



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



Project Overview

A leading multi-brand retailer in the Middle East aimed to enhance their online presence and improve the management of multiple e-commerce platforms owned by them. The project involved developing a robust, scalable, and unified e-commerce solution with optimized digital marketing and mobile experiences to drive online sales, improve customer experience, and streamline platform management. We partnered with the retailer to deliver a comprehensive solution using advanced technologies, covering web and mobile platforms, integrations, and cloud infrastructure.

Client Profile

Multinational retail franchise operator headquartered in Kuwait, managing nearly 70 consumer retail brands across the Middle East, North Africa, Türkiye, and Europe. They also have investments in real estate, construction, hotels, automotive, and general trading in the Middle East.

Business Requirements

The client wanted to strengthen their online presence and e-commerce platforms to drive growth, enhance customer experience, and efficiently manage multiple brands.

- Drive online revenue for all brands
- Provide a seamless and consistent online shopping experience across different brands and markets
- Centralize and simplify the management of multiple e-commerce websites and mobile applications
- Expand brand awareness and reach through effective digital marketing channels

Key Challenges

Unified E-commerce Platform

- Managing multiple online stores and applications for different brands on a single platform posed a significant challenge in ensuring consistent operations and user experience.
- Customization of online stores to reflect each brand's unique identity while ensuring integration with existing ERP and inventory management systems for real-time product information and stock updates.

Content Management System (CMS)

- Lack of a user-friendly CMS to support multilingual content and facilitate content management for diverse audiences.

Order Management and Fulfillment

- Delayed order processing and fulfillment workflows due to inadequate integration with various shipping carriers, logistics providers, and customer-facing order tracking systems.

Marketing and Promotions

- Difficulty in creating, managing, and optimizing cross-platform marketing campaigns that include email marketing, social media promotions, and personalized advertising based on customer behavior.
- Absence of analytics tools to track performance and adjust strategies accordingly.

Mobile Optimization

- Optimizing e-commerce platforms for mobile devices to cater to the increasing mobile shopping trend by providing responsive design, intuitive navigation, and seamless user experience.
- Developing native mobile applications with advanced features that outperform browser-based experiences.

Security and Compliance

- Insufficient security measures to protect customer data and prevent online fraud.

Scalability and Performance

- Maintaining scalability to handle increasing traffic and sales growth while ensuring high uptime, minimal downtime, and fast-loading performance across all e-commerce platforms was a challenge.
- Inadequate integration with existing systems and third-party applications to enable cohesive functionality and service delivery.

QBurst Solution

We delivered a comprehensive e-commerce solution utilizing Adobe Commerce, Drupal, Pimcore, and the latest cloud technologies. This platform integrates web and mobile frontends with a robust e-commerce backend, incorporating seamless connections to ERP, CRM, OMS, loyalty systems, and customer support tools. The headless architecture and modular design provide exceptional flexibility, scalability, and performance.

- **E-commerce backend:** Centralized backend system managing all e-commerce operations
- **Web and mobile frontends:** Customer-facing interfaces optimized for web and mobile
- **Integration with host brands:** Seamless integration to prepare and update product data
- **Stock and order management:** Integrations to manage inventory levels and streamline order fulfillment processes
- **Delivery partner integration:** Collaboration with logistics providers to enable efficient delivery
- **Loyalty platforms:** Integration with Aura and Hello Member for enhanced customer loyalty

- **Customer support integration:** Utilization of Sprinklr for comprehensive customer support solutions
- **Personalization tools:** Integration of Dynamic Yield and Exponea for personalized customer experiences
- **Content delivery and security:** Cloudflare as CDN, WAF for frontend, and Fastly as CDN for the backend, ensures secure and fast content delivery
- **Digital asset management:** Adobe DAM is employed for efficient storage and management of digital assets

Pimcore PIMS Implementation

Pimcore is utilized as the Product Information Management System (PIMS) for the client. It acts as the main entry point for host brand information into the client's digital ecosystem, making product information accessible through various sales channels.

