Case: AI Inbound Carrier Sales Flow

How AI automates load booking calls for carrier reps

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Carrier Rep:
looking to haul freight for shippers
(Shipper needs to move something)

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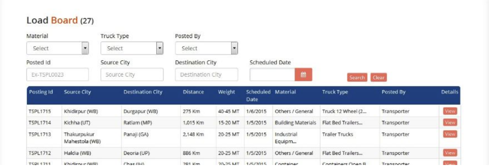


Load Board (27)

Material: Select	Truck Type: Select	Posted By: Select	
Posted Id: Ex-TSPL0023	Source City: Source City	Destination City: Destination City	Scheduled Date:

Search Clear

Posting Id	Source City	Destination City	Distance	Weight	Scheduled Date	Material	Truck Type	Posted By	Details
TSPL1715	Khidirpur (WB)	Durgapur (WB)	275 Km	40-45 MT	1/6/2015	Others / General	Truck 12 Wheel (2...	Transporter	View
TSPL1714	Kichha (UT)	Ratlam (MP)	1,015 Km	15-20 MT	1/5/2015	Building Materials	Flat Bed Trailers...	Transporter	View
TSPL1713	Thakurpukur Mahestola (WB)	Panaji (GA)	2,148 Km	20-25 MT	1/5/2015	Industrial Equipm...	Trailer Trucks	Transporter	View
TSPL1712	Haldia (WB)	Deoria (UP)	886 Km	20-25 MT	1/5/2015	Others / General	Flat Bed Trailers...	Transporter	View
TSPL1711	Khidirpur (WB)	Chas (JH)	281 Km	20-25 MT	1/5/2015	Container	Containers Open B...	Transporter	View

Carrier sees a load online and calls in

③

Traditionally…

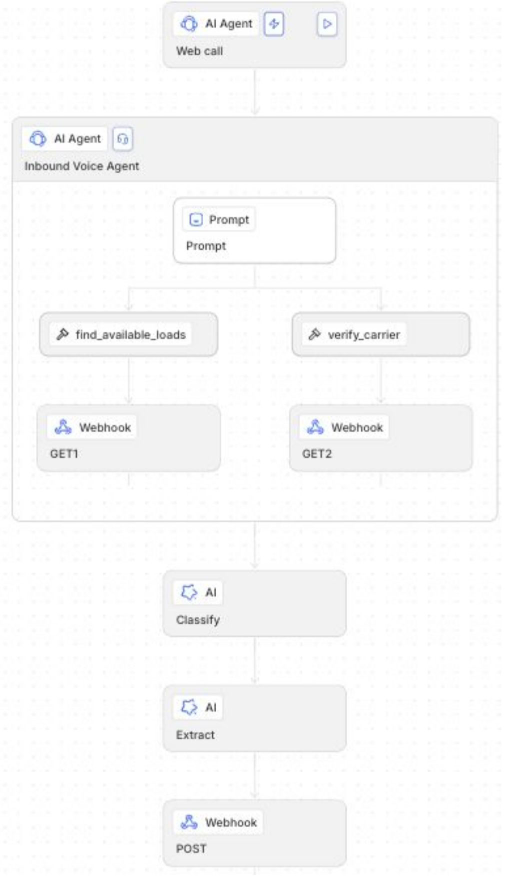
1. Calls a rep manually
   a. Wait time
   b. Voicemail
2. Rep checks load info via reference # and validates the carrier manually
3. Negotiation, back and forth
4. Booking is manually recorded
5. Missed bookings or errors

Flow of Carrier Rep with HappyRobot - Inbound Carrier Sales Flow

1. Pick up a call (24/7)
   a. Never miss an opportunity
2. Asks for reference and MC number
   a. Verifies carrier via FMCSA API in seconds
      i. No manual lookup
   b. Instantly finds the load using reference ID
      i. Saves time for the rep
      ii. Delivers accurate info instantly
3. AI Agent reads back the load offer like a real rep
   a. Straightforward negotiation
4. Understands if they're interested or not
5. Sends all booking info to the backend automatically

