



CUSTOMER STORY

Financial services digital transformation at a global scale





“ Databricks has provided one platform for our data and analytics teams to access and share data across ABN AMRO, delivering ML-based solutions that drive automation and insight throughout the company. ”

STEFAN GROOT

Head of Analytics Engineering, ABN AMRO

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ABN AMRO scales data-driven innovations across the enterprise with Databricks

As an established bank, ABN AMRO's ability to modernize its business was hamstrung by legacy infrastructure and data warehouses that complicated access to data across various sources and created inefficient data processes and workflows.

Today, Azure Databricks empowers ABN AMRO to democratize data and AI for a team of 500+ engineers, scientists and analysts, who work collaboratively on improving business operations and introducing new go-to-market capabilities across the company.

INDUSTRY

Financial services

SOLUTION

Lakehouse

TECHNICAL USE CASES

- Ingest and ETL
- Data analytics
- Machine learning



10x faster
time to market – new use cases deployed in 2 months



Dozens
of machine learning models delivered



Hundreds
of business and IT users



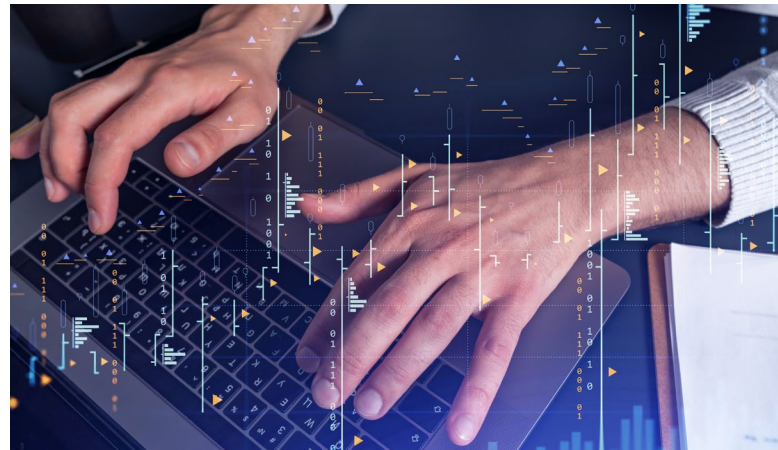
100
use cases planned for delivery over the coming year

The impossibility of tackling new ambitions with old technology

Over the years, ABN AMRO has grown to become the third-largest bank in the Netherlands, generating a wealth of data with hundreds of terabytes of data across hundreds disparate data sources – but their approach to data and analytics was far from where they needed it to be in order to realize their data-driven aspirations. Hampered by a centralized on-premises data warehouse and inefficient workflows, ABN AMRO struggled to transform into a truly digital bank that could realize the full potential of their data.

ABN AMRO's big data journey began with a single marketing intelligence data warehouse and then grew into a web of on-premises data warehouses focused on risk and finance support that were siloed and complex to navigate. This impacted the data team's ability to be productive, with data scattered across the company and a technology stack that was more of a blocker than an enabler. The data teams were unable to scale data innovation at the pace required by the business.

“In order to capitalize on the opportunity in front of us, we needed the ability to harness the data at our disposal and work in a different way than we are used to,” explained Stefan Groot, Head of Analytics Engineering at ABN AMRO. “Our organization suffered from highly disparate teams working in isolation without true collaboration and sharing of best practices. Although people were communicating, they weren’t working together around data as a cohesive organization, which created mass inefficiencies.”



Groot understood the importance of moving away from their traditional big data warehouse toward a domain-driven lakehouse and a data mesh approach where the creation and processing of data are federated across domains by using a proven, standardized platform. Following the data mesh principles, he created a central data platform team that builds and maintains the data-platform-as-a-service. “This way data teams can focus on creating value out of data and do not have to worry about the complexity of managing the underlying capabilities and infrastructure.”

He also envisioned an InnerSource culture among the hundreds of data professionals in which everyone works in a similar way, using the same technologies, contributing to the community with code and best practices, and sharing data insights seamlessly to support business goals. “By building a collaborative community of data professionals, we are able to break down organizational silos and accelerate our data strategy.”

A new mode of operation: Federating all data for all analytics

With the goal of transforming the bank into a data-driven organization, ABN AMRO shifted toward the Azure cloud for ease of use and scalability and was able to operationalize the Databricks Lakehouse Platform within a couple months. With Databricks, they are now able to accelerate innovation by introducing data-driven solutions that improve strategic decision-making, operational efficiency, cybersecurity and the overall customer experience.

