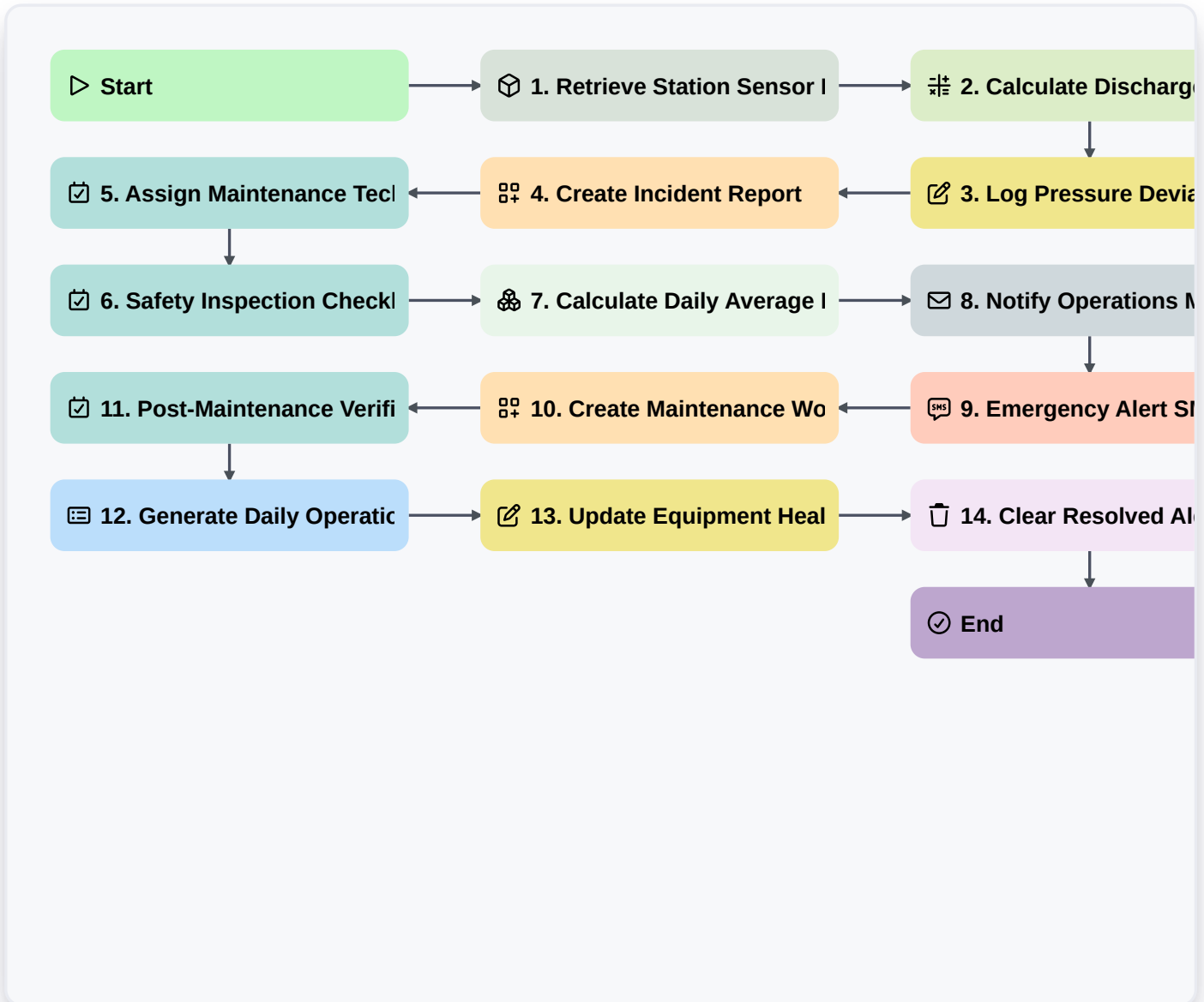


Gas Compression Station Operations



▷ Start

Start of the Workflow/Process.

📦 1. Retrieve Station Sensor Data

Fetch latest pressure, temperature, and flow rate readings from the Station Telemetry data model.

⚙️ 2. Calculate Discharge Pressure Differential

Calculate the difference between suction and discharge pressure to monitor compressor efficiency.

📝 3. Log Pressure Deviation

Update the Station Log entry with the newly calculated differential pressure value.

📄 4. Create Incident Report

Generate a new entry in the Incident Data Model if pressure levels exceed safety thresholds.

👤 5. Assign Maintenance Technician

Create a high-priority task for the on-call engineer to inspect the compressor unit.

📋 6. Safety Inspection Checklist

A mandatory checklist for the technician to verify valve positions, seal integrity, and lubrication levels.



7. Calculate Daily Average Flow

Aggregate all flow rate entries from the last 24 hours to determine the daily average throughput.

8. Notify Operations Manager

Send an automated email alert to the Operations Manager regarding the identified pressure deviation.

9. Emergency Alert SMS

Send an urgent SMS to the field supervisor if the system enters an Emergency Shutdown (ESD) state.

10. Create Maintenance Work Order

Create a new Work Order entry in the Maintenance module linked to the identified incident.

11. Post-Maintenance Verification Task

Create a task for the Quality Assurance officer to verify the station is back to operational parameters.

12. Generate Daily Operational Summary

Create a daily performance report summarizing all pressure, temperature, and flow aggregates for the shift.

13. Update Equipment Health Status

Update the Compressor Asset entry to reflect 'Under Maintenance' status.

14. Clear Resolved Alert Notifications

Delete temporary alert entries from the Active Alerts data model once the issue is resolved.

End

End of the Workflow/Process.