



INTEGRATED MANUFACTURING OPERATIONS

Plan the Materials. Control the Money.

ShivAI Manufacturer Inventory Planner + Finance Planner in one integrated suite. MRP with 4 engines (MRP, BOM, Capacity, AI Forecasting) feeds directly into 10 financial modules (Credit Risk, GST Health, Cash Flow, Bank Recon, AR/AP, Profitability, and more). Planned Purchase Orders from MRP flow into Payment Optimization. Inventory values flow into Working Capital. One data upload. Two intelligence systems. Zero gap between planning and finance.

THE INTEGRATION PAIN POINT

Planning Says 'Order.' Finance Says 'No Cash.'

MRP Runs in Isolation

Production planner generates Rs.45L of purchase orders. Nobody checked if cash flow can absorb them. Finance finds out when the cheques bounce.

Finance Has No Visibility into Demand

Cash flow forecast is a guess because finance doesn't see MRP planned orders, capacity loads, or material requirements. Budget vs actual is always a surprise.

Two Systems, Two Versions of Truth

Inventory value in MRP doesn't match inventory value in finance. Procurement costs in one system, payment terms in another. Month-end recon takes 3 days.

GST on Planned POs Is Manual

MRP says order 500 units from Supplier X. Finance manually calculates GST, creates the PO document, types supplier details. Errors everywhere.

WHAT INTEGRATION GIVES YOU

MRP Output → Finance Input. Automatically.

MRP Planned Orders → Cash Flow Forecast MRP generates planned purchase orders with quantities, dates, and supplier costs. Finance uses these directly to project cash outflows. No manual re-entry. Cash gap prediction weeks in advance.

Inventory Values → Working Capital MRP knows on-hand inventory by item with standard costs. Finance uses this for DIO calculation, working capital analysis, and inventory valuation. One number. One truth.

Capacity Load → Budget Variance CRP shows required hours by work center. Finance maps these to labor costs for budget vs actual analysis. Overloaded work center = overtime cost = budget variance explained.

Supplier Terms → Payment Optimization MRP supplier data (costs, lead times) feeds into Finance payment optimization. Early discount ROI calculated automatically. Cash allocation prioritized by MRP urgency.

GST Compliance → PO Generation MRP planned orders + Finance GST engine = GST-compliant purchase orders generated automatically. Supplier details, HSN codes, GST rates — all from master data.

Financial Reports

Profit & Loss

Cash Flow

Product Performance

Inventory Valuation

Monthly Profit & Loss Statement

Shows revenue, cost of goods sold, and gross margin by month

Month	Revenue	Cost of Goods Sold	Gross Margin
2024-01	₹96.96 L	₹66.61 L	₹30.34 L
2024-02	₹95.18 L	₹65.21 L	₹29.97 L
2024-03	₹1.39 Cr	₹95.67 L	₹43.55 L
2024-04	₹1.53 Cr	₹1.05 Cr	₹47.95 L
2024-05	₹1.75 Cr	₹1.20 Cr	₹54.72 L
2024-06	₹1.58 Cr	₹1.08 Cr	₹49.59 L
2024-07	₹90.22 L	₹61.91 L	₹28.31 L
2024-08	₹80.02 L	₹54.96 L	₹25.05 L
2024-09	₹77.85 L	₹53.41 L	₹24.44 L
2024-10	₹1.12 Cr	₹76.93 L	₹35.28 L

Total Revenue

₹28.96 Cr

Total Gross Margin

₹9.09 Cr

Average Margin

31.4%

Integrated dashboard — MRP planned orders feeding cash flow forecast, inventory valuation linked to working capital



MRP Engine

Time-phased planning by low-level code. Lot sizing (LFU/EOQ/Fixed/Period). Safety stock. Planned purchase + production orders.

BOM Explosion

Unlimited depth with scrap factors. Cycle detection. Where-used inquiry. Cumulative lead time. BOM validation.

Capacity Planning (CRP)

Load from MRP + routing. Per-work-center utilization. Overload detection. Load leveling. What-if simulation.

AI Demand Forecasting

6 models: Naive, MA, Exp Smoothing, Random Forest, XGBoost, LightGBM. Ensemble. Prediction intervals.

BOM Explorer
Select Item to Explode: FG-CP-100 - Centrifugal Pump 1HP
Quantity: 80
BOM Structure:
[FG] FG-CP-100 - Centrifugal Pump 1HP (x80.00)
[SA] SA-TMP-S - Impeller Assembly Small (x80.00)
[RM] RM-BR-001 - Brass Rod (x64.00)
[RM] RM-KEY-01 - Keyway Stock 5mm (x4.00)
[SA] SA-CAS-S - Pump Casing Small (x80.00)
[RM] RM-CE-001 - Cast Iron Grade 20 - Ingot (x640.00)
[RM] RM-PNT-01 - Primer Coat - Grey (x16.00)
[RM] RM-PNT-03 - Enamel Paint - Green (x24.00)
[SA] SA-SHF-S - Pump Shaft Assembly Small (x80.00)
[RM] RM-SS-001 - Stainless Steel 304 - Bar (x96.00)
[RM] RM-KEY-01 - Keyway Stock 5mm (x8.00)
[SA] SA-RSL-S - Mechanical Seal Small (x80.00)
[RM] RM-SEL-01 - Mechanical Seal 20mm (x80.00)
[RM] RM-ORS-01 - O-Ring Set Small (x80.00)
[FG] FG-EM-100 - Electric Motor 1HP (x80.00)

