

UNIPER BOOSTS PERFORMANCE BY 10X AND ENABLES AI-POWERED COMMODITY TRADING WITH SNOWFLAKE

COMPANY	Uniper SE	GOALS	Democratize data analytics and accelerate machine learning
LOCATION	Düsseldorf, Germany	WEBSITE	uniper.energy
INDUSTRY	Energy		
EMPLOYEES	11,500		

SNOWFLAKE BENEFITS

- Cloud data platform that's built for complex data structures and machine learning
- Separate storage and compute with near-infinite scalability
- Extensive network of integrations for maximum interoperability

Uniper SE generates, trades, and markets energy across Europe and North America. The company's 34 gigawatts of installed generation capacity makes it one of Europe's largest power generators. To provide insights that support commodity traders and guide investment decisions under ever-changing market conditions, Uniper's market analytics team of 40 analysts and data scientists analyzes large amounts of data from more than 270 sources.

THE CHALLENGE: Maximizing data accessibility and scalability, reducing time to insight, and embracing AI

Seeking to democratize data analytics and build a centralized platform to power its machine learning models, Uniper began reevaluating its data infrastructure.

Ingesting data into a legacy on-premises system took weeks of planning and administrative effort. Limited support for semi-structured data combined with unreliable query performance prevented the exploration of high-volume data sets containing billions of time series events. "The system lacked interoperability, was not scalable, and could not cope with ever-growing data volume and variety of data formats to adequately support all our models and other analytical workloads," Uniper's Data Innovation Lead, Volodymyr Sorokoumov, said.

Time-consuming data management tasks multiplied across numerous data silos stifled innovation.

THE SOLUTION: A cloud data platform for advanced analytics and AI

Realizing the need for a modern data infrastructure, the team turned to Snowflake's cloud data platform.

Bulk loading of structured and semi-structured data from Microsoft Azure made Snowflake the single source of truth for Uniper's data. The Snowflake Connector for Python and Talend integration accelerated ETL for new data sources. Snowflake's multi-cluster shared data architecture delivered 10 times the performance at a 30% lower cost. "Snowflake's unprecedented performance, near-zero maintenance, and scalability supported every use case with a single-platform approach. This allows us to keep focus on the value creation process and to offer innovative products to our customers rather than dealing with infrastructure issues," Uniper's VP Data Delivery, Peter Boldt, said

Snowflake's built-in SQL functions and interoperability with machine learning tools—Databricks and Azure Machine Learning, in particular—increased innovation and boosted adoption of AI.

“Snowflake enables Uniper to capture market opportunities by fully leveraging all of our data alongside state-of-the-art machine learning.”

—VOLODYMYR SOROKOUMOV, Data Innovation Lead, Uniper

THE RESULT: AI-powered insights and decision-making

Ingesting everything into Snowflake eliminates data silos, reduces administrative effort, and frees up capacity for maximizing machine learning's impact. "Snowflake helps us scale our modeling capabilities, increase the precision and speed of existing models, and develop 25% more models with the same team," Uniper's SVP Market Analytics, Jörn Higgen, said. Advanced machine learning models—powered by Snowflake—make it possible for Uniper to leverage algorithmic strategies that automate aspects of the commodity trading process.

Architecting Uniper's market analytics platform on Snowflake democratizes data analytics for 200 users across all Uniper's commercial departments. Combining 250,000 time series in a single place and making them searchable and easily accessible fuels the internal data economy at Uniper and enables cross-functional collaboration for producing high quality and timely insights.

Contention-free data exploration allows the market analytics team to transform raw data into meaningful insights twice as quickly and with less effort.

THE FUTURE: Engineering autonomous trading applications

Building additional applications on Uniper's Snowflake-powered data platform is a top priority for Uniper. For example, the team plans to build an autonomous trading application to further streamline the commodity trading process.

Leveraging Snowflake Data Marketplace is also on the roadmap. "Efficiently integrating more data sets combined with seamless data sharing will fuel our internal data economy and further increase value to our business," Volodymyr Sorokoumov said.

WHY SNOWFLAKE



Single source of truth democratizes data analytics



Separate storage and compute boosts performance at a lower cost



Bulk loading from Microsoft Azure simplifies the data pipeline



Machine learning integrations streamline data science



Connectors, drivers, and programming languages maximize interoperability



Near-zero maintenance infrastructure reduces database administration

ABOUT SNOWFLAKE

Thousands of customers deploy Snowflake's cloud data platform to derive all the insights from all their data by all their business users. Snowflake equips organizations with a single, integrated platform that offers the only data warehouse built for any cloud; instant, secure, and governed access to their entire network of data; and a core architecture to enable many other types of data workloads, such as developing modern data applications.

Find out more at snowflake.com