



INTEGRATED DISTRIBUTION OPERATIONS

Forecast the Demand. Finance the Stock.

ShivAI Distributor Inventory Planner + Finance Planner — 10 AI forecasting models with Newsvendor optimization feed directly into 10 financial modules. Recommended stock levels flow into cash flow projections. Supplier payment terms drive payment optimization. Inventory values power working capital analysis. 13 data connectors (Tally, SAP, Zoho, Shopify, Amazon) work for both planning and finance.

THE DISTRIBUTOR'S TWIN PROBLEM

Two Questions. Nobody Connects Them.

'How Much Should I Order?' (Planning)

3,000 SKUs. No demand forecast. Buyer orders by gut feel. Overstocked on slow movers, stockout on top 20%. Rs.80L stuck in wrong inventory.

'Can I Afford to Order?' (Finance)

Even if you knew the right quantity, can the cash flow handle Rs.25L of POs this week? Payment terms not optimized. Early discounts missed. GST cash blocked.

THE INTEGRATION

DIP Recommendations → FP Cash Flow. Automatically.

Stock Recommendations → Cash Outflow DIP computes optimal S* per SKU using Newsvendor. Multiply by purchase cost = cash required. FP projects when that cash is needed based on supplier lead times.

Supplier Terms → Payment Optimization DIP knows purchase costs and lead times per supplier. FP uses these to calculate early payment discount ROI and prioritize payments when cash is tight.

Inventory Value → Working Capital DIP on-hand quantities × purchase costs = inventory value for FP's DIO and working capital analysis. One source of truth.

Purchase Data → GST Health DIP purchase orders feed FP's GST transaction engine. ITC matching, GSTR-2A recon, and compliance — all automatic.

AI Forecast → Financial Planning DIP demand forecasts × margins = revenue projections for FP's FP&A module. Budget vs actual driven by real demand data.



Stock Recommendations

AI-optimized order quantities based on demand forecasts and inventory optimization.

Summary

SKUs **5**
Total Units **3,148**
Order Value **₹10,142,478**
Expected Profit **₹10,202,282**
Avg Service Level **76.6%**

Model Used: LightGBM — Forecasts generated by the champion AI model

Order Recommendations

	SKU Code	Product Name	On Hand	On Order	Monthly Forecast	Lead Time Demand (μL)	Uncertainty (σL)	Safety Stock	Recommended Stock (S*)	Order Qty	Unit Cost (₹)	Sell Price (₹)	Service Level (α)	Expected Profit (₹)
2	SKU-101	Premium Mixer	77	65	1061	1061	136.8	157	1218	1076	₹1742.19	₹7512.46	87.4%	₹5,774,461
1	SKU-102	Regular Mixer	182	76	797	797	136.8	122	918	660	₹2329.67	₹5977.35	81.3%	₹2,521,865
3	SKU-103	Compact Grinder	198	49	842	842	136.8	0	842	595	₹5655.05	₹5500.68	50.0%	₹478,947
0	SKU-104	Deluxe Grinder	80	22	484	484	136.8	97	581	479	₹5188.90	₹8012.29	76.1%	₹682,169
4	SKU-105	Juicer Pro	130	40	345	345	136.8	163	508	338	₹2602.34	₹9015.53	88.4%	₹1,702,734

DIP stock recommendations flowing into FP cash flow forecast and working capital dashboard

Monthly Cash Flow Statement

Shows cash inflows and outflows by month

Month	Cash Inflow	Cash Outflow	Net Cash Flow	inventory_value	output_gst	input_gst	net_gst_payable
2024-01	₹1.82 Cr	₹0	₹1.82 Cr		0	3283341.1236	0
2024-02	₹2.53 Cr	₹0	₹2.53 Cr		0	4547531.8314	0
2024-03	₹2.68 Cr	₹0	₹2.68 Cr		0	4826565.0252	0
2024-04	₹2.38 Cr	₹0	₹2.38 Cr		0	4283283.5046	0
2024-05	₹2.73 Cr	₹0	₹2.73 Cr		0	4916618.6958	0
2024-06	₹1.99 Cr	₹0	₹1.99 Cr		0	3588754.2804	0
2024-07	₹3.10 Cr	₹0	₹3.10 Cr		0	5573110.2624	0
2024-08	₹2.28 Cr	₹0	₹2.28 Cr		0	4105427.9364	0
2024-09	₹2.62 Cr	₹0	₹2.62 Cr		0	4716309.4362	0

DIP stock recommendations flowing into FP cash flow forecast and working capital dashboard



ShivAI Supply Chain Solutions

DIP: 10 AI MODELS + NEWSVENDOR + 13 CONNECTORS

10 Forecast Models

NaiveLast3M, ETS, SARIMA, Croston, TSB, RandomForest, XGBoost, LightGBM, CatBoost, Prophet + Ensemble.

News vendor Optimization

Optimal S* per SKU. Service level vs holding cost trade-off. Expected profit per cycle. What-if panel.

13 Data Connectors

Tally, SAP B1, Marg, Busy, Zoho, Shopify, Amazon, Flipkart, QuickBooks, PostgreSQL, Generic POS, Excel, Custom.

FP: 10 FINANCIAL MODULES + GST + e-INVOICE

Credit Risk + Payment Optimization

Score customers. Optimize payment timing. Cash allocation when tight.

Profitability + Financial Ratios

Product margin, customer profitability, Pareto. Liquidity, CCC, leverage.

Working Capital + AR/AP Aging

DSO/DIO/DPO targets. Collection probability by bucket. Concentration risk.