Databricks eases access to multiple data sources and simplifies infrastructure management at any scale. Delta Lake allows ABN AMRO to create data pipelines that are not only fast but highly reliable – critical for analytics and data science teams who rely on complete and accurate data for decision-making, analytics and model training.

With data at their fingertips, ABN AMRO's data teams have been provided with a centrally managed data

platform leveraging Azure and Databricks components that help them access and share all data across the company for all analytics workloads. The data analysts are now able to easily perform analytics and transform data to feed business reports and dashboards via PowerBI.

The data scientists and machine learning engineers can also easily deploy models into production with MLflow. What used to be a highly disjointed and manual process filled with inefficiencies is now consistent and automated.

“MLflow has really helped us ensure all data scientists are delivering their packages in the same way,” said Stefan Boom, Solutions Architect for Advanced Analytics at ABN AMRO. “This has saved us an enormous amount of time throughout the machine learning lifecycle.”



Putting data into action: Banking digital transformation at scale

With Databricks and a new marketing automation stack, ABN AMRO is now able to react to customer preferences faster, allowing them to serve relevant product recommendations or deliver a relevant service to ensure satisfaction and reduce churn. Data-driven marketing spans multiple departments, including mortgage, insurance, banking and investments. By developing predictive models through Databricks, they are able to identify target prospects and ensure their marketing automation system delivers the right campaign to the right person.

Fraud detection is also a focal point for the bank. Through the use of machine learning, they can identify anomalous behavior to prevent fraudulent activity such as money laundering, which is a common means to fund terrorism around the world. “What we are able to do with Databricks is use data and ML to determine patterns that are common with money trafficking and laundering,” explained Peter Kromhout, a Lead Solution Engineer at ABN AMRO. “With these insights, we can then act immediately to stop these transactions from occurring.”

Business operations is also an area that is greatly benefiting from data and AI. From a customer support perspective, Databricks powers a client dashboard that provides a complete view of the customer and all their



assets and transactions in near real-time. This provides the insights their help desk and support teams need in an easy-to-consume format to better serve their customers. Additionally, they have built a model called the Operational Cockpit, which monitors operational efficiency from capacity planning to how many calls each support representative has made and identifies opportunities to improve efficiencies and reduce operational costs.

Unlocking data-driven opportunities faster, more cost-efficiently

Today, ABN AMRO has flipped their data strategy on its head. Rather than technology being the problem, now it's an enabler. Because of this paradigm shift, the data teams at ABN AMRO have been able to deliver nearly dozens of use cases across the business at lightning speeds – 10x faster than with their existing infrastructure. But that's just the tip of the iceberg. Groot estimates that they've only delivered 5% of the total use cases they have on their road map, with over 100 additional use cases, and even more machine learning models, planned over the coming months.

Most importantly, as the company grows so does their data team's ability to grow and support the business. "We are a truly agile organization now," expressed Boom. "There were things that weren't even possible before. Now we have the flexibility and capability to do anything."

With Databricks playing a pivotal role in their data-driven decision-making, ABN AMRO has opened the floodgates to empower over 500 team members across data engineering, analytics, data science and the business

to leverage data to experiment and build solutions that deliver on use cases across marketing such as targeted campaigns, improving decision-making for efficient logistics and operations, identifying additional fraud use cases related to false credit cards, loan applications and more.

"Databricks has changed the way we do business," concluded Groot. "It has put us in a better position to succeed in our data and AI transformation as a company by enabling data professionals with advanced data capabilities in a controlled and scalable way."

Looking ahead, Groot feels that in the coming year they will see exponential growth in models with 100+ additional use cases on the road map. Now that they have the technology stack, organizational structure and processes, and collaborative culture in place, they will be able to shift their focus to accelerating value creation across the enterprise.



“ By building a collaborative community of data professionals we are able to break down organizational silos and accelerate on our data strategy. ”

STEFAN GROOT

Head of Analytics Engineering, ABN AMRO



About Databricks

Databricks is the data and AI company. More than 5,000 organizations worldwide – including Comcast, Condé Nast, H&M, and over 40% of the Fortune 500 – rely on the Databricks Lakehouse Platform to unify their data, analytics and AI. Databricks is headquartered in San Francisco, with offices around the globe. Founded by the original creators of Apache Spark™, Delta Lake and MLflow, Databricks is on a mission to help data teams solve the world's toughest problems. To learn more, follow Databricks on Twitter, LinkedIn and Facebook.



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