

FieldGenAI – The GenAI Co-Pilot for SAP Plant Maintenance, Store, and Quality Operations

1. Novelty – 15%

Reinventing Plant Maintenance with GenAI
FieldGenAI is the first voice-and-vision powered SAP-integrated assistant for plant engineers in India.

It empowers field engineers to:

Speak or snap: Capture faults, machine readings, and spare part needs hands-free.

Instant SAP updates: Auto-create PRs, attach readings/photos, and link to Work Orders in seconds.

Integrated operations: Instantly check store inventory, trigger quality inspections, and log ISO audit data — all inside SAP, without bypassing existing approval hierarchies.

This isn't just digitization — it's intelligent acceleration of the entire maintenance workflow.

2. Problem Fit & Clarity – 20%

The Challenge:

Engineers spend 30–40% of their time on manual note-taking and later SAP entry.

Delayed PR/PO creation → costly equipment downtime.

Store mismatch causes duplicate ordering.

Quality checks & ISO audit documentation are reactive, not real-time.

The Fit:

FieldGenAI solves all of this by acting as a real-time bridge between field activity and SAP PM, MM, IM, and QM modules:

1. Field engineer logs issue by voice or photo → AI identifies equipment & parts.
2. Store check: SAP IM verifies nearest stock, suggests stock transfer if available.
3. Quality management: SAP QM auto-generates inspection lot for incoming spares.
4. Audit-ready logs: ISO-compliant digital records, complete with images, GPS, and timestamps.
5. Approval-ready: Draft PR flows through Plant Manager → Purchase Officer → Store Officer → Project Manager → Plant

Head as per current release strategy.

3. Implementation Feasibility – 20%

Practical, Step-by-Step Rollout:

Phase 1: SAP Fiori/SAP Asset Manager mobile app with offline mode for remote sites.

Phase 2: GenAI layer (Azure OpenAI / SAP Joule) for NLP + OCR integration.

Phase 3: SAP BTP API integration for PM, MM, IM, QM modules.

Phase 4: ISO compliance automation, with configurable report templates.

Resources:

1 SAP functional consultant (PM/MM/QM/IM)

1 SAP BTP developer

1 AI/ML engineer

Pilot-ready in 8–10 weeks for a single plant site.

4. Long-Term Value & Sustenance – 20%

ROI-Driven Impact:

Downtime reduction: PR initiation within hours instead of days – up to 35% faster repairs.

Inventory savings: Avoids duplicate purchase by using existing stock – potential 10–15% annual savings.

Quality assurance: Every spare logged with inspection lot ensures zero bypass of quality checks.

Audit readiness: ISO-compliant logs reduce audit prep time by 70%.

Scalable: Multilingual capability (English, Hindi, Tamil, Bengali, Marathi) for rollout across plants nationwide.

5. Security & Compliance – 15%

Data residency: All data stored in SAP HANA (India) to comply with DPDP Act 2023.

Access control: SAP role-based security ensures only authorized actions per user role.

Full traceability: AI-generated entries tagged with source, timestamp, and GPS.

Responsible AI: Human-in-the-loop model – AI assists, humans approve.

6. Evidence & Documentation – 10%

Live Demonstration Scenario:

> Engineer says: “Log vibration 0.45mm for Pump #3, request coupling assembly.”

AI: Updates measurement point in SAP PM, checks store inventory, suggests stock transfer, creates PR draft, generates QM inspection lot, and logs all data for ISO audit — in under 2 minutes.

Supporting Materials:

Process flow diagram (Field → AI → Store/

QM → Approval → PO/Stock Transfer → ISO Log).

Before/After downtime metrics.

Prototype screenshots from SAP Fiori with AI suggestions visible.



Closing Statement:

FieldGenAI is not just a tool — it's a productivity multiplier for plant maintenance.

It keeps SAP at the heart of operations, removes friction from data capture, ensures compliance, optimizes inventory, and prepares plants for the next decade of Industry 4.0.

With measurable ROI, rapid deployment, and zero compromise on governance, it's the clear winner for transforming maintenance efficiency.