

Sai Hari Papers — Admin Dashboard Logic & UI Blueprint (Finalized)

This blueprint distills the **PRD (Aug 20, 2025)** requirements of Sai Hari Papers into a **unique, performance-oriented Admin Dashboard design**. It emphasizes usability, adaptive insights, and rapid decision-making for the core modules.

1) Dashboard Philosophy

- **Admin as Command Center:** Single screen that consolidates staff, machine, inventory, finance, and delivery KPIs.
 - **Adaptive Panels:** Widgets rearrange based on real-time data priority (e.g., payroll cutoff week → salary KPIs pushed top).
 - **Action-Oriented:** Every widget links directly to its respective workflow (e.g., “Low Stock” → auto-PO draft).
 - **Performance-first:** Cached summary queries + drill-down fetch on demand.
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2) Admin Dashboard Layout

Header Controls

- Global search (employee, item, order, challan).
- Date range switcher (Today / This Week / Month / Custom).
- Quick actions: **+Employee, +Work Order, +Invoice, +PO**.

KPI Tiles (Top Row)

1. **Attendance Status:** Present / Total Scheduled; color-coded (green $\geq 95\%$, amber 80–94%, red $< 80\%$).
2. Drilldown: absentee list, late logins, contract staff attendance.
3. **Employees on Leave:** Today vs Week; hover shows leave types (CL/SL/EL).
4. **Payroll Alerts:** Pending approvals, EMI cycles due, increment entries.
5. **Cash Flow Snapshot:** Income vs Expenses today; ledger anomalies flagged.

Middle Panels (Operational)

- **Inventory Alerts** (Left): Items below reorder threshold.
Logic: Alert if $\text{On-hand} < \text{ROP} = (\text{Avg Daily Use} \times \text{Lead Time}) + \text{Safety Stock}$.
CTA: **Create PO / Adjust Stock**.
- **Machine Health & Service** (Center): Machines due for PM or in downtime.
Logic: Alert if $(\text{hours_since_last_pm} \geq \text{threshold})$ OR $(\text{days_since_pm} \geq \text{threshold})$.
CTA: **Create Service Log / Assign Technician**.

- **Work Orders At-Risk** (Right): WOs behind schedule, or defective output >5%.
CTA: **Reassign / Adjust routing / Issue fine.**

Lower Panels (Finance & Delivery)

- **Delivery Challans:** Pending dispatch or collection; DC aging buckets.
CTA: **Generate DC / Mark Collected.**
- **Invoices & Payments:** Unpaid invoices by aging (0–30, 30–60, >60).
CTA: **Send Reminder / Record Payment.**
- **Ledger Balance:** Last 7 days trend, category filters (expenses vs income).

Side/Alert Panel (Real-Time)

- Biometric sync health (face/fingerprint devices online/offline).
- Overdue POs or GRNs.
- QC rejection % > tolerance.
- Payroll processing errors (deduction mismatch, duplicate EMI).
- Safety or compliance flags (audit log anomalies).

3) Dashboard Data Logic

- **Attendance %** = $\text{Present} \div \text{Scheduled}$ (exclude approved leave if HR policy demands).
- **Payroll Alert** = if pending approvals > 0 OR EMI due within 3 days.
- **Inventory Low Stock** = if On-hand + On-order < ROP.
- **Machine Due** = if `days_since_last_pm ≥ cycle` OR `meter_since_last_pm ≥ cycle`.
- **WO Delay** = if (Planned completion < today) AND (Actual status ≠ completed).
- **Cash Flow** = $\Sigma \text{Income} - \Sigma \text{Expenses}$ (daily ledger).
- **Invoice Aging** = Current date – Invoice due date.

4) UI Design Patterns

- **Modular Grid:** 3–4 resizable widget rows; drag-and-drop rearrangement.
- **Card-based KPIs** with hover drilldowns + quick actions.
- **Color-coded alerts** for thresholds (attendance, machine, inventory).
- **Interactive charts** (trend lines for cash flow, aging bars for invoices, donut for leave types).
- **Collapsible side alerts:** keep focus while surfacing exceptions.

5) Performance & Adaptivity

- Use **pre-aggregated views** for KPIs, refreshed every 5 minutes.
- Async load for drilldowns; prevent blocking UI.
- Device-aware responsiveness: tablet-first design for shopfloor/Admin mobility.

- **Adaptive priority:** If payroll cut-off week, salary KPIs pinned top; if inventory shortage, stock alerts pinned top.
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6) Uniqueness Factors

- **Smart Attention Engine:** reorders widgets dynamically by severity (e.g., machine breakdown supersedes payroll reminder).
 - **Direct-to-Action Workflow:** Every alert leads to action forms (PO, WO, Service Log, Invoice) in one click.
 - **Contextual Tooltips:** Each KPI shows formula + source dataset for transparency.
 - **Audit-Friendly:** Quick download of current state as PDF (attendance sheet, low stock list, ledger balance).
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7) Suggested Wireframe Blocks

- **Row 1:** 4 KPI tiles (Attendance, Leave, Payroll, Cash Flow).
 - **Row 2:** 3 panels (Inventory, Machines, Work Orders).
 - **Row 3:** 3 panels (Delivery Challans, Invoices, Ledger).
 - **Side Bar:** Alerts feed.
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8) Implementation Notes (Phase 1 Admin-Only)

- Single Admin role with full visibility.
 - Drilldowns limited to read-only where module is not fully rolled out (e.g., EMI history placeholder if payroll not implemented).
 - Export-ready panels for PDF/Excel compliance.
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Deliverable for UI Designer

Use this blueprint to: - Create **grid-based, adaptive dashboard mockups**. - Highlight unique design patterns (smart reordering, contextual tooltips). - Incorporate drilldowns into modals rather than full-page redirects. - Ensure every KPI/alert drives a workflow action.