



SUCCESS STORY

Integrating 300+ Stores For V2 Retail To Deliver A Seamless Omnichannel Experience To Their Customers

Customer

V2 Retail

Country

India

Industry

Retail



ABOUT THE CLIENT



SERVICES DELIVERED

eCommerce Development
Services



V2 Retail is one of India's fastest-growing value fashion chains, built on the promise of affordable, trend-driven apparel for the everyday Indian family. With 300+ stores spread across tier-2 and tier-3 cities, V2 Retail had built a formidable physical retail presence, a loyal customer base, deep supplier relationships, and a store network that most D2C brands would spend years trying to replicate.

BUSINESS SITUATION

When V2 Retail approached Daffodil, the framing of the problem was straightforward: "We have no online presence. We need an e-commerce platform." But the more we examined the business, the more we realized this was not a standard e-commerce problem.

V2 Retail was not a brand without inventory; it had a significant amount sitting across 300+ store locations nationwide. The real problem was that none of that inventory was accessible to online shoppers, and the existing infrastructure was not designed to support this.

They did not have an e-commerce problem so much as a store-led commerce problem: the stores served as warehouses with distributed inventory, and fulfilment was decentralised. They operated a SAP-based ERP that tracked inventory at the store level. But it was designed for physical retail operations: purchase orders, goods receipt, and inter-branch transfer.

Inventory data carried a 15—30-minute sync lag, and the system lacked support for online order reservations, no pick-pack-ship workflow, and no way to surface store-specific stock to a digital storefront. Building directly on top of it would have meant inheriting these limitations.

As a result, three gaps emerged. First, inventory remained effectively invisible online, with 300+ stores holding all available stock. However, there was no way to display it in real time to customers. Second, there was no fulfilment infrastructure in place: no pick-pack-ship process, no scan validation, and no task-based execution workflow for store staff. This meant that online order execution simply did not exist at the store level. Third, store operations were inherently offline-first, with delayed ERP sync, creating a risk of incorrect stock visibility and order failure.

To address these challenges, our client's requirements were to:

1. Build a production-ready e-commerce storefront with native Indian payment support (UPI, COD, cards)

2. Design a fulfilment model leveraging the store network, not a central warehouse, as the fulfilment source

3. Create an Order Management System (OMS) giving HQ real-time visibility across all 300+ store orders

4. Build a store-facing Android app enabling staff to action pick, pack, and dispatch via scan-based validation

5. Integrate with SAP for inventory and POS for store-level data, without replacing either system

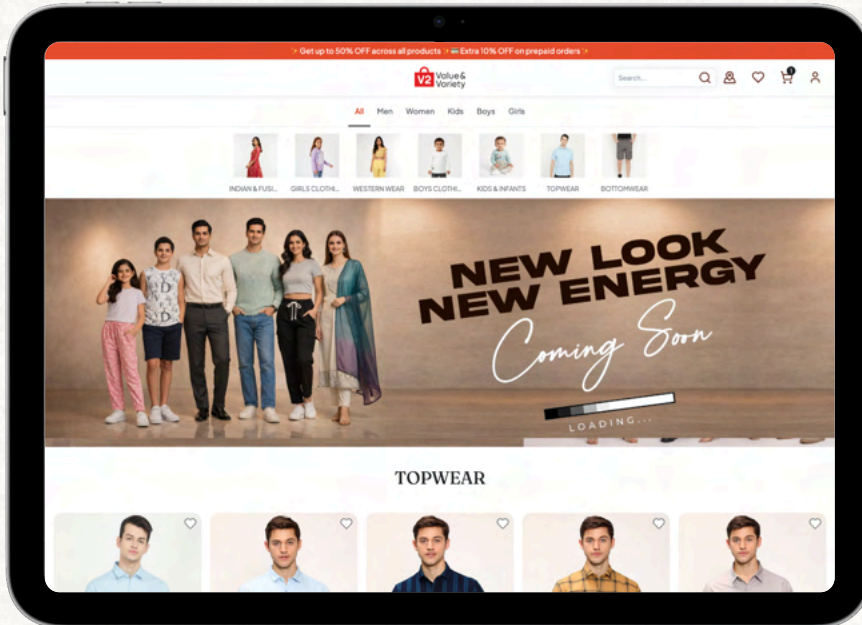
6. Engineer an inventory sync engine that tolerates the SAP lag without showing incorrect stock to customers

THE SOLUTION

We approached this not as a storefront build, but as a distributed commerce infrastructure problem. The solution architecture comprised four interconnected layers, each engineered to operate within the realities of a 300-store offline-first retail network.