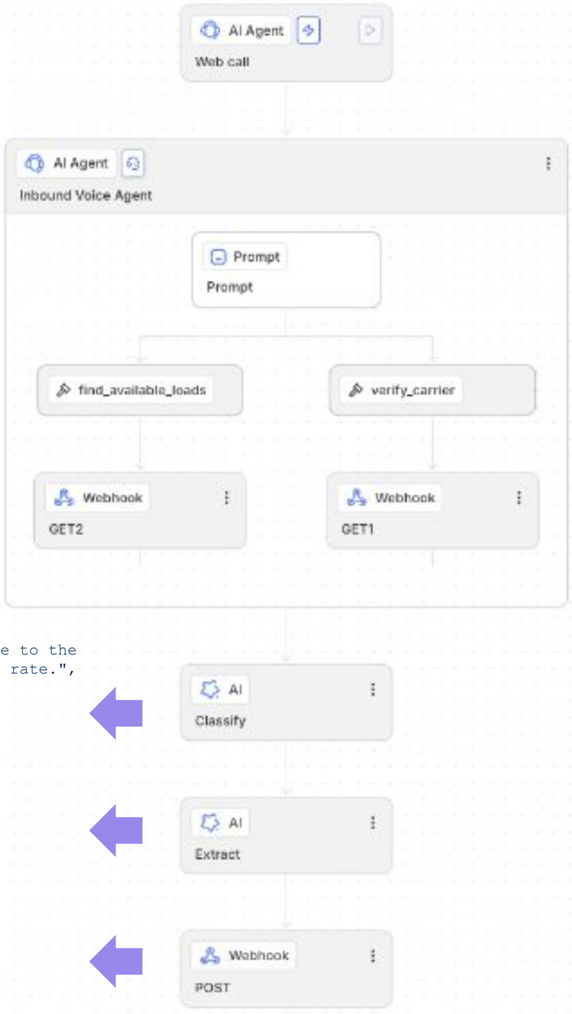
HappyRobot's inbound carrier flow replaces error-prone calls with fast, intelligent automation.

Demo



AI Agent
Web call
AI Agent
Inbound Voice Agent
Prompt
Prompt
find_available_loads
verify_carrier
Webhook
GET1
Webhook
GET2
AI
Classify
AI
Extract
Webhook
POST

Demo Recap:



verify_carrier to validate the MC number using the FMCSA API

Agent: Validates MC number and returns carrier details

find_available_loads to search the load details from a CSV

Agent: Provides lane details (rate, equipment, schedule, requirements)

Classify: Intent Classification for smart routing

Agent: Determines carrier interest and identifies specific reasons for declining the load

Extract: Pulls booking context for downstream automation

Agent: Extracts sentiment, booking intent, and additional information like decline reason or special requirements

Confirm Booking: Sends booking info to backend

Agent: Posts confirmed load data (carrier, lane, time, sentiment) to API

```
    "reasoning": "The carrier initially hesitated due to the
rate but then agreed to book the load at the offered rate.",
    "classification": "Interested"


    "decline_reason": null,
    "caller_sentiment":
"Neutral"
```

```
{
  "origin": "Denver, CO",
  "commodity": "Automotive Parts",
  "mc_number": "302238",
  "agent_name": "Paul",
  "destination": "Detroit, MI",
  "pickup_time": "2025-04-10 08:00",
  "carrier_name": "P I T A TRUCKING INC",
  "delivery_time": "2025-04-11 14:00",
  "caller_sentiment": "Neutral",
  "reference_number": "REF09460",
  "special_requirements": "TWIC"
}
```

Tech Stack & Tools Used

🧱 Core Components

- FastAPI: For building the REST API backend
- Python: Main language used for logic and integration
- VS Code: Development environment
- Render: Deployment platform for hosting the live API
- CSV Files: Stores available load data
- FMCSA API: Validates MC numbers of carriers
- Dotenv: Loads secure API keys from environment

🧠 AI Agent Integration

- Classify: Understands booking intent
- Extract: Pulls sentiment and relevant booking info
- POST: Sends booking details to backend

🔐 Security & Testing

- .env + .gitignore – Protects sensitive keys
- /docs (Swagger UI) – Live API testing interface
- /redoc – Clean reference documentation
- Tested with cURL, Render logs, and browser