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Gap Analysis

🧩 **GAP ANALYSIS**

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Overview

After modeling the current (AS-IS) and proposed (TO-BE) production management workflows, this **Gap Analysis** identifies the **key process inefficiencies**, their **impacts**, and the **required changes** to achieve digital optimization under the PMOS (Production Management Optimization System).

The goal is to illustrate how **manual, disconnected, and delayed operations** can be transformed into a **real-time, integrated, and data-driven process** using low-cost digital tools suitable for SMEs.

GAP ANALYSIS TABLE

AS-IS Process (Current State)	TO-BE Process (Proposed Solution)	Identified Gap	Action / Required Change
1️⃣ HR manually creates weekly schedules in Excel.	**HR Attendance System syncs with PMOS to auto-generate daily production schedules.**	No integration between HR attendance and production plan.	Implement HR data sync API; automate daily scheduling within PMOS.
2️⃣ Employees manually sign attendance sheets.	**Attendance data automatically recorded and stored in PMOS database.**	Time-consuming and error-prone attendance tracking.	Deploy digital attendance tracking (biometric or form-based sync).

AS-IS Process (Current State)	TO-BE Process (Proposed Solution)	Identified Gap	Action / Required Change
3️⃣ **Supervisors record output and downtime on paper.**	**Operators input production data via tablet/mobile in real-time.**	Paper-based input causes delay and data inaccuracy.	Introduce mobile data entry forms; provide basic device training.
4️⃣ **Daily production logs consolidated manually.**	**PMOS updates and centralizes data automatically.**	Data duplication and version mismatch across departments.	Establish a unified data repository with real-time synchronization.
5️⃣ **QC conducts inspections manually and logs defects in Excel.**	**QC logs defect data digitally; system calculates OEE and defect ratios automatically.**	No data link between QC and production → delays root cause analysis.	Digitalize QC inspections and integrate KPIs into shared dashboard.
6️⃣ **Reports are compiled manually at the end of the day (delayed 1–2 days).**	**PMOS auto-generates daily/weekly reports instantly.**	Manual reporting → delayed management decisions.	Enable automated report scheduling and validation workflow.
7️⃣ **Management decisions based on outdated or incomplete reports.**	**Managers monitor real-time dashboards (OEE, defect rate, productivity).**	No real-time KPI visibility or data-driven decision-making.	Implement Power BI or Data Studio dashboard linked to PMOS database.
8️⃣ **Downtime reasons recorded inconsistently or missing.**	**Downtime categories standardized in PMOS (e.g., maintenance, material delay, power cut).**	Lack of standardized downtime tracking reduces visibility.	Create downtime code list; enforce mandatory entry in PMOS.
9️⃣ **Departments operate in silos (HR, Production, QC each maintain separate Excel files).**	**All departments access one shared, role-based PMOS platform.**	Fragmented information, duplication, and poor communication.	Centralize system access with role-based permissions per department.
🔟 **No KPI tracking system.**	**Automatic KPI calculation (OEE,**	Managers rely on manual estimates,	Integrate KPI logic in PMOS; automate

AS-IS Process (Current State)	TO-BE Process (Proposed Solution)	Identified Gap	Action / Required Change
	output/shift, defect ratio) with visual dashboards.	not actual data.	performance analytics.