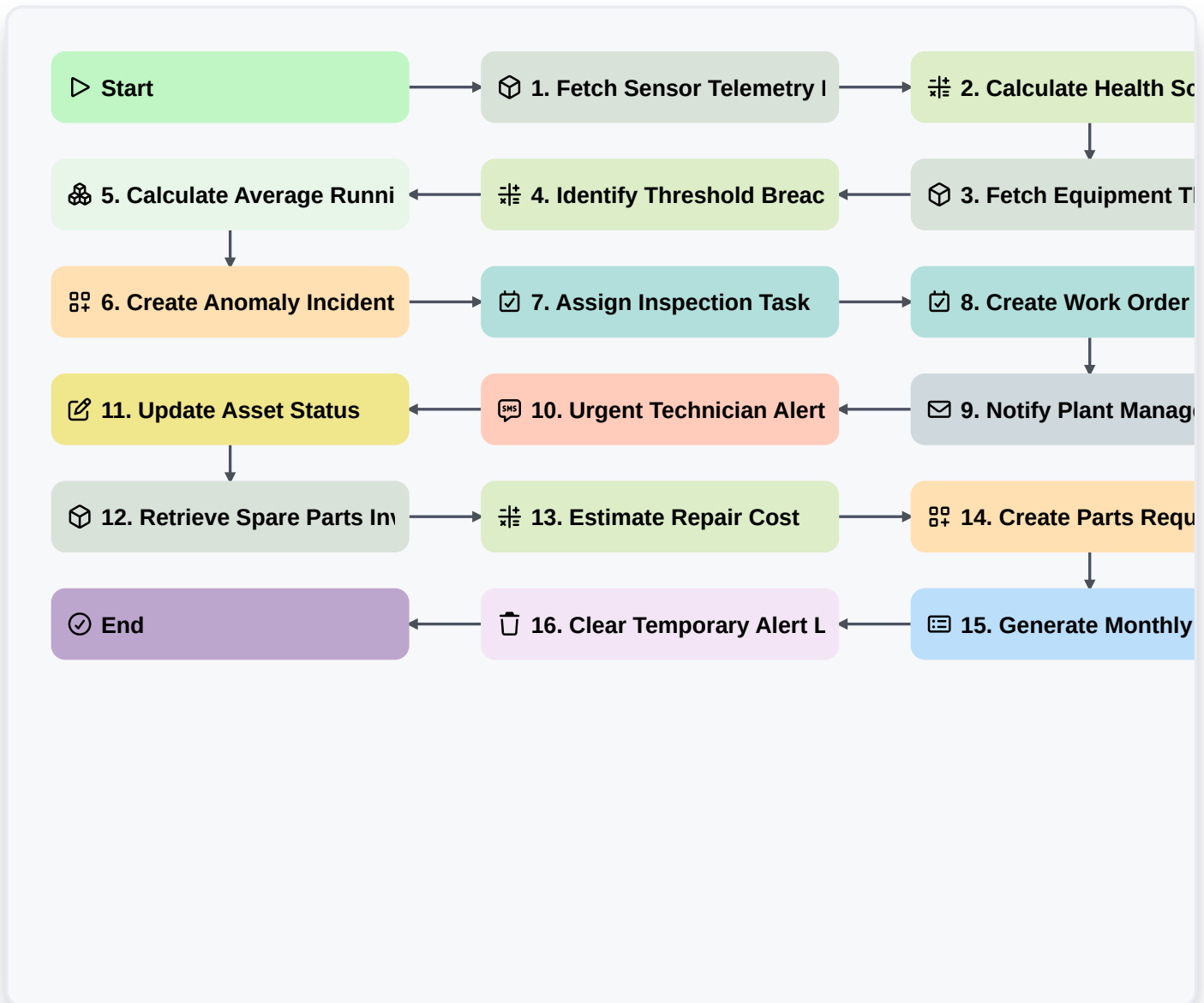


Condition-Based Maintenance Workflow



▷ Start

Start of the Workflow/Process.

📦 1. Fetch Sensor Telemetry Data

Retrieve recent vibration, temperature, and pressure readings from the Asset IoT data model.

🔢 2. Calculate Health Score

Execute a formula weighing temperature, vibration, and hours of operation to determine a degradation percentage.

📦 3. Fetch Equipment Thresholds

Get the predefined maximum allowable limit values for the specific asset being analyzed.

🔢 4. Identify Threshold Breach

Compare the calculated Health Score against the Equipment Thresholds to determine if an alert is triggered.

🔗 5. Calculate Average Running Hours

Aggregate all historical maintenance logs to find the average time between failures for this machine type.

📦 6. Create Anomaly Incident

Create a new entry in the 'Incidents' data model when a threshold breach is detected.



7. Assign Inspection Task

Create a task for the Maintenance Technician to perform a physical inspection of the asset.

8. Create Work Order

Generate a formal Work Order task in the Maintenance module if the inspection fails.

9. Notify Plant Manager

Send an email alert to the Plant Manager regarding the critical equipment status change.

10. Urgent Technician Alert

Send an SMS to the on-call technician if the anomaly score exceeds the 'Critical' threshold.

11. Update Asset Status

Update the 'Status' field in the Equipment data model from 'Operational' to 'Under Maintenance'.

12. Retrieve Spare Parts Inventory

Check the 'Inventory' data model to see if required replacement parts are available in stock.

13. Estimate Repair Cost

Calculate the estimated cost by summing part prices and estimated labor hours.

14. Create Parts Requisition

If parts are missing, create an entry in the 'Purchase Requests' data model.

15. Generate Monthly Reliability Report

Create a summary report aggregating all maintenance incidents and downtime duration for the month.

16. Clear Temporary Alert Logs

Delete transient/temporary alert entries from the system once the incident has been resolved and closed.

End

End of the Workflow/Process.