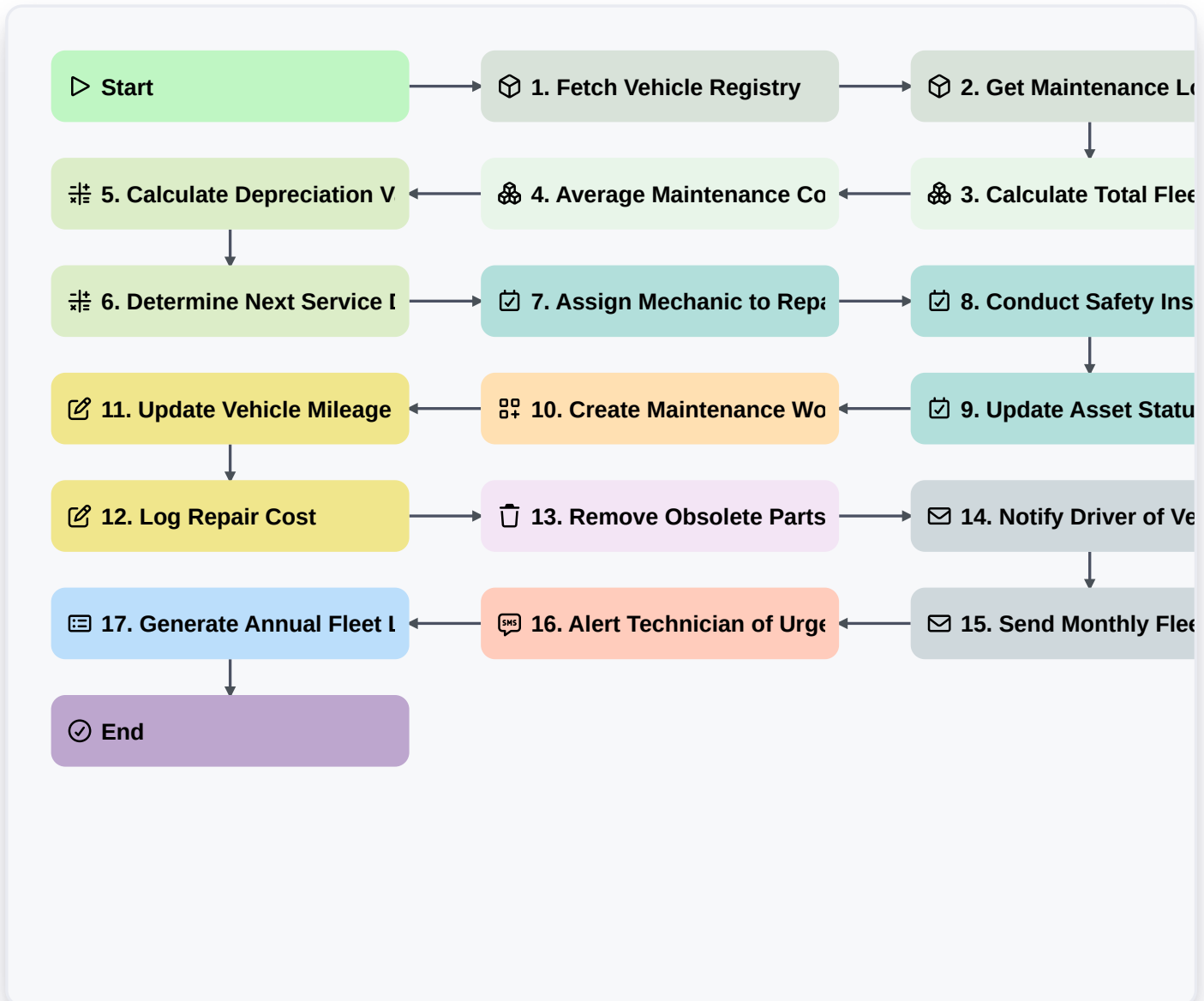


Public Transit Fleet Lifecycle Management Process



▶ Start

Start of the Workflow/Process.

📦 1. Fetch Vehicle Registry

Retrieve all active vehicle entries from the Fleet Data Model to identify vehicles due for inspection.

📦 2. Get Maintenance Logs

Retrieve historical maintenance records for a specific vehicle ID to check for recurring issues.

🔗 3. Calculate Total Fleet Downtime

Sum the total hours of downtime from all maintenance entries to assess fleet availability.

🔗 4. Average Maintenance Cost

Calculate the average cost of repairs per vehicle class to inform budgeting.

🔗 5. Calculate Depreciation Value

Execute formula: $(\text{Initial_Purchase_Price} - (\text{Annual_Usage} * \text{Depreciation_Rate}) - \text{Current_Value})$.



6. Determine Next Service Date

Execute formula: (Last_Service_Date + Service_Interval_Days).

7. Assign Mechanic to Repair

Create a task for the Maintenance Supervisor to assign a technician to a broken-down vehicle.

8. Conduct Safety Inspection

Create a task for the Safety Officer to perform a physical inspection of the vehicle.

9. Update Asset Status

Create a task for the Fleet Manager to officially move a vehicle from 'Active' to 'Decommissioned'.

10. Create Maintenance Work Order

Generate a new entry in the Work Orders Data Model when a fault is detected.

11. Update Vehicle Mileage

Update the 'Current Odometer Reading' field in the Vehicle Data Model after a service is completed.

12. Log Repair Cost

Update the total expenditure field in the Asset Data Model with the latest invoice amount.

13. Remove Obsolete Parts Record

Delete temporary inventory entries for parts that were incorrectly logged or redundant.

14. Notify Driver of Vehicle Recall

Send an email to the assigned driver regarding an urgent safety recall on their assigned vehicle.

15. Send Monthly Fleet Report to Stakeholders

Send an automated email summary of fleet health and maintenance costs to the Operations Director.

16. Alert Technician of Urgent Repair

Send an SMS to the mechanic on call when a high-priority breakdown is reported.

17. Generate Annual Fleet Lifecycle Report

Generate a comprehensive report summarizing all acquisitions, maintenance, and decommission events for the year.

End

End of the Workflow/Process.