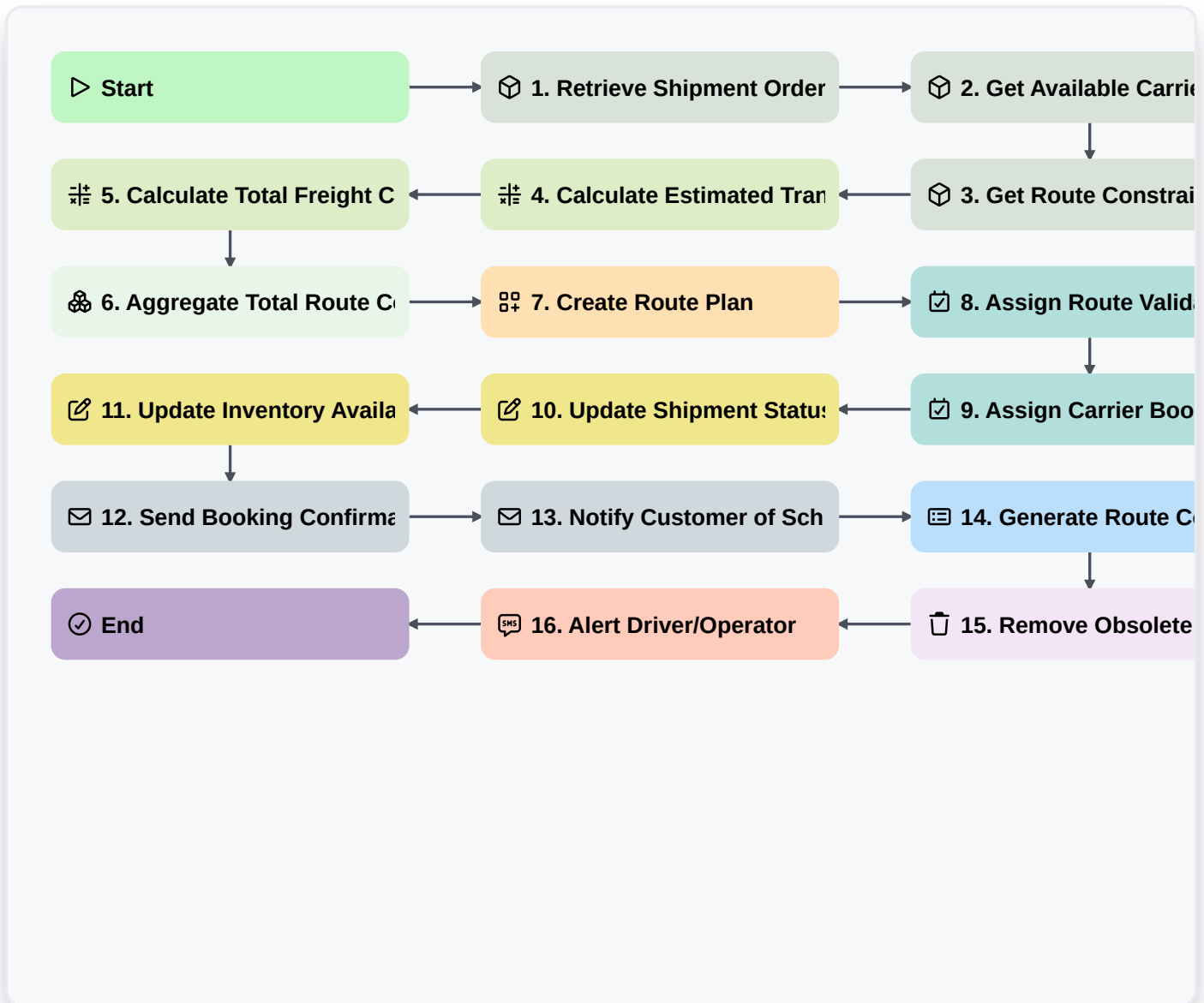


Intermodal Transportation Planning Workflow



▷ Start

Start of the Workflow/Process.

📦 1. Retrieve Shipment Order

Fetch the specific shipment details, including origin, destination, and cargo type from the Shipment Data Model.

📦 2. Get Available Carriers

Retrieve a list of available rail, trucking, and ocean carriers from the Carrier Data Model.

📦 3. Get Route Constraints

Fetch regulatory and logistical constraints (e.g., weight limits, hazmat restrictions) from the Logistics Rules Model.

📊 4. Calculate Estimated Transit Time

Calculate the total duration by summing the transit times of each leg (Rail + Truck + Ocean) plus transfer buffers.

📊 5. Calculate Total Freight Cost

Sum the base freight rates, fuel surcharges, and terminal handling fees for the planned route.

📊 6. Aggregate Total Route Cost

Sum the costs of all individual transport segments to determine the total cost of the intermodal journey.



7. Create Route Plan

Create a new entry in the 'Route Plans' data model containing the proposed sequence of modes and timestamps.

8. Assign Route Validation Task

Create a task for a Logistics Planner to review the proposed intermodal route for feasibility.

9. Assign Carrier Booking Task

Create a task for the Procurement Agent to contact the selected carriers for final booking confirmation.

10. Update Shipment Status

Update the status of the original Shipment Order to 'Planned' or 'Route Confirmed'.

11. Update Inventory Availability

Update the equipment/container availability in the Equipment Data Model based on the new plan.

12. Send Booking Confirmation to Carrier

Send an email to the selected carrier with the shipment details and required pickup/drop-off windows.

13. Notify Customer of Schedule

Send an email to the client/consignee with the estimated arrival time (ETA) and planned route.

14. Generate Route Cost Analysis Report

Generate a report comparing the current route cost against historical averages for similar shipments.

15. Remove Obsolete Route Drafts

Delete expired or unselected route plan entries from the system to maintain data hygiene.

16. Alert Driver/Operator

Send an SMS notification to the trucking dispatcher regarding the upcoming container pickup window.

End

End of the Workflow/Process.