AI-Led Demand Planning That Turned Forecast Accuracy into working capital and P&L Impact



How a leading consumer electricals manufacturer transformed spreadsheet-led planning into an AI/ML-driven demand planning process that is more accurate, collaborative, and financially measurable.

A leading Indian consumer electricals manufacturer with ~₹2,900 Cr FY24 revenue, 125,000+ retail outlets, and presence across India and 35 export markets was managing demand planning through spreadsheets, segment-level forecasts, and experience-led overrides.

As the business scaled across Electrical Consumer Durables, Lighting, and Switchgear, the existing planning model began limiting performance. On the recognized demand-planning maturity curve, the function was operating at Stage 2 – Reactive, with SKU-level forecast accuracy at around 48%, weak branch-level visibility, difficulty predicting seasonal peaks, and an S&OP process that remained largely supply-chain led.

The business needed more than a forecasting tool. It needed a planning architecture that could bring demand signals, commercial intelligence, and supply-chain execution into one aligned process.

The Shift: From Reactive Forecasting to Integrated Demand Intelligence

3SC redesigned the demand planning process using an AI-led forecasting model built at SKU × branch level, with forecast accuracy measured at National, Regional, and Branch levels. Instead of planning only at a national or segment level, the new model created demand forecasts at the level where inventory, service, and replenishment decisions are actually made.

The platform brought statistical forecasting, automated outlier treatment with an audit trail, sales and marketing inputs, and consensus planning into one workflow. This enabled planning teams to move from manual reconciliation to a structured S&OP rhythm, where sales, marketing, planning, and supply chain worked from the same set of numbers. As a result, the function moved from Stage 2 – Reactive to Stage 4 – Integrated on the demand-planning maturity curve.

Key Outcomes Delivered

	Area	Before	After	Impact
	SKU-level forecast accuracy (WMAPE-based)	48%	67%	**+19 percentage points**
	Inventory cover (DOH)	52 days	44 days	**8 days reduction (-15%); Frees up working capital.**
	S&OP cycle time	26 days	17 days	**1.5* faster cycle through workflow redesign**
	Baseline forecast effort	Manual-heavy	AI-led baseline	**40% reduction in planning time**
	Peak-season stockouts	Recurring challenge	Better anticipated	**-10% reduction; higher service level**
	Commercial adoption	Supply-chain led	80+ users	**Sales and marketing integrated into S&OP**
	Time to first impact	–	120 days	**Early value post go-live**
	Rollout duration	–	6 months	**End-to-end implementation**

Business Impact Created

- ~₹16 Cr annual recurring P&L impact through lost sales recovery, lower inventory carrying cost, reduced obsolescence, and avoided emergency logistics.
- ~₹43 Cr working capital released through an 8-day reduction in inventory cover.
- Improved seasonal readiness with better visibility into demand peaks and lower stockout risk.
- Faster planning decisions through a shorter S&OP cycle and reduced manual forecasting effort.
- Stronger cross-functional alignment as sales, marketing, planning, and supply chain moved to one consensus number.

From Planning Accuracy to Enterprise Impact

For complex, seasonal, multi-segment supply chains, demand planning is no longer just a forecasting function. It directly influences revenue conversion, working capital efficiency, service levels, and logistics cost.

This engagement shows what changes when planning moves from instinct-led forecasting to AI-supported, consensus-driven decision-making. AI raised forecast accuracy, while workflow re-engineering compressed the S&OP cycle. The forecast becomes more than a supply-chain output – it becomes a shared business view that helps commercial and supply-chain teams decide faster, plan better, and respond earlier.

Within 6 months, the organization moved from reactive planning to an integrated demand planning model with measurable gains in accuracy, inventory productivity, planning speed, and financial performance.