



Retail & Warehouse Business Execution Structure

Retail Shops · Consignment Shops · Own E-commerce · Amazon/Flipkart · Barcode Inventory

Barcode-centric · Multi-channel ERP + AI TicketingOS

1. Master Retail & Warehouse Execution Flow (Barcode-Driven)

ID	Department	Process	Activity	Action	Progress %
2001	Sales (Retail)	POS SALE	Bill Generated	Customer purchase at store	5
2002	Sales (E-com)	ORDER	Order Received	Website/Amazon/Flipkart order	5
2003	Consignment	STOCK IN	Consignment Receipt	Partner stock received & barcode scanned	10
2004	Inventory	BARCODE	Scan & Allocation	Barcode scanned → bin assigned	15
2005	Inventory	STOCK RESERVATION	Channel-wise Reserve	Retail / Online / Consignment stock segregated	20
2006	Warehouse	PICKING	Barcode Pick	Pick list → scanner validation	30
2007	Warehouse	QC	Quality Check	Barcode match, expiry (FMCG), damage check	35
2008	Warehouse	PACKING	Channel Packing	Retail bag / E-com box / Marketplace label	45
2009	Dispatch	LOGISTICS	AWB Generation	Courier assigned (Bluedart/Delhivery/etc)	50

ID	Department	Process	Activity	Action	Progress %
2010	Dispatch	LOGISTICS	Courier Pickup	Handover to logistics partner	55
2011	Dispatch	LOGISTICS	In Transit	Hub scanning	60
2012	Dispatch	LOGISTICS	Out for Delivery	Delivery executive assigned	70
2013	Delivery	LAST MILE	Delivered	POD received	80
2014	Consignment	SETTLEMENT	Sale Report	Partner share calculation (e.g., 70/30)	85
2015	Finance	PAYOUT	Vendor / Consignor Payment	Payment released as per terms	90
2016	CRM	AFTERSALES	Return / Exchange	Barcode-based return verification	95
2017	Inventory	REPLENISHMENT	Auto PO	Low stock alert → PO to brand/wholesaler	100

2. Multi-Channel Customer & Order Tracking Timeline

Step	Retail Store	Consignment Shop	Own E-commerce	Amazon / Flipkart
Order source	POS counter	Walk-in / Partner app	Website / WhatsApp	Marketplace panel
Inventory check	Barcode scan at store	Barcode scan at consignment	Real-time WMS sync	API stock sync
Payment	Cash / Card / UPI	Shared terminal (store + partner)	Razorpay / COD	Amazon Pay / Flipkart wallet

Step	Retail Store	Consignment Shop	Own E-commerce	Amazon / Flipkart
Fulfillment	Instant handover	Store picks from consignment stock	Warehouse pick & pack	Fulfilled by merchant (FBM) or FBA
Delivery	N/A	N/A	Courier	Amazon logistics
Return	Store counter	Consignment T&C	Self-return portal	Marketplace return window
Settlement	Immediate	Weekly / Monthly payout to consignor	After delivery	After weekly settlement


3. Payment Release Structure (Retail + Consignment + Online)


Stage	Release Condition	Payment % (Vendor/Consignor)	Channel Applicable
Stock accepted (consignment)	Barcode scan at store entry	0% (no advance)	Consignment shops
Sale occurs at retail store	POS billing & barcode de-stock	70% of MRR (consignor share) within 7 days	Consignment + Retail
E-commerce order confirmed	Customer payment received	30% advance to vendor	Own site / Marketplace
Order dispatched	AWB generated + barcode scanned out	20% additional	E-com / Marketplace
Delivery confirmed	POD uploaded (customer signature)	30%	E-com / Marketplace


Stage	Release Condition	Payment % (Vendor/Consignor)	Channel Applicable
Return window closed	7 days no return (barcode unused)	20% final settlement	All online channels
Consignment unsold stock return	Physical return with barcode scan	0% (stock taken back)	Consignment only
FMCG expiry write-off	Barcode marked expired in system	Vendor to credit 100%	Kirana / FMCG

💰 Consignment auto-settlement: Daily sales sync → consignor payout calculation + bank file


4. ERP Module Mapping (Barcode-Centric Multi-Channel)


 **POS (Retail)** – Store billing, barcode scan, consignment split


 **OMS (Order Management)** – Orders from website, Amazon, Flipkart, WhatsApp


 **WMS (Warehouse)** – Bin location, barcode pick/pack, expiry tracking


 **Consignment Mgmt** – Partner stock entry, sale reconciliation, payout


 **Marketplace Integrator** – API with Amazon SP-API, Flipkart, Shopify

 **Inventory Core** – Real-time stock across all channels, low-stock alert

 **Logistics TMS** –
AWB generation, courier
allocation, tracking sync

 **Finance** – Consignor
payout, vendor
payment, GST
reconciliation

 **CRM + Returns** –
Return QR/barcode
validation, refund
processing


 **AI Engine** –
Demand forecasting,
auto-replenishment,
return prediction

5. AI-Based Retail & Warehouse Automation (Barcode + TicketingOS)

Function	AI Automation
Auto-PO generation	Stock below threshold → PO to brand/wholesaler based on 3-week forecast
Barcode expiry alert	FMCG/kirana items near expiry → auto discount push to retail POS
Consignment auto-settlement	Daily sales sync → consignor payout calculation + bank file
Channel-wise inventory AI	Amazon vs Flipkart vs own site – reallocation based on sell-through rate
Return fraud detection	Barcode already returned in last 30 days → auto reject
Warehouse pick path optimization	AI reduces picker travel time by 40%
Marketplace price recommendation	Competitive pricing based on real-time scraping
AI customer support	Order status via WhatsApp (barcode scan or order ID)
Predictive logistics	Delay risk alert → auto switch courier partner

Function	AI Automation
Smart replenishment for consignment	Predict which items will sell in each store


6. Final ERP Architecture for Retail & Warehouse Business


 **Channel Side** : Retail Store (POS) → Consignment Shop → Own E-com → Amazon/Flipkart → WhatsApp/Bulk Order

 **Internal ERP Side** : Sales Channel → Inventory (Barcode Core) → Warehouse → Logistics → Finance → Consignment Settlement

 **AI TicketingOS Side** : Auto PO AI → Expiry Alert AI → Consignment Payout AI → Return Fraud AI → Replenishment AI → Price Intelligence AI


Barcode-Based Inventory Control Across All Channels


 **Retail store receipt** – Scan incoming stock → update consignment/owned

 **POS billing** – Scan item → deplete retail inventory & consignment share


 **E-com warehouse** – Scan pick → reserve for order

 **Amazon dispatch** – Scan → mark FBM shipment

 **Return desk** – Scan → validate purchase & route to QC

 **Consignment stock take** – Scan all items monthly → auto reconcile

 **FMCG expiry check** – Daily scan near-expiry batch → discount / return to vendor

 Retail & Warehouse ERP – Barcode Multi-Channel Execution | AI TicketingOS Ready
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