Planned Orders
Purchase Orders: 252
Production Orders: 0
Item Code | Item Name
RM-SS-001 | Stainless Steel 304 - Bar
RM-SS-001 | Stainless Steel 304 - Bar
RM-SS-001 | Stainless Steel 304 - Bar
RM-SS-002 | Stainless Steel 316 - Bar
RM-SS-002 | Stainless Steel 316 - Bar
RM-SEL-01 | Mechanical Seal 20mm
RM-SEL-01 | Mechanical Seal 20mm
RM-SEL-01 | Mechanical Seal 20mm
RM-SEL-02 | Mechanical Seal 25mm
RM-PKG-02 | Corrugated Box Medium

Capacity Results

Work Center	Total Load (hrs)	Available (hrs)	Avg Utilization
WC-CNC-01	0.0	979.2	116.0%
WC-CNC-02	0.0	979.2	95.6%
WC-LAT-01	0.0	921.6	34.5%
WC-LAT-02	0.0	921.6	19.9%
WC-WND-01	0.0	864.0	286.4%
WC-WND-02	0.0	864.0	44.3%
WC-ASM-01	0.0	979.2	303.8%
WC-ASM-02	0.0	979.2	37.1%
WC-TST-01	0.0	1036.8	21.6%
WC-TST-02	0.0	1036.8	40.3%

MIP Engines — MRP planning, Planned orders, Capacity utilization, BOM Explorer

THE MFP ENGINE — 10 FINANCIAL MODULES

1. Credit Risk Scoring

Score 0-100. 6 weighted components. Risk tiers with credit limit recommendations.

2. Payment Optimization

Early discount ROI. Priority scoring. Cash allocation algorithm.

3. Profitability Analysis

Product margin, customer profitability, Pareto 80/20.

4. Financial Ratios

Liquidity, efficiency, CCC, profitability, leverage. Traffic-light.

5. Working Capital

DSO + DIO + DPO = CCC. Improvement potential targets.

6. AR/AP Aging

Collection probability by bucket. Concentration risk.

7. GST Health Check

ITC match rate. GSTR-1 vs 3B. Penalty calculator.

8. Compliance Calendar

GST + TDS + PF/ESI + Advance Tax. 3-day alerts.

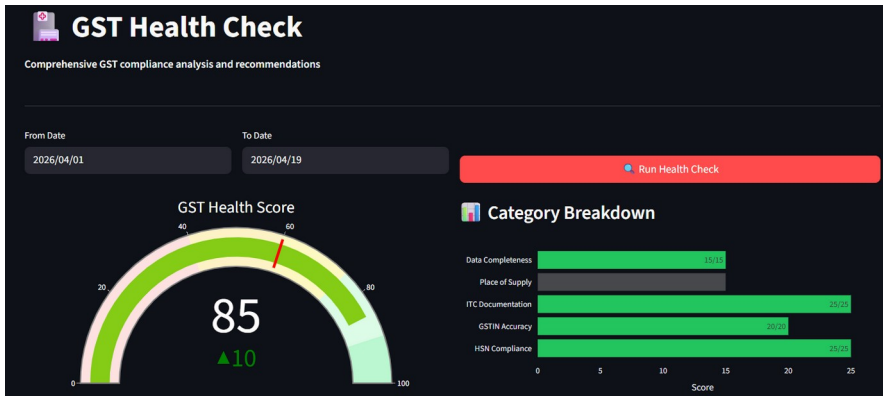
9. Cash Flow Forecasting

AR probability + AP + fixed outflows. Cash gap prediction.

10. Bank Reconciliation

Match confidence scoring. Auto-recon. Exception aging.

Plus: GST Transaction Engine (1,045 lines), e-Invoice + e-Way Bill generation, GSTR-2A Reconciliation, TDS/TCS Engine, Balance Sheet, FP&A with budget variance, MIS pack exporter.



Comprehensive GST compliance analysis — Data completeness, GSTIN accuracy, HSN compliance

THE BUSINESS CASE

4+10 Planning + Finance modules	35% Lower inventory holding	Rs.50K+ GST penalties avoided	Zero Gap between plan and finance
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WHO IT'S FOR

Single-Plant Manufacturing Rs.10-100 Cr. Discrete or process manufacturing.	Owner + Finance Manager One system for production planning AND financial control.	Tally Users MFP integrates with Tally. MIP reads Excel. Both work alongside existing ERP.	MSME Growing Fast Revenue growing but cash flow chaotic. Need planning discipline + financial visibility.
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Plan the Materials. Control the Money. One System.
Start your 30-day Pilot (₹4,999) | contact@shivaiscsolutions.com | www.shivaiscsolutions.com