Developing A High-Performance E-Commerce Storefront

We built the customer-facing storefront on a unified commerce platform engineered as a single system rather than a plugin stack. The performance decision mattered here: V2 Retail's target customers in tier-2 and tier-3 cities shop predominantly on mid-range Android devices over mobile data connections. A higher load time would kill conversion before a customer ever saw a product. We designed a CDN-first, sub-1-second architecture for exactly this context.

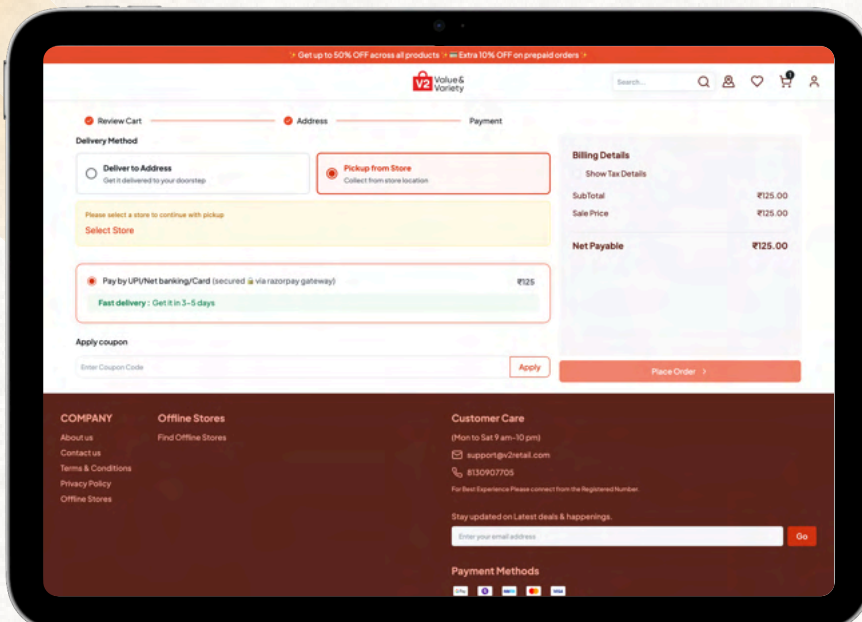


Intuitive and User friendly homepage with sub 1 sec load time

Engineering A Scalable Commerce Infrastructure And Payment Integration

The platform delivers sub-1-second page load times through a global CDN and intelligent caching, ensuring a seamless experience for mobile-first users on bandwidth-constrained networks. It supports native UPI, COD, and card payments via Razorpay and PhonePe, eliminating dependency on third-party plugins and avoiding additional latency.

To scale catalogue management, the system uses AI-generated product descriptions and metadata, removing the need for manual cataloguing across thousands of fashion SKUs. It also enables smart collections that dynamically group inventory by season, occasion, and trends; for example, 'Festive Kurtis' or 'Monsoon Casuals'.



