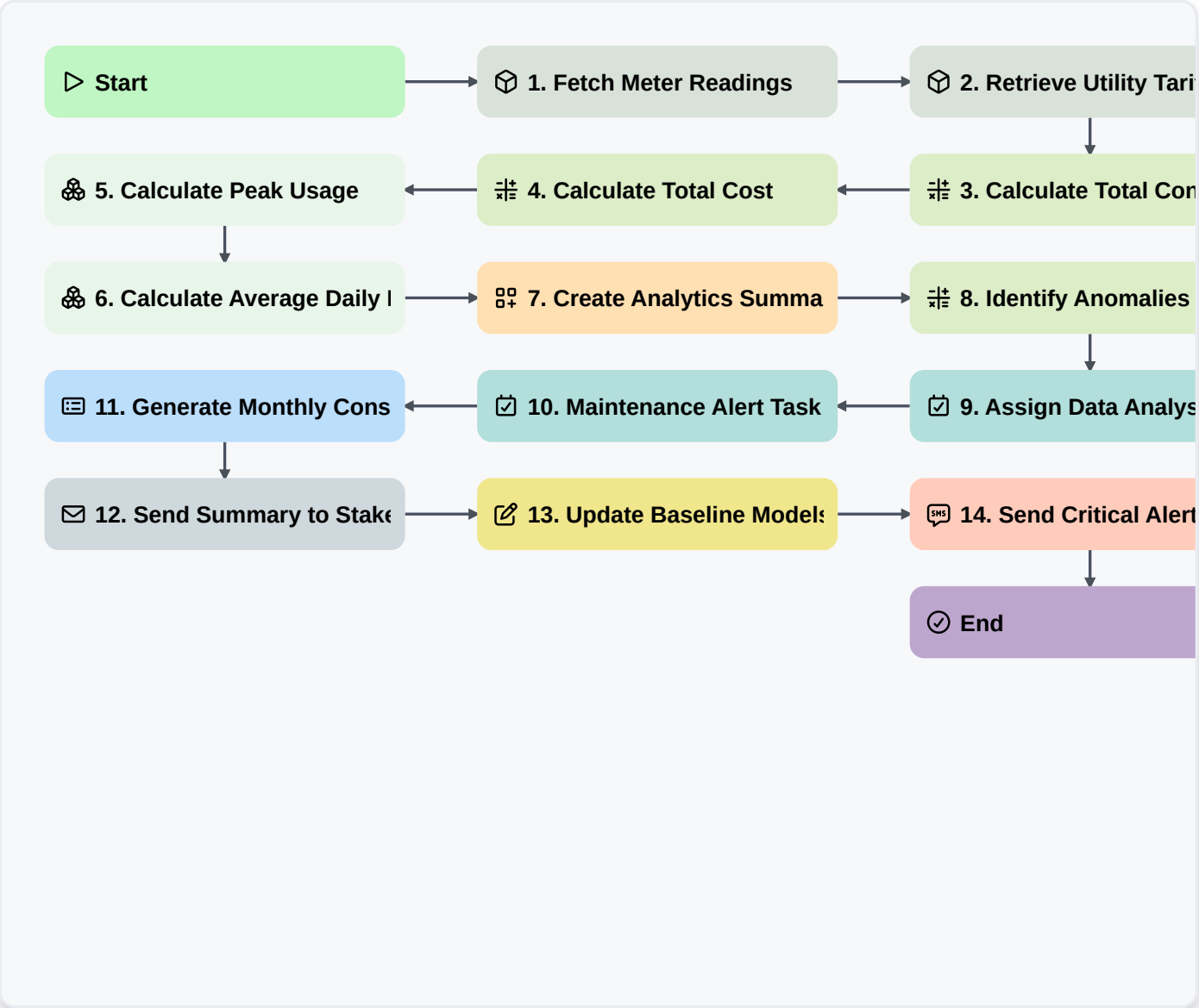
ChecklistGuro

Energy Consumption Analytics Process



Start
Start of the Workflow/Process.

1. Fetch Meter Readings
Retrieve all raw energy consumption entries from the Smart Meter Data Model for the specified period.

2. Retrieve Utility Tariffs
Get the current pricing and tax rates from the Energy Tariffs Data Model.

3. Calculate Total Consumption
Sum the kWh values from the retrieved meter readings to find the total energy used.

4. Calculate Total Cost
Multiply the total kWh by the retrieved tariff rate to determine the monetary cost.

5. Calculate Peak Usage
Identify the maximum (MAX) energy consumption value recorded in a single interval from the dataset.

6. Calculate Average Daily Load
Calculate the average (AVG) daily energy usage to establish a baseline.

7. Create Analytics Summary
Generate a new entry in the 'Energy Analytics Report' data model containing the calculated totals, peaks, and costs.

8. Identify Anomalies
Compare current usage against historical averages to detect a percentage increase above a specific threshold.

9. Assign Data Analyst Review
Create a task for the Energy Analyst to verify the accuracy of the generated analytics summary.

10. Maintenance Alert Task
If an anomaly is detected, create a task for the Facilities Manager to inspect the energy hardware.

11. Generate Monthly Consumption Report
Compile the aggregated data and summary entries into a formal PDF/Dashboard report.

12. Send Summary to Stakeholders
Send an automated email to the Operations Manager with the key findings from the analytics summary.

13. Update Baseline Models
Update the 'Historical Baseline' data model with the newly calculated average usage for future comparisons.

14. Send Critical Alert SMS
Send an urgent SMS notification to the site supervisor if energy consumption exceeds a critical safety threshold.

End
End of the Workflow/Process.