, multi-factor authentication, automatic key management, and robust intrusion detection to ensure they would meet AXA's high standards. Snowflake removed concerns for data security and the challenge of protecting data assets from constantly evolving threats. Using Snowflake, AXA significantly reduced the security efforts for a platform of this scale.

FUTURE:

Consuming external data with Snowflake's Data Cloud
It's important for AXA's Smart Data Platform to never be locked in by one technology. Because Snowflake is cloud-agnostic, AXA sees its multi-cloud capabilities as a reassurance and a future roadmap to using the best technologies cloud providers have to offer.

AXA's Smart Data Platform is always evolving and the number of internal data sources will continuously grow. With all relevant data in the organization now accessible in a single platform, the next step is to incorporate external data. Snowflake Data Marketplace provides the technology to access such third-party data effortlessly and securely while reducing data engineers' operational efforts.

Going forward AXA intends to consume all external data using Snowflake Secure Data Sharing. Several of AXA's data providers have already switched to using this much easier technology for delivering data to AXA. Using Snowflake's Data Cloud, external data is always up to date and gives AXA's data consumers an edge over competition.