GST Health + Compliance Calendar

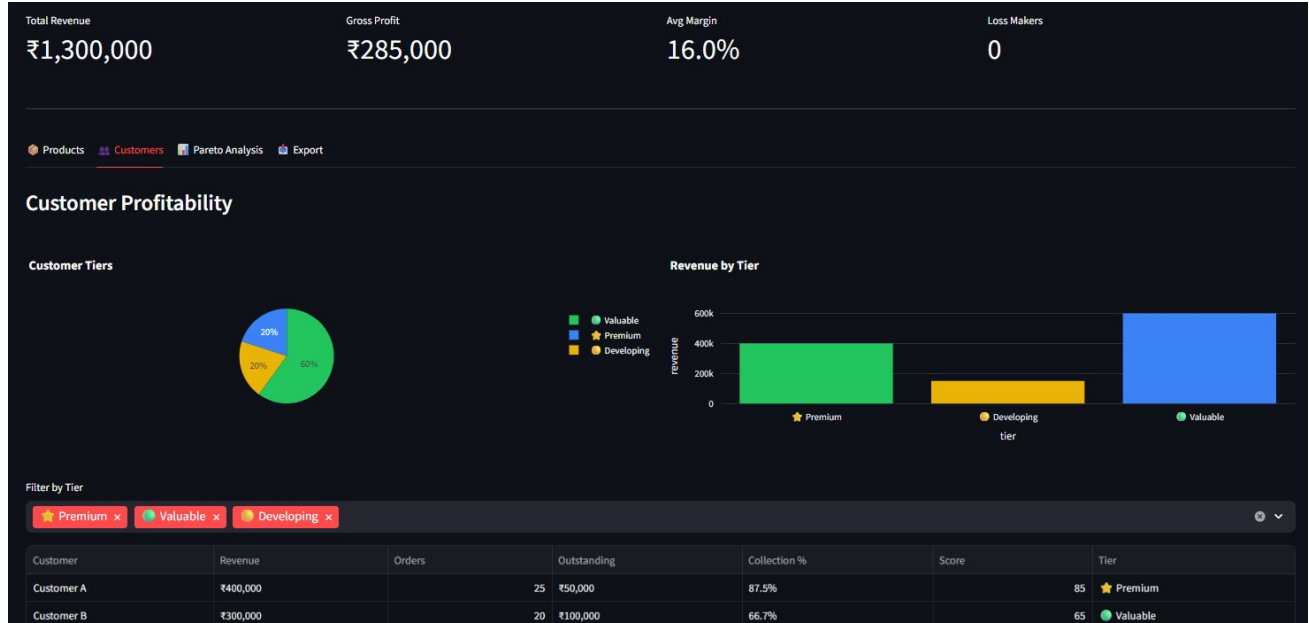
ITC match, GSTR-1 vs 3B, penalty calc. All deadlines with 3-day alerts.

Cash Flow + Bank Reconciliation

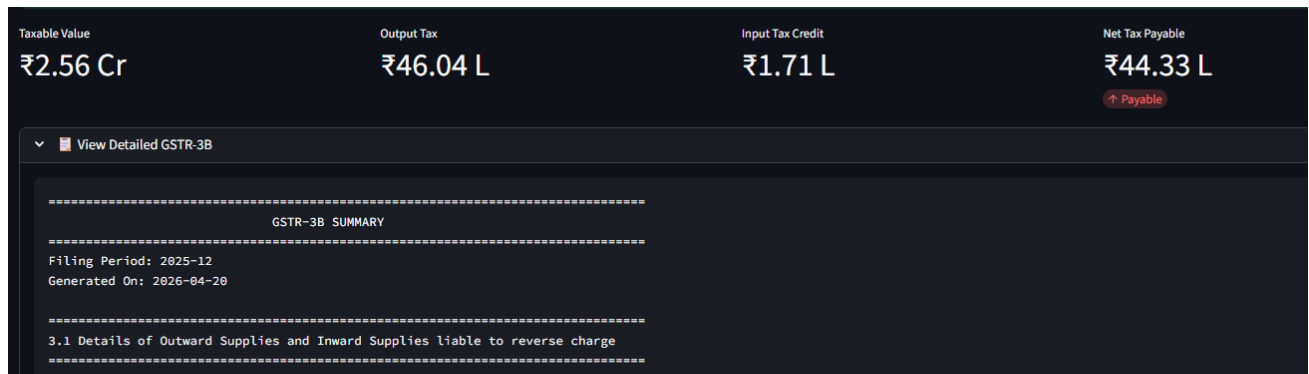
AR collection + AP payments + fixed outflows. Match confidence auto-recon.

Plus: GST Engine, e-Invoice, TDS/TCS

1,045-line GST engine. IRN-ready e-Invoice. TDS computation. Balance Sheet.



Profitability Analysis – Identify loss makers and optimize your product/customer mix



GST Compliance Reports – Compute GST – Generate GSTR-3B summary, GST Registers, Transactions, Reconciliation

THE BUSINESS CASE

10+10 AI models + Finance modules	40% Fewer stockouts	25% Lower holding cost	Rs.50K+ GST penalties avoided
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WHO IT'S FOR

FMCG Distributors High SKU count, tight margins, cash flow pressure. Rs.10-100 Cr.	Auto Parts Dealers Intermittent demand, long tail SKUs, critical availability.	Pharma Distribution Expiry-sensitive, regulatory compliance, seasonal demand.	Owner-Operators One person decides stock AND manages finance. Needs both in one place.
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Forecast the Demand. Finance the Stock. One System.

Start your 30-day Pilot (₹4,999) | contact@shivaiscsolutions.com | www.shivaiscsolutions.com