- Object and layout definitions for products and pricing
- Product workflow management with multiple enrichment states
- Supports multiple data formats (XML, JSON, EXCEL, CSV) for importing product data from host brands
- Automated and manual processing of media assets for products
- Multi-level daily reports for stakeholders
- Custom REST APIs for Adobe Commerce integration
- Integration with marketplaces like Tamanna, Namshi, and Trendyol
- Connections with CRAVE retail and BI tools for analysis and reporting
- Catalog asset management in Adobe DAM

Adobe Commerce Implementation

The solution was implemented using a headless architecture to support the client's omnichannel platform, providing a robust backend that handles multiple brands, regions, and languages under a unified system.

- Integrated with Checkout.com payment gateway
- Custom integrations with Order Management Systems (OMS) like IBM Sterling and custom-built Customer Online Management System (COMS)
- ERP and CRM tools integration
- Product data synchronization from Pimcore PIMS to the Drupal CMS system
- AI-powered Algolia search integration for enhanced search capabilities
- REST APIs for handling transactions with both authenticated and anonymous users
- Hosting within Adobe's Azure Cloud
- RabbitMQ for inter-system communication and data processing tasks, such as pushing data to Algolia

Drupal CMS Implementation

Drupal serves as the content management system for the client, managing the frontend configurations and brand-specific themes to maintain uniform branding across different regions and languages.

- Handles frontend code and configurations
- Stores CMS content, brand-specific style overrides, and configurations
- Server-side rendering with Twig; client-side rendering with Handlebars and React
- Supplies CMS content and configurations to the mobile app
- Data is pushed to Algolia for search and listing pages

Mobile Framework

The mobile application is designed to provide a consistent experience for the client's customers across multiple brands.

- Frontend developed using React Native; backend services built using Spring Boot and Spring WebFlux for RESTful calls

- Hosted on Azure Cloud with auto-scaling capabilities for high throughput
- Optimized performance with custom caching strategies and dedicated caching services
- BFF (Backend for Frontend) layer manages data aggregation from various systems (Adobe Commerce, Algolia, and Drupal) and supplies it to the frontend
- Brand and market-specific configurations are managed externally in Azure Storage
- Supports deep-link architecture for handling web link resolutions

Central Code Management and Deployment

Employs Azure DevOps for streamlined source code management and deployment across different environments—QA, UAT, Sanity, and Production.

- Modular approach with separate repositories for brand-specific code and reusable components
- Reusable plugins integrated via composer for version control
- Structured branching strategy for code integration and deployment: QA, UAT, Sanity, and Master branches
- Automated build and deployment pipelines using Azure DevOps for Adobe Commerce Cloud and Acquia Cloud
- Patching process for security, bug fixes, and performance enhancements with automated cache invalidation across the cluster

Key Features and Functionalities

Checkout options

- Supports online checkout for both guest and logged-in customers
- Offers various payment methods, including Buy Now Pay Later (BNPL), Apple Pay, Credit/Debit cards, and region-specific options such as QPay, Fawry, and Knet

Alternative payment methods

- Allows purchases via e-gift cards
- Enables buying with loyalty points

Order management

- Online order management and returns are available for logged-in customers

Loyalty programs

- Award-winning loyalty programs integration with Aura and Hello Member (Best in the Region 2024)
- Features include signup, points accrual and redemption, viewing history, personalized offers, and member-specific pricing
- Provides early access to products before they are available in stores

E-gift card management

- Users can buy new e-gift cards, top up existing cards, and link them to their accounts for quick checkout

Personalization and wishlist

- Wishlist feature for quick access to favorite products
- Dynamic, personalized content such as banners based on market, language, customer category, and browsing history

Online reviews

- Access to global online reviews via Bazaarvoice

Omni-channel customer support

- Available through chatbot and "Contact Us" forms

Advanced reporting for administrators

- Enhanced reporting features beyond standard options, including omnichannel reporting for both online and offline sales

