

HEXAWARE

Data Modernization with Azure and Databricks for Credit Analytics

How a Global Bank Introduced Advanced Analytics
with Azure

Case study



Client

| Client

- Challenge
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- Benefits
- Summary

Convenience is the name of the game for our client. Operating in America, our client has a much-loved banking experience. Committing to putting people first in the digital world, its offerings encompass – IRAs, online banking, mobile banking, cross-border banking, foreign exchange services, and overdraft services – developed to drive simplified lending programs, intuitive digital journeys, and led by in-house innovation think tanks to enable success stories for the people it empowers.

45+ billion
in revenue



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Driving initiatives to let its customers bank smarter, our client has traversed towards ndew-age banking services that hold the power to transform lives. Some of its unique people-first initiatives include AI-powered personalized insights for customers, its apps and websites thoughtfully designed to be inclusive and accessible for all, and its simplified lending programs for businesses solving critical social problems.

ts challenge? Its massive 6+ Billion credit card offering surfaced data challenges. Its on-premises data ecosystem required a significant overhaul, as the vast data that flowed in from its credit card customers, partners, and external credit vigilance companies was ever-increasing. This transformation was crucial for its commitment to truly people-first digital credit services, as it involved leveraging this wealth of data to gain deep insights into customer behavior, preferences, and risk profiles.

Shifting to the cloud was the only way to go. However, they required a partner to help them enhance their data abilities for some additional pivots. These included:

- A modern outlook on data for credit services to build a truly people-first experience
- Comprehensive big data integration and management from internal and external sources

- A simplified data ecosystem for its teams to benefit from customer and product insights
- A cloud-first environment to drive robust data governance and regulatory compliance
- Advanced AI capabilities based on the latest analytics techniques

They set their sights on transitioning their data ecosystem to the Cloud, a journey that entailed a comprehensive set of actions. As they sought a partner to guide this digital transformation, they emphasized the need for a clear vision for their data modernization strategy and efforts. This encompassed developing a new data architecture, implementing compatible tech stacks to support their goals, and provisions for training to ensure optimal enterprise-wide data utilization.

Ultimately, they chose our **data and AI modernization services** to steer them towards success.

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Hexaware’s data modernization services ensured effortless scaling of their credit services, delivering a holistic solution aligned with their vision to put their customers’ needs first.

Carried out to evolve their credit suite, our implementation intricately brings out the benefits of our Data & AI services. Their transformation journey began with an initial assessment and modernization strategy for data platforms, seamlessly transitioning to the execution of data ecosystem migration to Azure cloud. We also offered comprehensive training activities designed to empower their teams with dedicated know-how on the power of their new data capabilities.

We worked closely with stakeholders to leverage the power of cloud-native technologies for optimized data workflows, efficient data management, and advanced analytics. For the evolved analytics platform, we also enabled them to use widely trusted AI capabilities based on data models built in collaboration with the most prominent global banks. Here’s how we made it happen:

Unified Data Management with Azure Cloud

We collaborated towards building a PCI-compliant solution to cater to its most critical business endeavor.

In adherence to the Payment Card Industry Data Security Standard (PCI DSS), we modernized their \$6B Card business through Azure Cloud platforms – Databricks and Azure Synapse.

Our initiative ensured unified data management across various business units, enhancing data security, scalability, and agility while complying with industry standards and regulations.

Data Modernization with Azure Synapse and Databricks

Our client’s key focus was shifting from traditional data architecture to modern cloud-based solutions, choosing Azure for its promising compatibility with Databricks and Azure Synapse.

When combined for a credit card business, Azure Synapse and Databricks offer a powerful suite of capabilities.

Adding to the dynamism, **Databricks – a data and AI platform**, offers a collaborative platform for storing, analyzing, and utilizing data within a lake house architecture while enabling seamless integration with other Azure services.

Azure Synapse – an analytics service that combines data warehousing and Big Data analytics, integrates SQL, Spark, Data Lake, Data Integration, and Data Explorer, providing a comprehensive enterprise analytics service.

Together, these platforms empower our client’s credit card businesses with robust analytics, data management, AI capabilities, and seamless integration with the Azure ecosystem for enhanced operational efficiency and strategic decision-making, enabling:

- Faster data processing across credit operations
- Data analytics for multi-variate credit reports
- Machine learning for new data modeling initiatives
- Predictive modeling for accurate credit risk profiling
- Real-time data insights for proactive risk management

PODs for First-priority Agile Programs

We used self-sufficient and agile Project on Demand (POD) teams to deliver system integration, regulatory reporting, and anti-money laundering programs. This approach helped us meet our client’s compliance standards faster, better, and with more team cooperation.