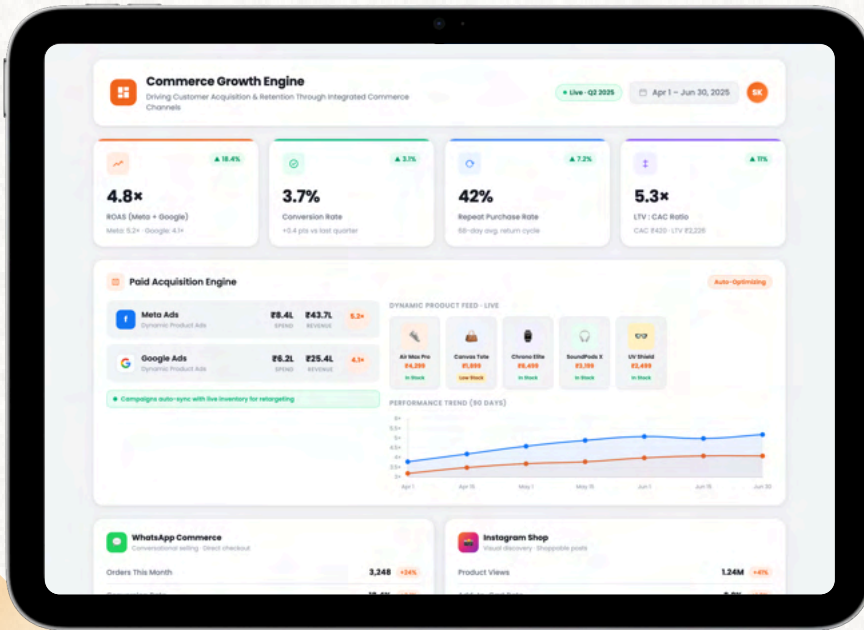
Multi channel payment gateway integration for faster checkouts

Driving Customer Acquisition & Retention Through Integrated Commerce Channels

The platform enables automated customer acquisition through Meta and Google Dynamic Product Ads (DPA), where campaigns pull live inventory for real-time retargeting.

It extends the product catalogue natively to social channels through WhatsApp Commerce and Instagram Shop integrations, allowing customers to discover and engage across multiple touchpoints.

To improve conversion and retention, the system incorporates a smart cart with abandoned cart recovery, prepaid discount nudges, and COD-to-prepaid conversion incentives. It further supports RFM-based segmentation, enabling automated loyalty programs and review collection workflows to drive repeat purchases and long-term customer engagement.



Analytics Dashboard for realtime insights for customer acquisition

Designing A Store-Led Fulfilment Architecture

A Store-Led Fulfilment Architecture was the most architecturally significant decision of the engagement. Rather than routing all online orders through a central warehouse, we designed three complementary fulfilment models that treated the store network itself as the fulfilment infrastructure.

Nearest Store Allocation

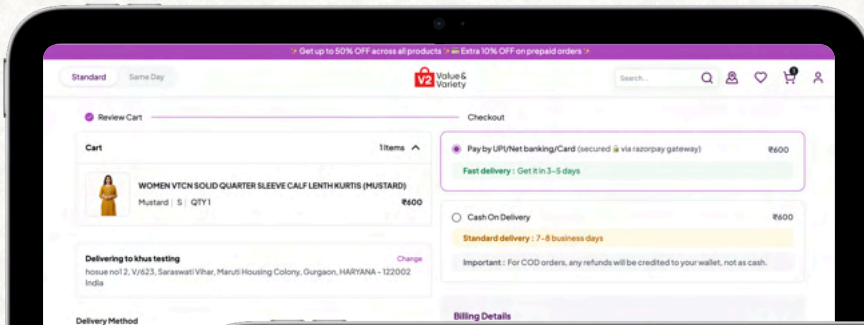
When a customer places an order, the system identifies the store with available inventory closest to the delivery pin code and routes the order to that store. This reduces last-mile logistics costs and delivery time, critical for a value fashion brand with thin margins.