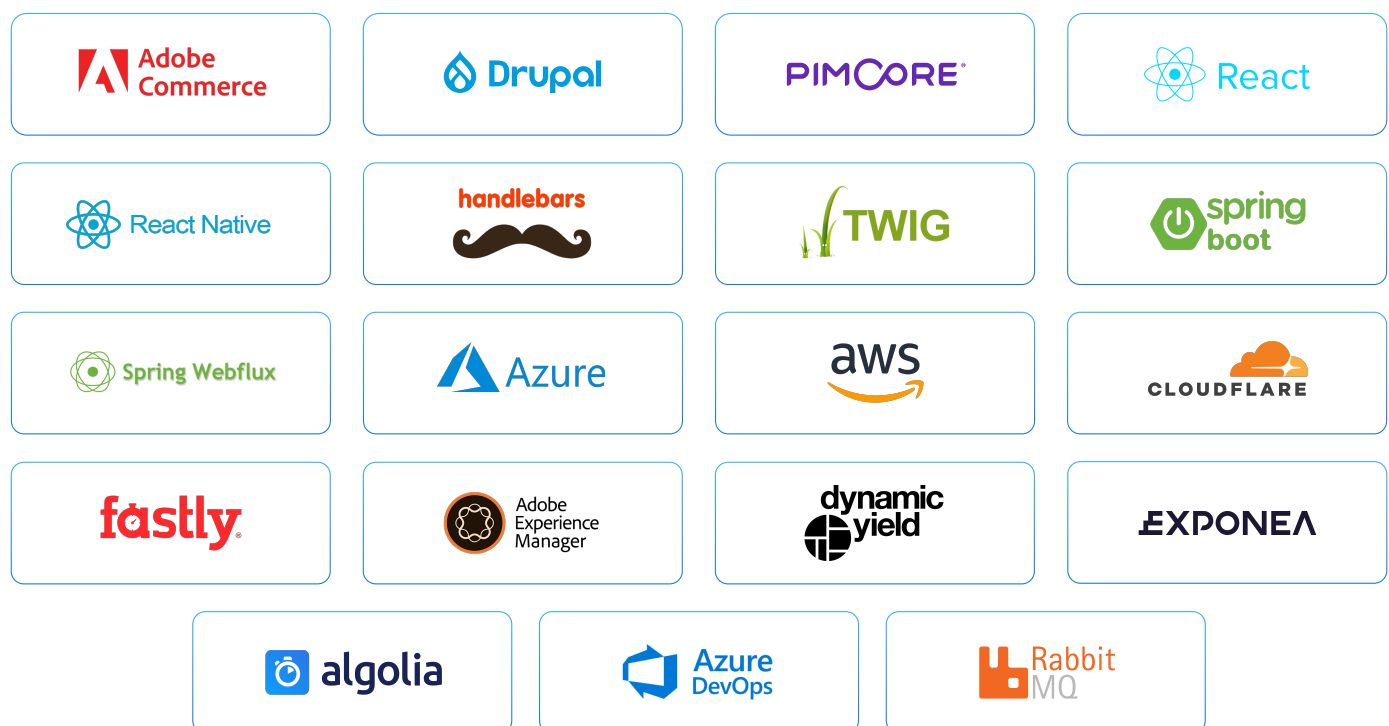
Multi-brand support

- Platform supports selling products from different brands under the same website or app (for instance, Monki brand products under H&M)

Brand-specific integrations

- Integration with shoeai.com for AI-based size suggestions (Footlocker)
- Appointment booking capabilities for Boots Pharmacy

Technologies Used



Business Benefits

- Optimized omnichannel user experience increased conversion rates and average order values
- High scalability supported growing traffic and sales volumes

- Robust performance ensured high uptime and fast-loading speeds
- Strong security measures protected customer data and prevented fraud
- Efficient order processing and fulfillment improved accuracy
- Real-time order tracking enhanced transparency and customer satisfaction
- Advanced reporting provided insights into sales and customer behavior
- Data-driven decisions supported strategic adjustments
- Personalized shopping delivered tailored content and offers



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