

HEXAWARE

Real-Time Data Platform for Global Energy Trade with Microsoft Fabric

Modernized Commercial Data Access

Case study



Client

| Client

Challenge

Solution

Benefits

Summary

Powering Global Energy Trade and Sustainability

A leading global energy company focused on responsibly trading and distributing energy across traditional, transitional, and renewable sectors. The enterprise operates across global markets with a growing focus on sustainability, low-carbon investments, and improving energy accessibility in underserved regions like sub-Saharan Africa.



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Building a Faster and More Connected Data Foundation

As the business expanded, the company needed a modern data foundation that could support faster decisions, improve operational visibility, and scale with growing commercial operations.

A Unified View Across the Business

The enterprise’s Commercial Line of Business was operating across SQL Server, Azure SQL, and Power BI on Fabric, creating an opportunity to unify fragmented reporting environments into a centralized platform.

Existing systems produced inconsistent metrics, duplicated records, and disconnected reporting views, delayed results making it difficult to establish a single trusted source of truth for analytics and business reporting.

Data Responsiveness, Scalability, and Governance

The enterprise also needed to modernize how data was processed and delivered to business users. Existing ingestion processes were not optimized for incremental or near real-time updates, resulting in refresh cycles of more than an hour.

At the same time, growing reporting workloads were placing strain on upstream systems, while increasing data volumes made it difficult to consistently meet strict latency SLAs of about 3 minutes.

During the assessment, Hexaware identified the absence of a structured medallion architecture, limiting their ability to efficiently organize, refine, and optimize data across bronze, silver, and gold layers.

Enterprise Data Governance and Trust in Insights

The platform also lacked standardized governance controls including enforced primary keys, automated validation, and structured data classification, reducing confidence in analytical outputs and creating challenges around scalability, consistency, and future compliance readiness.

Collectively, these requirements highlighted the need for a centralized, scalable, and near-real-time enterprise data platform capable of delivering trusted insights with greater speed, accuracy, automation, and operational resilience.



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Modernizing the Data Platform with Microsoft Fabric

To help our client overcome fragmented reporting, inconsistent data, and delayed business insights, we partnered with them to redesign and modernize its entire Commercial Line of Business data ecosystem.

Hexaware built a centralized, scalable, and real-time data platform on Microsoft Fabric that could improve data reliability, accelerate reporting, and support future growth with stronger governance and automation.

Established a Modernization Foundation

To support growing commercial operations, the enterprise set out to modernize its fragmented data environment spanning SQL Server, Azure SQL, and Power BI on Fabric. The enterprise needed a centralized platform to improve reporting consistency, strengthen trust in business insights, and support near-real-time operational visibility at scale.

During the assessment phase, key gaps were identified across the existing ecosystem, including fragmented datasets, inconsistent reporting metrics, duplicated records, missing primary keys, and the absence of a structured medallion architecture.

Existing ingestion processes were also limiting responsiveness, with refresh cycles taking nearly more than an hour. These findings helped shape a future-state modernization roadmap focused on creating a scalable, centralized, and real-time enterprise data platform.

Unified the Platform: Microsoft Fabric Data Foundation

Hexaware transformed the existing platform into a centralized Microsoft Fabric-based architecture designed to standardize and optimize enterprise data operations. At the core of the solution was a canonical gold layer containing nearly 4 million business-ready records, enabling a single trusted source of truth for analytics and reporting.

The new architecture consolidated disconnected datasets into a centralized platform capable of supporting faster business decisions, improved operational visibility, and scalable analytics. By redesigning the reporting foundation, the enterprise was able to improve consistency across reporting environments while increasing confidence in analytical outputs.



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Structured Scalable Medallion Architecture Implementation

To improve data organization and processing efficiency, we designed and implemented a modern medallion architecture structured across bronze, silver, and gold layers.

- **Bronze Layer:** Enabled raw ingestion and source-aligned data capture while preserving historical tracking
- **Silver Layer:** Standardized and transformed datasets to improve consistency and downstream usability
- **Gold Layer:** Delivered canonical, business-ready datasets optimized for reporting and operational analytics

This layered architecture simplified enterprise reporting while improving scalability, governance, and overall data reliability across the Commercial Line of Business.

