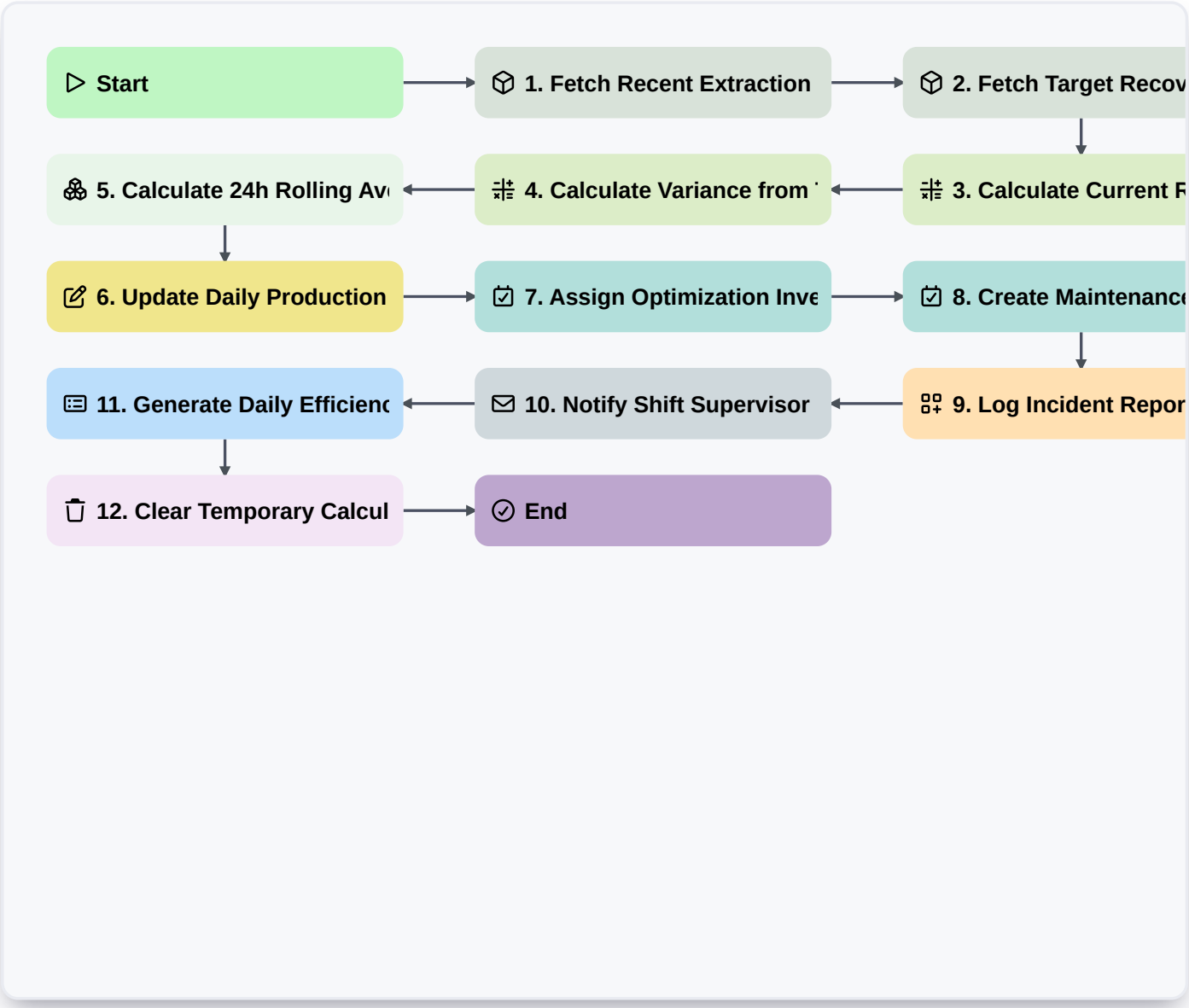
ChecklistGuro

Mineral Recovery Rate Optimization



Start
Start of the Workflow/Process.

1. Fetch Recent Extraction Data
Retrieve the latest sensor readings and lab assay results from the Production Data Model.

2. Fetch Target Recovery Benchmarks
Retrieve the predefined optimal recovery rate targets for the specific mineral type currently being processed.

3. Calculate Current Recovery Rate
Execute formula: (Mass of recovered mineral / Mass of mineral in feed) * 100.

4. Calculate Variance from Target
Calculate the delta between the Current Recovery Rate and the Target Recovery Benchmark.

5. Calculate 24h Rolling Average
Aggregate the last 24 hours of recovery rate entries to identify trends versus single-point anomalies.

6. Update Daily Production Log
Update the 'Daily Production' entry with the newly calculated average recovery rate and variance.

7. Assign Optimization Investigation
Create a high-priority task for the Metallurgical Engineer if the recovery rate falls below the threshold.

8. Create Maintenance Inspection Task
Create a task for the Plant Technician to check reagent dosing pumps if a variance is detected.

9. Log Incident Report
Create a new entry in the 'Optimization Incident' data model detailing the deviation parameters.

10. Notify Shift Supervisor
Send an automated email alert to the Shift Supervisor containing the current recovery metrics and variance.

11. Generate Daily Efficiency Report
Generate a summary report comparing today's performance against the weekly trend for stakeholders.

12. Clear Temporary Calculation Cache
Delete transient calculation entries from the workspace to maintain data model cleanliness.

End
End of the Workflow/Process.