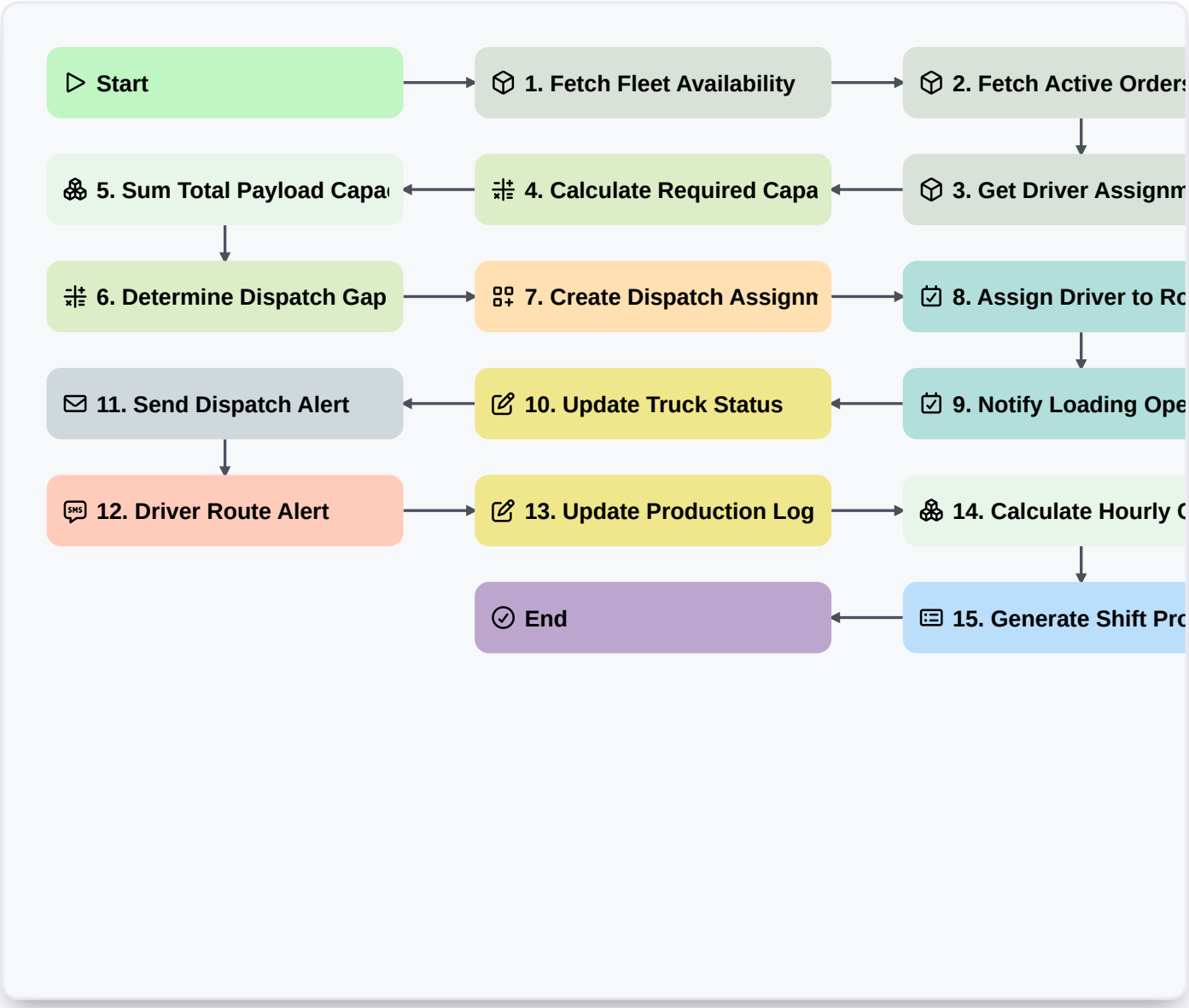
ChecklistGuro

Haul Truck Dispatch Optimization



Start
Start of the Workflow/Process.

1. Fetch Fleet Availability
Retrieve all active Haul Trucks from the Fleet Data Model to identify available units.

2. Fetch Active Orders
Retrieve pending loading requests or production targets from the Production Schedule model.

3. Get Driver Assignments
Retrieve current driver shifts and fatigue status from the Human Resources/Driver model.

4. Calculate Required Capacity
Calculate the total volume needed for the next hour based on production targets vs. current truck capacity.

5. Sum Total Payload Capacity
Aggregate the payload capacity of all 'Available' trucks to see if it meets the required capacity.

6. Determine Dispatch Gap
Subtract Total Available Capacity from Required Capacity to identify if more trucks or faster cycles are needed.

7. Create Dispatch Assignment
Create a new 'Dispatch Instruction' entry linking a specific Truck, Driver, and Loading Point.

8. Assign Driver to Route
Create a task for the assigned Driver to acknowledge the new route and start the cycle.

9. Notify Loading Operator
Create a task for the Excavator/Loader operator to prepare for the incoming truck arrival.

10. Update Truck Status
Update the status of the selected Haul Truck from 'Available' to 'In-Transit/Busy'.

11. Send Dispatch Alert
Send an email to the Site Supervisor containing the updated dispatch plan and fleet utilization.

12. Driver Route Alert
Send an SMS to the driver with the specific loading point coordinates and priority level.

13. Update Production Log
Update the active Production Order entry with the expected tonnage move.

14. Calculate Hourly Cycle Efficiency
Aggregate completed trip durations to calculate the average cycle time for the current period.

15. Generate Shift Productivity Report
Create a summary report comparing actual payload moved vs. the planned target for the shift.

End
End of the Workflow/Process.