



# End-to-End E-Commerce Transformation for a Large Multi-Brand Retail Chain

A robust, unified, and scalable e-commerce solution that uses a headless architecture (Adobe Commerce, Drupal, Pimcore) to centralize management, boost online revenue, and provide consistent experiences for a multinational retail chain.

## Overview

Our client faced challenges in consolidating their digital presence, ensuring brand consistency, and maintaining scalability.

- Delivered a headless e-commerce platform utilizing Adobe Commerce (backend), Drupal (CMS/frontend config), and Pimcore (PIMS), built primarily on the Azure Cloud.
- Achieved unified management of multiple brands and markets under a single platform, ensuring seamless integration with legacy ERP, CRM, and logistics partners.
- Integrated advanced capabilities including AI-powered search (Algolia), personalization tools (Dynamic Yield, Exponea), and award-winning loyalty programs (Aura, Hello Member).
- Increased conversion rates and average order values, ensured high scalability for sales volumes, and streamlined order processing and fulfillment accuracy across all brands.



## Client Profile

Multinational retail franchise operator headquartered in Kuwait, managing nearly 70 consumer retail brands across the Middle East, North Africa, Türkiye, and Europe.

## Challenges: Fragmentation, Compliance, and Inefficient Operations

The client's growth was hindered by architectural complexity and operational gaps:

- **Unified Platform Management:** The challenge of managing diverse brands with unique identities and separate online stores on a single platform while maintaining operational consistency.

- **Integration and Data Integrity:** Difficulty integrating with existing ERP/Inventory systems for real-time stock updates and ensuring cohesive functionality with third-party applications.
- **Content and Multilingual Support:** Lack of a user-friendly CMS to support content management for diverse audiences across multiple languages and markets.
- **Order and Fulfillment Delays:** Inadequate integration with various shipping carriers and logistics providers slowed down order processing and fulfillment workflows.
- **Security and Scalability:** Maintaining high performance, uptime, and robust security measures against fraud across all e-commerce platforms.

## **Solution: Headless Architecture for Omnichannel**

QBurst delivered a comprehensive, modular e-commerce solution based on a headless architecture to provide flexibility, scalability, and unified control over the client's omnichannel platform.

- **Headless E-Commerce Core:** The solution utilizes Adobe Commerce as the centralized e-commerce backend to handle multiple brands, regions, and languages. The architecture is hosted within Adobe's Azure Cloud.
- **PIM Implementation (Pimcore):** Pimcore serves as the central Product Information Management System (PIMS), acting as the main entry point for all host brand product data. It manages workflow, object definitions, supports multiple import formats (XML, JSON, EXCEL, CSV), and feeds product data to all sales channels.
- **CMS and Frontend Configuration (Drupal):** Drupal manages the frontend configurations, CMS content, and brand-specific theme overrides to ensure consistent, uniform branding across different regions. It uses Twig for server-side rendering and Handlebars/React for client-side rendering.

- **Mobile Experience:** The native mobile application frontend was developed using React Native, supported by Spring Boot/Spring WebFlux backend services hosted on Azure Cloud with auto-scaling capabilities. A BFF (Backend for Frontend) layer manages data aggregation from various systems (Adobe Commerce, Algolia, Drupal) for optimal mobile performance.
- **Advanced Integrations:** Seamless connectivity was established with:
  - Payment Gateways: Checkout.com, plus region-specific options (Knet, QPay, Fawry, BNPL).
  - Personalization: Dynamic Yield and Exponea.
  - Order/Logistics: IBM Sterling OMS, custom COMS, and numerous delivery partners.
  - Loyalty: Aura and Hello Member loyalty programs.

## Technical Highlights

The solution leverages best-of-breed technologies for speed, resilience, and data management:

- **Headless Architecture:** Decoupling Adobe Commerce from the frontends (Web via Drupal/Mobile via React Native) provided maximum flexibility and omnichannel consistency.
- **Streaming & Messaging:** RabbitMQ was used for inter-system communication and data processing tasks, such as pushing data to Algolia for AI-powered search.
- **Global Content Delivery & Security:** Cloudflare (WAF/CDN for frontend) and Fastly (CDN for backend) ensure secure and fast content delivery.
- **Product Information Management (PIM):** Pimcore ensured centralized data governance and product workflow management.
- **Deployment Automation:** Azure DevOps implemented a structured branching strategy and automated build/deployment pipelines across various environments (QA, UAT, Production).

# Impact

- **Increased Conversion Rates:** Optimized omnichannel user experience, personalization (Dynamic Yield/Exponea), and enhanced loyalty programs increased conversion rates and average order values.
- **High Scalability and Performance:** Robust platform ensured high uptime and fast-loading speeds, supporting substantial traffic and sales growth during peak periods.
- **Streamlined Operations:** Efficient order processing, fulfillment, and returns management improved accuracy and reduced delays across all brands.
- **Enhanced Customer Trust:** Strong security measures protected customer data, and real-time order tracking enhanced transparency.
- **Data-Driven Strategy:** Advanced omni-channel reporting provided deep insights into sales and customer behavior (via BI tools and CRAVE retail integration), supporting strategic data-driven decisions.