Powered Near Real-Time Data Access

To support faster operational insights, the platform leveraged Change Data Capture (CDC), table classification, and automated pipeline orchestration to enable incremental and idempotent updates across all data layers.

This modernization reduced processing times from nearly 40–45 minutes to approximately 3 minutes, enabling near real-time access to critical commercial and operational data. The enhanced ingestion framework also improved responsiveness while reducing reporting strain on upstream systems.

Improved Data Quality and Governance

The modernized platform introduced automated validation and governance capabilities to improve data accuracy, consistency, and trust across reporting environments.

The solution included primary key enforcement, duplication checks, automated validation rules, data classification capabilities, and continuous monitoring for latency and completeness.

These enhancements improved reporting reliability while creating a stronger governance foundation to support future initiatives including Microsoft Purview adoption.

Automated Deployment and Platform Operations

To improve operational efficiency and delivery consistency, we automated deployment and pipeline management using native Microsoft Fabric deployment pipelines, schema evolution strategies, and testing frameworks.

Automated monitoring processes were implemented to continuously track pipeline performance, data accuracy, completeness, latency, and SLA adherence. This reduced manual intervention, accelerated release cycles, and drove reliable platform operations.

Assured Long-Term Scalability and Growth

Today, the enterprise operates on a centralized real-time data platform that delivers trusted insights faster, improves reporting consistency, and supports scalable growth across the commercial line of business.

The new Microsoft Fabric foundation positions the enterprise to onboard additional data sources, expand governance capabilities, and continue evolving its enterprise analytics ecosystem with greater agility, resilience, and operational efficiency.

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Faster Insights with Centralized Real-Time Access

The modernized Microsoft Fabric-based platform significantly improved data availability, operational efficiency, and reporting reliability for the client’s commercial line of business.

70% Reduction in Data Latency

The organization reduced end-to-end processing latency from 40–45 minutes to approximately 3 minutes, enabling near real-time access to operational and commercial insights.

35% Increase in Operational Efficiency

Automation across ingestion, validation, deployment, and monitoring reduced manual intervention, minimized operational delays, and accelerated delivery cycles.

25% Improvement in Data Quality

Automated validation & latency checks, enforced primary keys, and duplication controls improved the consistency, completeness, and trustworthiness of enterprise data.

Centralized and Trusted Business Reporting

The canonical gold layer established a single trusted source of truth for reporting and analytics, eliminating fragmented metrics and improving business alignment across teams.

Improved Scalability for Future Growth

The medallion architecture created a scalable foundation capable of supporting growing data volumes, additional data sources, and evolving analytical requirements without compromising performance.

Stronger Governance and Compliance Readiness

Data classification capabilities and structured governance foundations prepared the organization for future Microsoft Purview adoption and enterprise data governance initiatives.

Reduced Risk Across Data Operations

Automated monitoring, testing, and validation helped identify issues early, reducing the risk of delays, inaccurate reporting, and operational disruptions.



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Faster Energy Trading Decisions with a Real-Time Data Platform

Today, the enterprise operates on a centralized real-time data platform built on Microsoft Fabric, enabling faster access to trusted commercial and trading insights across its energy operations. The platform supports improved visibility across trading, reporting, and operational processes while helping teams respond faster to dynamic markets.

Built on a modern medallion architecture with CDC-driven ingestion, automated quality validation, and centralized reporting datasets, its Microsoft Fabric data platform now delivers scalable and highly optimized data processing times reduced from nearly 45 minutes to around 3 minutes, the enterprise can access near real-time insights to support faster operational and commercial decision-making.

The enterprise is now preparing for the next phase of modernization by onboarding additional data sources into the near real-time ingestion framework and evaluating [Microsoft Purview](#) adoption to strengthen governance, compliance, and enterprise-wide data management capabilities as its global energy operations continue to scale.



Build Your Real-time Data Platform

Hexaware's [Microsoft Fabric partnership](#) guides enterprises in centralizing analytics, automating data operations, and scaling near real-time intelligence with greater speed, scalability, and governance.

About Hexaware

Hexaware is a global technology and business process services company. Every day, Hexawarians wake up 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 offices across the world, we empower enterprises 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.com>.

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