BOPIS

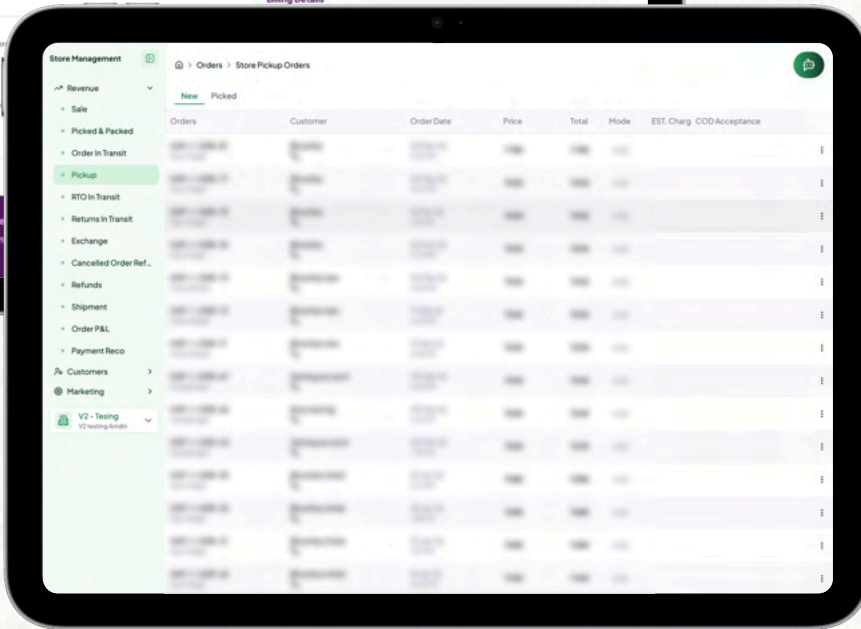
Buy Online, Pick Up In Store. Customers browse online, purchase digitally, and pick up at their nearest V2 Retail location. With 300+ stores, BOPIS is a genuine competitive advantage that no D2C-only brand can match.

Hub Fulfilment

For regions with multiple nearby stores, designated hub stores handle consolidated fulfilment for surrounding locations, reducing per-order handling complexity while maintaining the distributed inventory model.

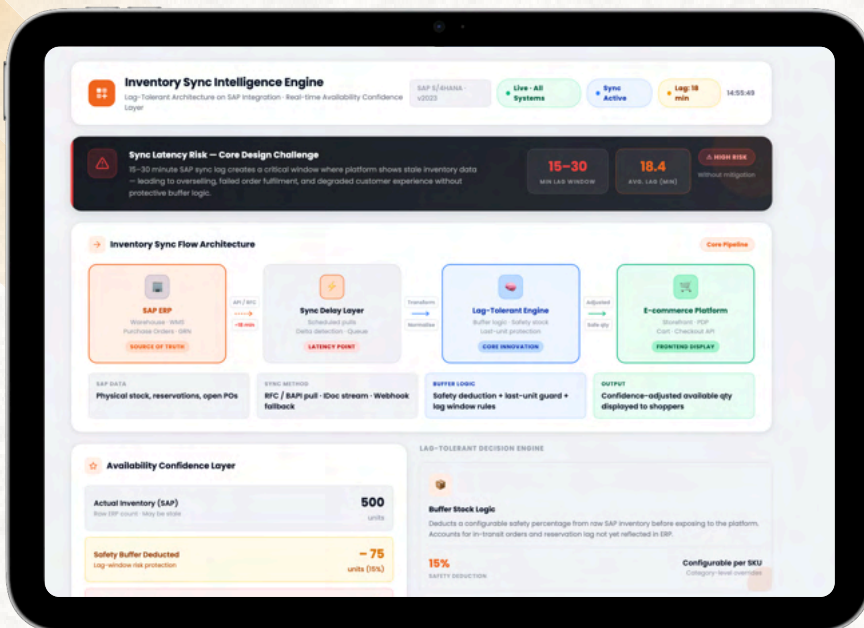


Store-Led Fulfilment Models with BORIS and BOPIS Integration



Building A Lag-Tolerant Inventory Sync Engine On Top Of SAP

The 15–30-minute SAP sync lag was the most dangerous technical risk on the project. An e-commerce platform that shows 'Available' when a store has already sold the last unit offline creates a failed order and a damaged customer relationship. We designed the inventory layer to be lag-tolerant by default.



