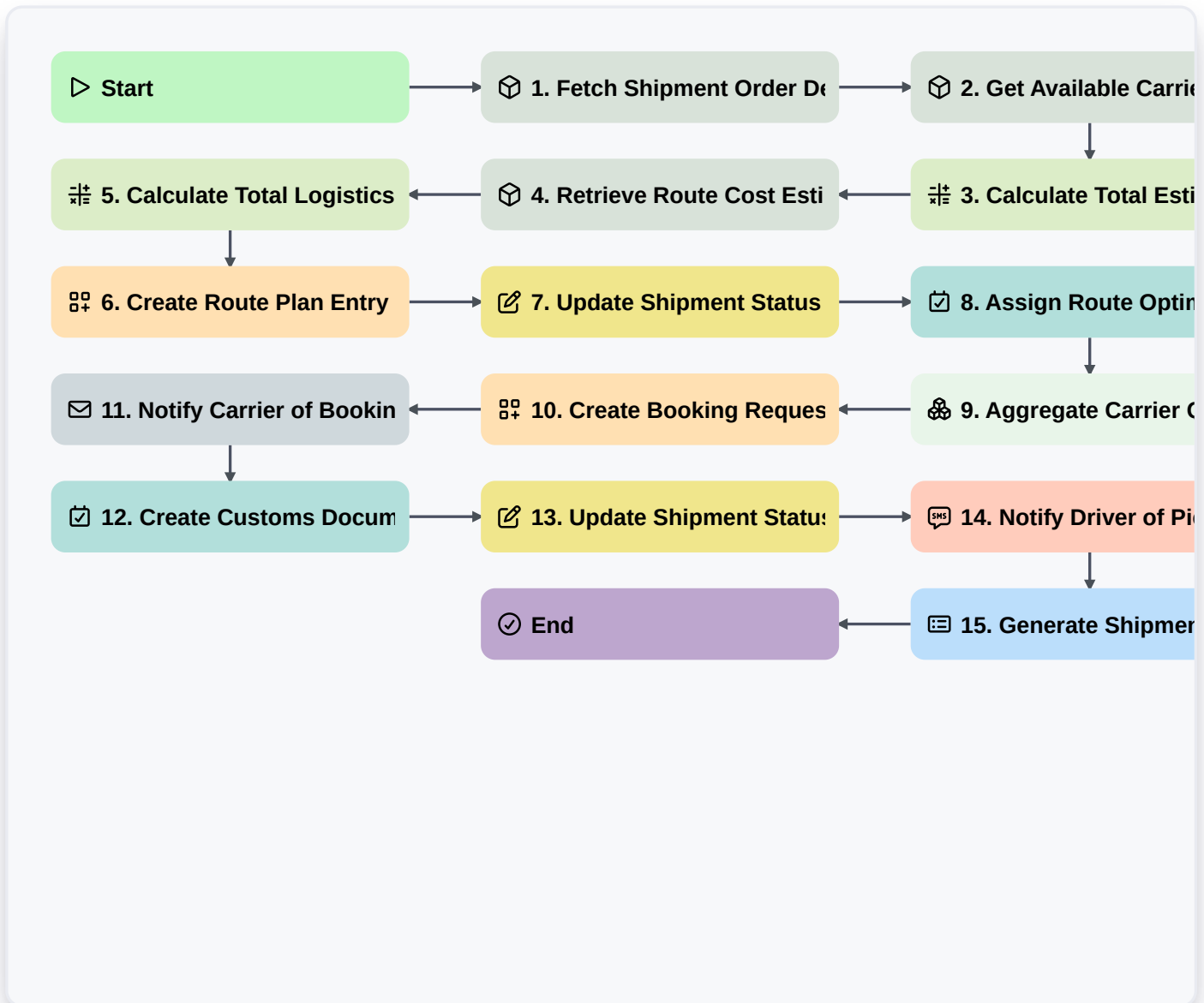


Multi-Modal Freight Planning Workflow



▷ Start

Start of the Workflow/Process.

📦 1. Fetch Shipment Order Details

Retrieve core shipment data such as origin, destination, weight, and cargo type from the Shipment Data Model.

📦 2. Get Available Carriers

Retrieve a list of available carriers and their service capabilities from the Carrier Data Model.

⚖️ 3. Calculate Total Estimated Weight

Sum the weights of all individual line items within the shipment to determine total freight weight.

📦 4. Retrieve Route Cost Estimates

Fetch existing freight rate quotes associated with the selected transit modes (Sea, Air, Rail, Road).

⚖️ 5. Calculate Total Logistics Cost

Execute a formula to sum freight rates, fuel surcharges, customs fees, and handling fees.

📦 6. Create Route Plan Entry

Create a new record in the Route Planning Data Model containing the selected multi-modal sequence.



7. Update Shipment Status

Update the status of the original Shipment Entry to 'Planning in Progress'.

8. Assign Route Optimization Task

Create a task for the Logistics Planner to review and approve the generated multi-modal route.

9. Aggregate Carrier Quotes

Calculate the minimum (min) quote found among all retrieved carrier options to identify the cheapest route.

10. Create Booking Request

Create a new entry in the Booking Data Model once the route is approved.

11. Notify Carrier of Booking

Send an email to the selected carrier with the shipment details and pickup instructions.

12. Create Customs Documentation Task

Create a task for the Documentation Specialist to prepare necessary international shipping papers.

13. Update Shipment Status to 'Booked'

Update the shipment entry status to reflect that the carrier has been secured.

14. Notify Driver of Pickup

Send an SMS to the truck driver/carrier contact with the pickup location and time window.

15. Generate Shipment Itinerary Report

Generate a PDF report summarizing the entire multi-modal journey, including timestamps and transfer points.

End

End of the Workflow/Process.