DataToBiz

Connecting 6 Systems To Beat Inventory Mismanagement For A UK Retail Giant

ABOUT CLIENT

- A leading UK-based retail enterprise with a network of over 150 stores across the country, specializing in household goods, home improvement products, and lifestyle essentials.
- Processing millions of transactions each month across POS systems, online platforms, and loyalty programs, the company operates through diverse formats, from high-street outlets to large-format stores and a fast-growing e-commerce platform.
- With a focus on seamless omnichannel experiences, the brand continues to expand its footprint while optimizing inventory, driving sales growth, and enhancing customer satisfaction across every touchpoint.

Retail & E-commerce

Azure Data Engineering | Business Intelligence (BI) | Data Analytics | Data Warehousing | ETL | Power BI

India

IT and Technology Support, Strategy and Planning

End to End Project Lifecycle Management

PROBLEM STATEMENT

In our initial conversations, the client shared key challenges affecting their retail performance and decision-making. What we discovered was that, during our early discussions, the client was open about the everyday challenges slowing down their retail operations and decision-making. As their business expanded, managing data and drawing timely insights became increasingly difficult.

Disconnected Data Sources

Information on sales, inventory, suppliers, and customers lived in separate systems like POS, ERP, and online portals, making it hard to get a single, reliable view of performance.

Slow Decision Loops

Without real-time access to data, store managers and senior teams often had to wait days for reports, delaying responses to changing sales trends or stock issues.

Inventory Imbalances

The absence of predictive forecasting meant some stores faced frequent stockouts while others were overstocked, leading to inefficiencies and lost opportunities.

Limited Insight Generation

Most reporting was manual, leaving teams to react to issues after they occurred instead of planning proactively with data-backed insights.

SOLUTION

The goal was simple: bring everything together into one connected system that could turn data into daily decision support. We set out to unify information, simplify reporting, and introduce predictive intelligence to help teams stay ahead.

Bringing Data Together

We connected six core systems – POS, ERP, e-commerce, supplier portals, CRM, and loyalty platforms- into one secure, centralized data space. This created a single source of truth for the entire retail network.

Turning Data into Everyday Insights

Easy-to-use dashboards were built to show live updates on sales, stock, promotions, and store performance. Teams could instantly check what was working, where to improve, and how to act faster, all without relying on complex reports.

Seeing Ahead with Predictive Intelligence

AI-powered models were introduced to forecast demand across products, stores, and seasons. This helped plan replenishments better, reduce waste, and maintain the right stock at the right time.

Keeping Data Safe and Accountable

All data handling followed strict privacy and compliance standards, ensuring customer information remained secure. Access controls were set up so that every user only saw what was relevant to their role.

Empowering Teams to Own the Change

Training sessions, practical playbooks, and guided walkthroughs helped store managers, merchandisers, and executives use insights confidently. The goal wasn't just to build a system; it was to make data-driven decision-making part of everyday work.

TECHNICAL IMPLEMENTATION

Cloud Infrastructure & Security

- The solution is fully hosted on Microsoft Azure, ensuring high scalability, enterprise-grade security, and compliance.
- Azure Key Vault is used for managing all sensitive credentials and access keys securely.
- Azure Monitor supports continuous operational logging, performance tracking, and alerting.

Data Ingestion & Storage

- All raw and processed data is centralized in Azure Data Lake Storage Gen2, organized into structured layers for better governance and faster retrieval.

Data Processing & Modeling

- Azure Databricks powers the end-to-end data transformation pipeline, including cleaning, aggregation, and feature engineering.
- Azure Machine Learning (Azure ML) is used to build and deploy forecasting models, covering demand prediction and sales trend analysis.

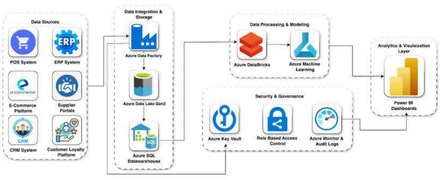
Visualization & Insights Delivery

- Insights are delivered through five key dashboard categories covering: Sales & Revenue, Inventory, Promotions, Store Performance, and Customer Analytics.

Monitoring & Governance

- End-to-end data lineage tracking is maintained to ensure transparency and traceability.
- Automated refresh cycles are configured to keep dashboards, models, and reports consistently up to date.

TECHNICAL ARCHITECTURE



BUSINESS IMPACT

Faster Insights, Quicker Decisions

Reporting time dropped from three days to just a few hours, giving teams near real-time access to business insights and enabling faster, more confident decision-making across departments.

Smarter Inventory Planning

Predictive replenishment ensured the right products were available at the right time, improving stock availability by around 25% and minimizing costly stockouts.

Better Returns from Promotions

With real-time visibility into campaign performance, marketing teams could fine-tune discounts and offers on the go, improving overall promotion ROI.

Sharper Store-Level Visibility

Store managers gained the ability to track performance in real time and act on sales dips within the same day, driving responsiveness and accountability.

One Unified View of the Business

By consolidating data from all systems into a single reliable source, the company eliminated conflicting reports and created a shared version of the truth across departments.

All-in-all, we helped the client move from reactive reporting to proactive retail management. This leads to better decision-making with increased transparency, speed, and intelligence across channels. With integrated dashboards and predictive insights, we achieved stronger sales performance, measurable operational efficiency, and growth even in a competitive retail market.