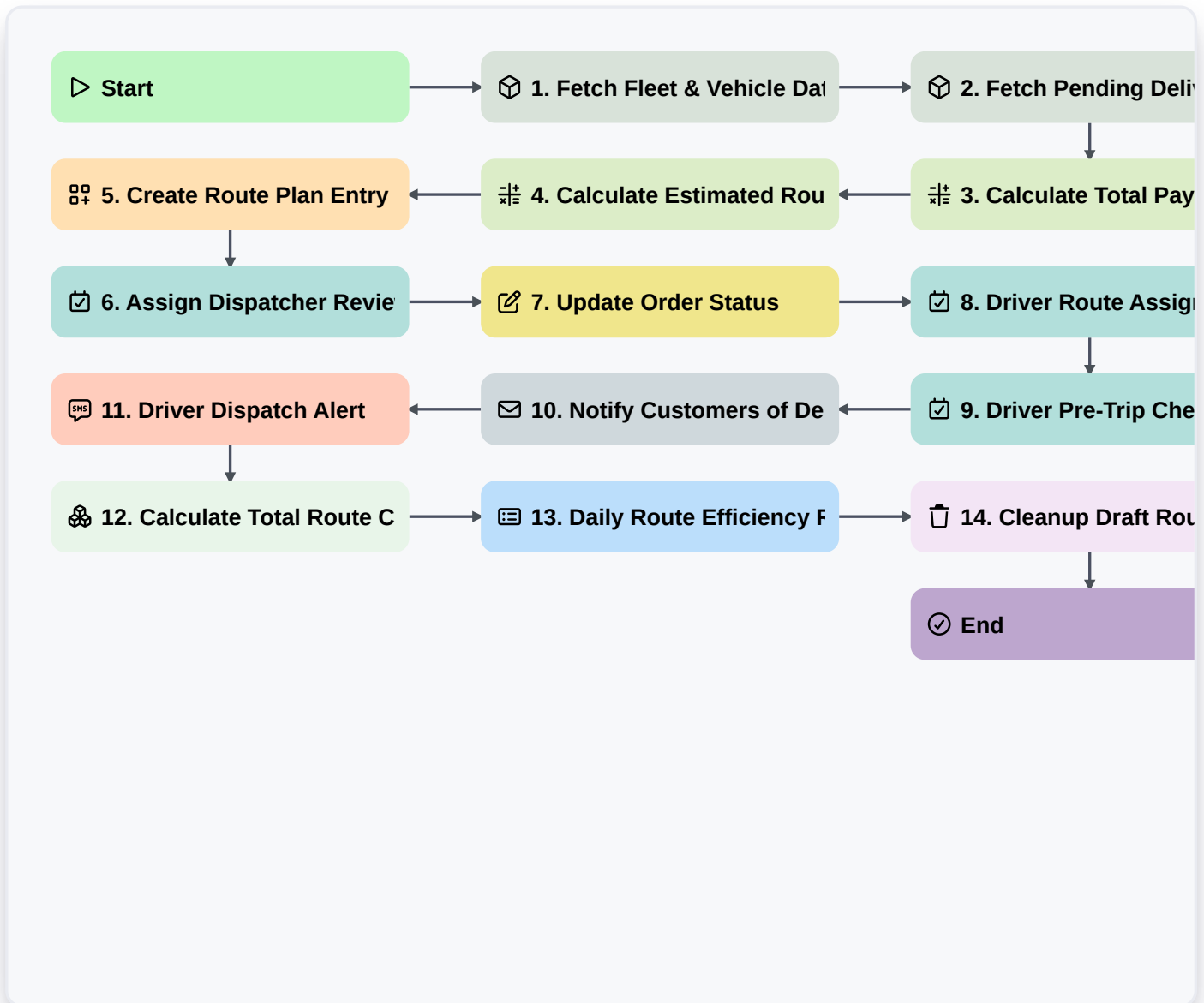


# Route Optimization And Planning Workflow



## Start

Start of the Workflow/Process.

## 1. Fetch Fleet & Vehicle Data

Retrieve available vehicles, their capacities, and current locations from the Vehicle Data Model.

## 2. Fetch Pending Deliveries

Retrieve all orders/deliveries marked as 'Pending' from the Orders Data Model.

## 3. Calculate Total Payload Demand

Sum the weight and volume of all selected pending deliveries to ensure they fit within vehicle capacity.

## 4. Calculate Estimated Route Distance

Apply a routing algorithm or formula to estimate the total mileage and travel time based on selected stops.

## 5. Create Route Plan Entry

Create a new entry in the 'Route Plans' data model containing the calculated stops, assigned vehicle, and estimated duration.

## 6. Assign Dispatcher Review

Create a task for the Dispatcher to review and approve the generated route plan before deployment.



## **7. Update Order Status**

Update the status of all orders included in the route from 'Pending' to 'Scheduled'.

## **8. Driver Route Assignment**

Create a task for the assigned Driver containing the route details and checklist for departure.

## **9. Driver Pre-Trip Checklist**

Generate a checklist task for the driver to verify vehicle safety, fuel levels, and cargo integrity.

## **10. Notify Customers of Delivery Window**

Send an automated email to customers included in the route with their expected delivery time window.

## **11. Driver Dispatch Alert**

Send an SMS to the Driver's phone number notifying them that a new route has been assigned and is ready for pickup.

## **12. Calculate Total Route Cost**

Aggregate fuel costs, driver wages, and maintenance estimates to calculate the total operational cost of the route.

## **13. Daily Route Efficiency Report**

Generate a report summarizing planned vs. actual mileage and planned vs. actual delivery time for the completed route.

## **14. Cleanup Draft Routes**

Delete expired or unassigned draft route entries from the system to maintain data hygiene.

## **End**

End of the Workflow/Process.