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SAS Report Conversion to PySpark

We drove a streamlined report conversion process from SAS to Databricks PySpark introducing modernized reporting, distributed computing, enhanced scalability, and improved analytics performance across its credit capabilities. We converted over 250 SAS scripts to Pyspark in a very short span of three months and retrofitted the scripts to align with a new data model in the cloud.

Additionally, as the Business users were using SAS reporting process, they needed to upskill to use PySpark. We conducted learning sessions and workshops to handhold users and accustom them with the new technology and process.

We enabled reporting with PySpark, a Python API for Apache Spark, a powerful open-source distributed computing system for big data integration and analytics you write Spark applications using Python, providing a familiar syntax for Python developers to work with large-scale data processing tasks.

Modernized with Meta-data Driven Frameworks

Our metadata-driven framework gave our client major benefits in efficiency and accuracy for PySpark report conversion and Oracle Informatica compliance.

We architected a meta-data driven framework to automate data replication, synchronization, audit control, and change handling, improving data management and its transition to the Azure solution.

Re-engineered Merchant Reports

Among other reports for credit portfolio insights and regulatory reports, our client predominantly used Fiserv for customer and product insights, which empowers real-time access to funds and information, tailoring offers and experiences to meet evolving customer expectations. Fiserv leverages its vast data through APIs, value-added products, partners, and automated CRM solutions to derive deep insights.

We introduced a meta-driven reporting framework, a common reporting framework which is flexible and robust. It played a crucial role in expediting the reports' migration to cloud. Close to 100 reports, including 25 Fiserv Nautilus reports and 62 Fiserv Merchant reports were automated through the reporting framework. Addition, deletion, and managing the reports was now easier for business users with configurable metadata.

Subsequently, the entire framework is guarded by a governance framework to monitor and control the report execution.

Streamlined Regulatory Compliance

Our metadata-driven framework was instrumental in successfully replicating on-premises data warehouse structures into the cloud. This resulted in seamless daily synchronization and efficient data integration.

We specifically implemented the metadata-driven framework for risk analytics and regulatory frameworks, focusing on replicating data from on-premises to the cloud daily. This framework facilitates audit and balance control functionalities and offers customization options to adapt to new changes, thereby ensuring regulatory compliance and operational flexibility.

Strengthening Data-driven Work Culture

We've ensured continuous support and engagement by providing ongoing workshops, training sessions, and regular interactions with business users and technical teams, facilitating a smooth transition and adoption of new tools and processes while effectively addressing challenges and optimizing workflows.

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Business Scalability and Performance

Through the Databricks data management and analytics platform, our client can efficiently process large volumes of transaction data, accelerating analytics and gaining deep, actionable insights for strategic growth.

Advanced Analytics for Credit and Payments

Our client enhances their people-first business proposition by leveraging real-time insights, enabling targeted customer engagement strategies and optimized credit risk management.

Symbiosis of the Cloud and Big Data for Risk

By automating fraud detection processes in the cloud, our client improves accuracy, drives proactive measures, and reduces operational overheads for risk management.

Business Intelligence-driven Credit Operations

Faster, data-driven decisions are made, allowing quick adaptation to market shifts and improving customer satisfaction with tailored credit card offerings.

Reduced Operation Costs by 20%

Streamlining operations and enhancing collaboration within the Databricks workspace has led to a 20% reduction in credit business operation costs while helping adapt quickly to changing business needs.

15% TCO Savings with the Cloud

Optimizing performance with cloud-native solutions has reduced TCO costs in tech stacks and licenses by 15%, providing scalability for faster decision-making in credit card payments.



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Our client’s core business values revolve around innovation, putting people first, and staying ahead of regulatory and security challenges. We embarked on a transformative journey built on three key pillars to bring their vision to life.

Firstly, with a revamped cloud-native data ecosystem, our client can handle more data easily. This helps them understand their business better and innovate with AI fluidly. They don’t have to worry about data overload anymore. Secondly, using advanced analytics-driven insights means our client knows what their customers want and when they want it. They can offer better services and products people need while becoming proactive against fraud and other risks. Lastly, the new cloud ecosystem makes everything faster and smoother for our clients. They can adapt quickly to changes in the market or new rules. It’s like having a superpower that keeps them ahead of the game.

To sum it up, our Data & AI Modernization services have helped them lay a strong foundation for growth by embracing innovation, putting people first, and staying prepared for whatever comes next.



About Hexaware

Hexaware is a global technology and business process services company. Our 32,000+ Hexawarians wake up every day with a singular purpose; to create smiles through great people and technology. With this purpose gaining momentum, we are well on our way to realizing our vision of being the most loved digital transformation partner in the world. We also seek to protect the planet and build a better tomorrow for our customers, employees, partners, investors, and the communities in which we operate.

With 54 offices in 28 countries, we empower enterprises worldwide to realize digital transformation at scale and speed by partnering with them to build, transform, run, and optimize their technology and business processes.

Learn more about Hexaware at <https://www.hexaware>

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