PRODUCTION COST CALCULATOR

Date-Wise Delivery Plan (Oct–Nov 2025)

Milestone	Deliverables	Timeline	Dates	% Payment	Amount (₹)
M1: Project Kickoff & Setup	Requirement freeze, repo setup, environments	**Day 1–3**	**Oct 4 – Oct 6**	10%	6,300
M2: Core Modules (User, Product, Raw Material, Vendor)	Auth + Roles, Product mgmt, Raw material & vendor mgmt	**Day 4–15**	**Oct 7 – Oct 18**	25%	15,750
M3: Costing Modules (Labor, Machine, Overheads, Wastage, Packaging, Transport, Profit)	Cost engine with all cost contributors integrated	**Day 16–28**	**Oct 19 – Oct 31**	25%	15,750
M4: Reports, Dashboards, Simulations	KPI dashboards, exports, "What-if" simulations	**Day 29–36**	**Nov 1 – Nov 8**	20%	12,600
M5: Final Delivery (Core Integration) (Batch mgmt, History, Notifications, Security)	Fully integrated system ready	**Day 37–40**	**Nov 9 – Nov 12**	10%	6,300
M6: Client Testing & Closure	10 days UAT, bug fixes, deployment, docs handover, sign-off	**Day 41–50**	**Nov 13 – Nov 22**	10%	6,300

Summary

- **Development Phase:** Oct 4 – Nov 12 (40 days)
- **Client Testing & Closure:** Nov 13 – Nov 22 (10 days)
- **Final Project Closure & Payment: Nov 22, 2025**

Milestone-Aligned System Story

M2: Core Modules (Oct 7 – Oct 18, 2025)

The system first comes alive with **foundations of user and product management**:

- **User Management in Action**:
  The Admin logs into the system with secure JWT authentication. Roles (Admin, Production Manager, Accountant, Staff) are created, each with permissions tailored to their responsibilities. Admin can add new users, reset passwords, or remove inactive accounts.
- **Product & Batch Setup**:
  A Production Manager adds new products with SKUs, descriptions, and batch sizes. Each product can have multiple batch sizes defined.
  The Accountant searches and filters the product list easily with pagination and sorting.
- **Raw Material & Vendor Integration**:
  Raw materials are created with name, unit price, and vendor assignment. For example, "Steel Sheet" with price ₹200/kg and Vendor "ABC Metals."
  Stock quantities are tracked, and the system automatically alerts when quantities are running low.
  Vendors are also managed independently, with details like contact info and emails linked to the materials they supply.

End of M2 Story: The company can securely log in, manage users, products, materials, and vendors – establishing the digital foundation of operations.

M3: Costing Modules (Oct 19 – Oct 31, 2025)

The cost engine is now activated with **labor, machine, utility, overheads, wastage, and profit**:

- **Labor Costs**:
  Managers log labor hours for batches (direct & indirect). The system calculates wages automatically, factoring overtime where applicable.
- **Machine & Utility Costs**:
  Machine usage is tracked by hours and costs per hour. Utility expenses (electricity, water) are added. A batch of 500 units now shows exactly how much machine + utility it consumed.
- **Overheads & Wastage**:
  Fixed or percentage-based overheads are applied automatically (e.g., 10% admin cost).
  Material wastage is recorded per batch – e.g., 5% steel wasted – and the system recalculates adjusted costs. Scrap resale value reduces the net cost.
- **Packaging, Transport & Profit**:
  Costs for packaging (₹2/unit) and transportation (₹3,000 per batch) are added.
  A profit margin (say 20%) is applied, and the system instantly suggests a **selling price per unit**.

End of M3 Story: For the first time, the company sees a complete **batch costing breakdown** – material + labor + machines + overhead + transport + profit – giving them a true per-unit cost and selling price.

M4: Reports, Dashboards, Simulations (Nov 1 – Nov 8, 2025)
Now the system becomes **analytical and visual**:

- **Reports & Dashboards**:
  Managers open a dashboard showing cost breakdowns (Material 45%, Labor 30%, Overhead 10%, Transport 15%).
  Comparisons are visible – e.g., October vs September batches, or Product A vs Product B.
  KPIs such as break-even quantity, total profit, and per-unit margin are always visible.
- **Exports**:
  Reports can be exported in **PDF/Excel** formats to share with accountants or management meetings.
- **Scenario Simulations ("What-If")**:
  The Manager increases raw material cost by 15% in the simulator. Instantly, the dashboard recalculates unit cost, profit margin, and selling price.
  Two scenarios can be compared side by side – giving management foresight into price fluctuations.

End of M4 Story: Decision-makers can now see **clear insights, visual dashboards, and run simulations** to prepare for market changes.

M5: Final Delivery (Nov 9 – Nov 12, 2025)
The final integration stage ensures the system is **complete and production-ready**:

- **Batch Management**:
  The Production Manager creates batches, pulling in all cost contributors (materials, labor, machines, overheads, transport). The system auto-calculates total batch cost, per-unit cost, and break-even points.
- **History & Versioning**:
  Each batch is saved with a timestamp, enabling comparisons between multiple versions. Managers can check how costs evolved over time or across versions.
- **Notifications & Alerts**:
  Low-stock alerts are triggered (e.g., "Steel stock is below 100 kg"). Budget alerts notify when a batch exceeds the set threshold.
- **Security & Audit Trail**:
  Every action (e.g., a product edited, batch deleted, overhead added) is logged with user, timestamp, and role for compliance.

End of M5 Story: The system is **end-to-end functional**, with complete batch costing, history tracking, alerts, and role-based secured workflows.

M6: Client Testing & Closure (Nov 13 – Nov 22, 2025)

The project enters the **final phase with client involvement**:

- **UAT (User Acceptance Testing)**:
  The client's team logs in and tries all workflows – adding products, creating batches, simulating costs, exporting reports.
- **Bug Fixes & Polishing**:
  Any UI issues, edge case errors, or performance bottlenecks are resolved.
- **Documentation & Training**:
  Admin and user guides are provided (PDF/video as needed). Training sessions are conducted for staff.
- **Final Deployment**:
  The software is deployed on the client's production server. Access credentials and documentation are handed over.
- **Closure & Payment**:
  With final sign-off on Nov 22, the last milestone payment is made.

End of M6 Story: The client has a **fully operational Production Cost Calculator** – tested, deployed, and documented – ready for real-world use.