SAP Integrated Inventory Management System

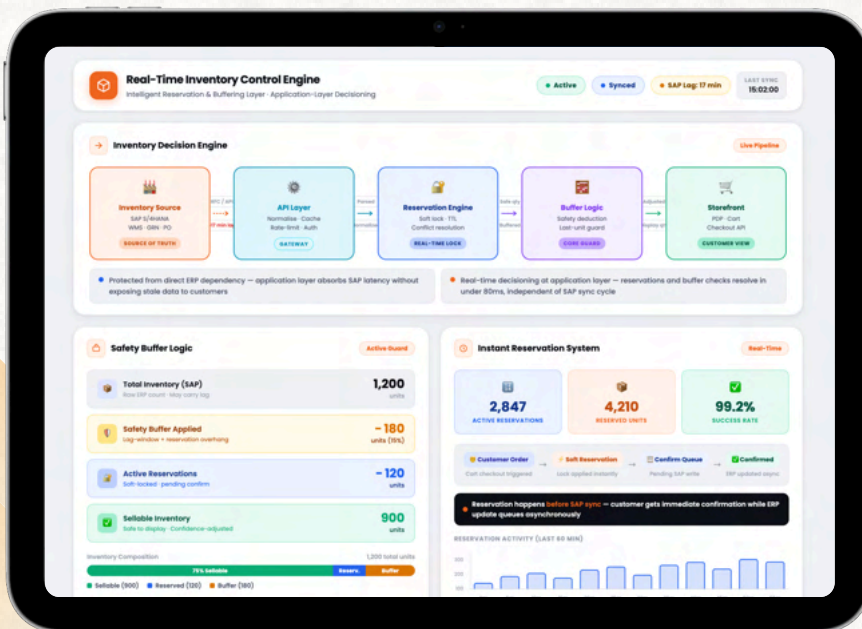
Implementing Real-Time Inventory Control Through Intelligent Reservation & Buffering

The system ensures inventory accuracy through a buffer-based visibility mechanism, where online stock availability is calculated using a configurable safety buffer. This prevents the last unit from being sold online while offline transactions are still pending synchronization.

To further reduce inconsistencies, a real-time reservation layer is implemented: when a customer places an order, the item is immediately soft-reserved at the application layer before the SAP sync cycle completes, eliminating the risk of double-selling.

In cases where conflicts arise, such as an offline sale consuming a reserved unit, the system automatically resolves this through dynamic reassignment to the next-nearest store with available inventory.

It also incorporates graceful degradation, where inventory data that becomes stale beyond a defined threshold is temporarily hidden from the storefront rather than displayed with uncertain accuracy. All inventory operations are routed through a dedicated API integration layer, ensuring that e-commerce reads and writes remain isolated while preserving the stability of core SAP ERP workflows.

