Proposal: Plant-wide Inventory & Procurement Management System

1. Introduction

This proposal outlines the design, development, and implementation of a Plant-wide Inventory & Procurement Management System for an Ore Processing Unit with 6 Departments, 1 Common Store, and approximately 5000 SKUs. The system ensures material control, transparency, operational efficiency, and audit readiness through approval-based workflows.

2. Objectives

- End-to-end traceability of materials
- Eliminate stock-outs and emergency purchases
- Standardize approvals and procurement
- Enable data-driven inventory decisions
- Improve plant uptime and cost control

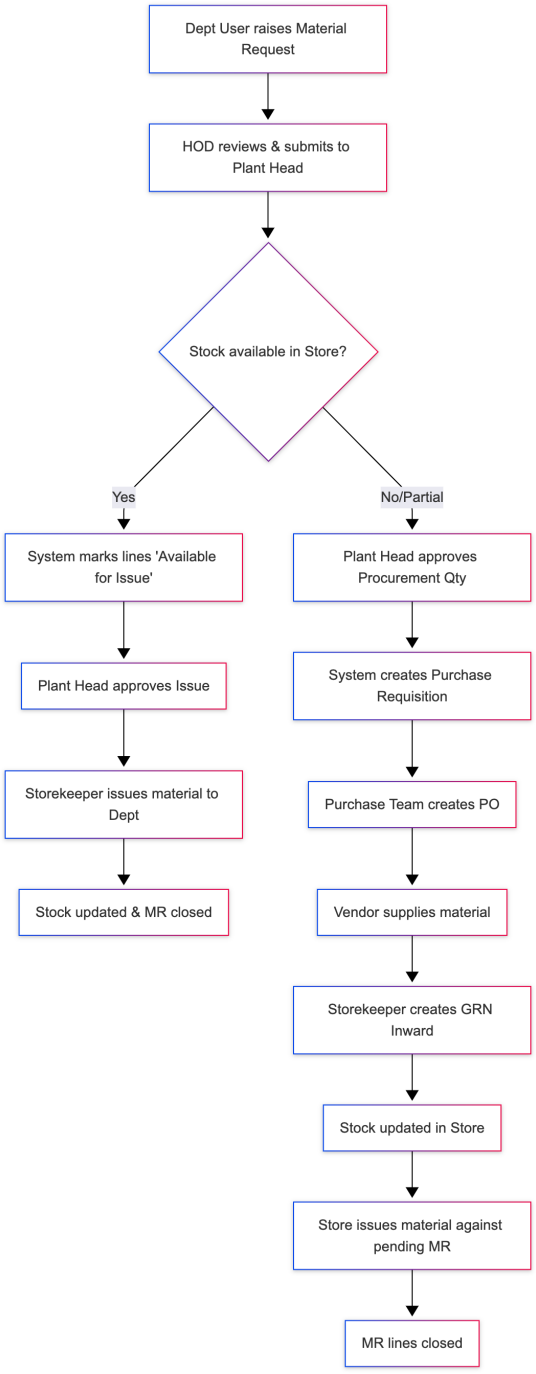
3. System Overview

The proposed Inventory & Procurement Management System is a centralized, web-based solution designed to bring complete visibility, control, and traceability to material movement across the plant. It digitizes and standardizes the entire lifecycle of materials—from departmental requirement generation through approvals, store issuance, procurement, inwarding, and consumption—under a single, role-driven platform.

The system operates on clearly defined approval workflows aligned with organizational hierarchy. Material requests originate from user departments, are reviewed by respective Heads of Department, and routed to the Plant Head for final approval. Based on real-time stock availability in the Common Store, the system automatically determines whether the requirement can be fulfilled internally or must proceed for procurement, ensuring informed and timely decision-making at every stage.

Store operations are tightly integrated into the workflow, enabling controlled issuance, partial fulfilment, returns, and inward processing against approved requests and purchase orders. Real-time stock updates, bin/location tracking, and configurable reorder levels ensure accurate inventory positioning and minimize stock-outs, excess inventory, and emergency purchases. The procurement module streamlines purchase requisitions, purchase orders, and goods receipt, providing full traceability from demand to receipt.

The system incorporates robust role-based access, audit trails, and reporting to support operational accountability and management oversight. Comprehensive dashboards and reports provide insights into stock levels, consumption patterns, pending approvals, slow-moving items, and department-wise usage, enabling data-driven planning and cost control. Built on a scalable and modular architecture, the solution supports phased enhancement and future integration with finance or ERP systems, ensuring that the organization's investment remains secure and adaptable as operational complexity grows.



4. Option 1 – Core Control System
Timeline: 10–12 weeks
Investment: ₹8.5 – ₹10.5 Lakhs (Excl. GST)

Scope:
- Item, Vendor, Department, User Masters
- Material Requisition (Dept → HOD → Plant Head)
- Reorder Levels & Low-stock Alerts
- Stock availability check
- Store Issue & Partial Issue
- Basic Purchase (PR → PO → GRN)
- Stock & Pending Approval Reports
- Role-based access & reports

Exclusions:
- Advanced inventory planning
- Analytics & dashboards
- ERP integration

5. Option 2 – Operations-Optimized System
Timeline: 14–16 weeks
Investment: ₹16.5 – ₹18.5 Lakhs (Excl. GST)

Includes everything in Option 1 plus:
- Automatic linkage of inward stock to pending issues
- Department & machine-wise consumption
- Slow / non-moving inventory reports
- Bin / location management
- Approval aging and delay analytics
- Dashboards for Plant Head & Store

6. Option 3 – Enterprise Control & Compliance System
Timeline: 18–20 weeks
Investment: ₹25 – ₹27 Lakhs (Excl. GST)

Includes everything in Option 2 plus:
- Quality Check workflow on GRN
- Batch / Lot / Shelf-life tracking
- 3-way matching (PO–GRN–Invoice)
- Limited ERP/Tally/SAP integration
- Advanced audit & compliance reports
- Customized MIS dashboards for management

7. Commercials & Payment Milestones

Suggested Milestones:
30% – Project kickoff & SRS sign-off
25% – Core workflows completed
25% – Procurement & inventory controls
15% – UAT sign-off
5% – Go-live

8. Support & Maintenance

Annual support is charged separately (applicable after 12 months):
- Operational Support: 15–20%

9. Assumptions & Exclusions

- Single plant deployment
- Standard web browsers
- Stable internet connectivity
- Hardware, barcode/RFID not included

10. Conclusion

These three implementation options allow the organization to select an inventory and procurement control framework aligned with its current operational needs and investment priorities. The modular design ensures that any option selected today can be enhanced in the future without rework, protecting the organization’s investment while supporting long-term growth.