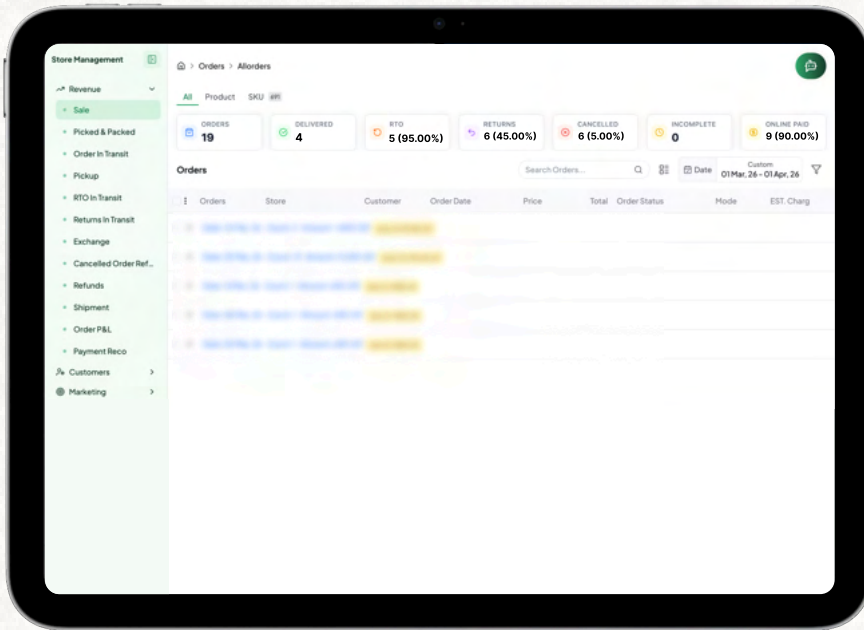


Real time inventory control and planning module

Enabling Centralized Order Visibility Through An OMS

Headquarters needed visibility, and store staff needed execution tools. We addressed these two needs through a paired OMS admin dashboard and a dedicated Android store application. We built a real-time order management system for distributed operations that provides order lifecycle tracking across four status tabs: New, Pickup, Shipment, and Return. It enables COD management with delivery attempt tracking and daily reconciliation, along with store-wise order volume and fulfillment rate dashboards that identify bottlenecks at specific locations in real time.

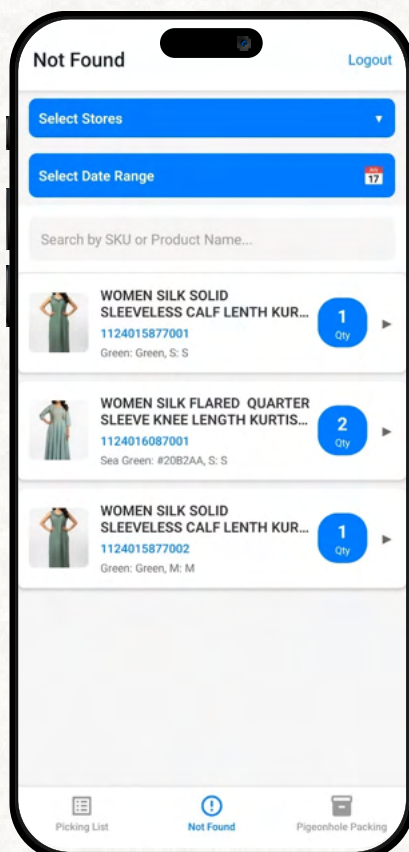
The system also supports return and exchange management with automated refund triggers and includes a courier integration dashboard that tracks dispatch status for each shipment.



Custom order management system for real time order tracking

Empowering Store Staff With A Scan-Driven Fulfilment Application

Store staff had no tools to action online orders before this engagement. We built a purpose-designed Android application giving store associates a structured, scan-validated workflow from order receipt to handover. The app provides a structured picking list with product name, SKU, size, and quantity, eliminating manual interpretation. Each picked item is validated through barcode or QR code scanning before packing to prevent dispatch errors. It maintains clear separation between picked and packed stages with timestamp logging at each step. The application also generates a courier handover confirmation linked to the courier's scanning system, closing the fulfilment loop. For BOPIS, it supports in-store pickup confirmation where staff verify the customer and mark the order as collected, triggering automatic closure.



Barcode scan driven fulfilment application for store managers and delivery partners

IMPACT

The platform launched with V2 Retail's 300+ stores as fulfilment nodes, enabling customers to discover, purchase, and receive products online for the first time. It established a nationwide e-commerce channel with UPI, COD, and card support, while maintaining sub-2-second load times for mobile users. Nearest-store fulfilment reduced delivery distance and logistics costs.

Structured, scan-based workflows improved store operations and reduced dispatch errors to near zero. The OMS provided real-time visibility across all store orders, enabling better control and faster decision-making. BOPIS introduced a cost-efficient fulfilment option with in-store pickups.

The solution transformed the store network into a distributed fulfilment advantage, preserved SAP stability, and created a scalable foundation for expansion across locations, channels, and catalogue size.

NUMBERS THAT SHOWCASE THE IMPACT

300+

Stores As Fulfilment
Nodes

2s

Storefront Load Time

3

Fulfilment Models
Enabled



HAVE A SOFTWARE PRODUCT VISION IN MIND?

Set up a personalized consultation with our technology expert

Let's Talk 



info@daffodilsw.com



www.daffodilsw.com