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AUTOMOTIVE / COMMERCIAL VEHICLES · OUTBOUND LOGISTICS & VISIBILITY

Real-Time Outbound Visibility & Route Optimisation for a Leading Commercial Vehicle OEM

GPS-Integrated Tracking · Trailer-on-Truck & Convoy Modes · Electronic Proof of Delivery

INDUSTRY
Automotive / Commercial Vehicles

DISPATCH MODES
Trailer-on-Truck & Convoy

OEM TYPE
Leading Indian Commercial Vehicle Manufacturer

NETWORK
Multi-plant, national dealership distribution

SCALE
Legacy Systems and Manual Processes.

IMPACT AT A GLANCE

15%	**12%↑**	**~60%**	**~9%**
Reduction in KM Travelled Per Delivery , Through route optimisation	Improvement in On-Time Delivery Rate, Across all dispatch modes	Reduction in Route Deviation Incidents After geo-fence alerting rollout	Billing Location Discrepancy Cases Resolved, Via delivery GPS validation

BACKGROUND & SITUATION

The Operating Environment

A major Indian commercial vehicle OEM — manufacturing buses and trucks/trailers across multiple plants faced growing complexity in outbound logistics as production volumes scaled. Finished vehicles move either in Trailer-on-Truck (ToT) mode, where vehicles are loaded onto flatbed carriers, or in Convoy mode, where drivers self-drive units to dealerships.

With dispatches spanning hundreds of routes daily and dealerships distributed across the country, the client had limited visibility into where vehicles were at any point post-gate. Exceptions went undetected, delivery timelines were opaque, and billing disputes arising from GPS-versus-invoice location mismatches were eroding dealer trust.

TRIGGER FOR CHANGE

The Case for Hardware-Free Visibility

The client engaged Enmovil to deploy its Outbound Visibility & Optimisation platform, leveraging the in-built GPS capability of the trucks and buses being dispatched eliminating the need for any additional hardware.

> *Exceptions went undetected, delivery timelines were opaque, and billing disputes arising from GPS-versus-invoice location mismatches were eroding dealer trust creating an urgent need for a unified, hardware free outbound visibility solution at national scale.*

THE CHALLENGE

Key Barriers to Outbound Excellence

Limited post-gate visibility and the absence of a unified platform across two distinct dispatch modes created compounding operational and commercial challenges.

No Real-Time Visibility Post-Dispatch

Once vehicles left the plant gate, tracking relied on manual driver calls and estimated transit times — no live view of vehicle location or status.

High Route Deviation Rates

Drivers taking unplanned detours added unproductive kilometres and delayed deliveries, with no alert mechanism to detect or intervene.

OTD Performance Below Target

On-Time Delivery performance was below target, with no systematic root-cause data to distinguish transit delays from loading or dispatch delays.

ePOD Absent — Damage Claims Unverifiable

Electronic Proof of Delivery was absent; damage claims at dealerships were unverifiable and disputes were resolved manually with no audit trail.

GPS-Invoice Location Mismatches

Final delivery GPS coordinates frequently mismatched billed dealership locations, creating billing disputes and revenue leakage.

Convoy Mode Vehicles Hard to Track

No centralized view of driver location, speed, or ETA for multi-unit convoy dispatches — particularly challenging across long-haul routes.

THE SOLUTION

Outbound Visibility & Optimisation Platform

Enmovil deployed its outbound visibility platform, integrating directly with the in-built telematics and GPS units of the commercial vehicles being dispatched. No additional hardware was required, the platform activates vehicle-native GPS data through a secure API layer and orchestrates the full outbound journey lifecycle.

Geo-fenced route corridors automatically flag deviations, with alerts dispatched to fleet managers and logistics coordinators within minutes. Route optimisation computes optimal routes per dispatch considering distance, road type, dealer priority, and historical transit time data with multi-stop convoy planning sequencing dealership drops to minimise total KM.

An electronic proof of delivery (ePOD) mobile app captures delivery GPS stamp, timestamp, receiver signature, and vehicle condition photos at point of handover. Final delivery GPS coordinates are validated against billed dealership locations mismatches trigger a billing hold before invoice confirmation.

CAPABILITIES DELIVERED

1 Real-Time GPS Tracking

- Live vehicle location streamed from in-built GPS; unified view across ToT carriers and self-driven convoy units on a single control tower dashboard
- Geo-fenced route corridors automatically flag deviations; alerts dispatched to fleet managers and logistics coordinators within minutes
- ETA tracking for all active dispatches updated continuously across both dispatch modes

2 Route Optimisation

- Optimal routes computed per dispatch considering distance, road type, dealer priority, and historical transit time data
- Multi-stop convoy planning sequences dealership drops to minimise total KM and driver turnaround time
- Route-level performance benchmarking to identify and address persistent delay corridors.

3 Exception Management

- Automated alerts for stoppages beyond threshold duration, speed violations, and off-route movement
- Exception dashboard with severity classification enables control tower teams to intervene proactively
- Root-cause delay tagging distinguishes transit issues from loading and gate delays for targeted action.

4 Electronic Proof of Delivery (ePOD)

- Driver mobile app captures delivery GPS stamp, timestamp, receiver signature, and vehicle condition photos at point of handover
- ePOD data auto-reconciled against dispatch records; discrepancies flagged for review before invoice confirmation
- ePOD capture rate scaled from <10% to >92%, providing a complete digital audit record of every delivery

5 Delivery Location Validation

• Final delivery GPS coordinates validated against billed dealership location; mismatches above a configurable radius trigger a billing hold

• Stakeholder notifications — dealer, transporter, and OEM logistics automated at key milestones: dispatch, in-transit, arrival, and ePOD confirmed

• GPS validation reduced billing location discrepancy cases from ~9% to ~1% of dispatches

6 Damage Analytics

• Vehicle condition captured at dispatch gate and delivery point; image comparison surfaces transit damage incidents

• Damage reports linked to route, driver, and carrier for accountability tracking and insurance claim support

• Pre- and post-delivery image matching resolves unverifiable damage claims and reduces disputed write-offs

KEY VALUE DRIVERS

Delivery Performance

• OTD improved from ~71% to ~80% by surfacing root-cause delays — distinguishing in-transit issues from loading and gate delays

• Route optimisation cut average KM per delivery by ~15%, reducing transporter fuel costs and improving vehicle turnaround at receiving dealerships

• Real-time ETA visibility eliminated manual follow-up calls across OEM logistics, transporter, and dealer teams

• Systematic delay attribution enabled targeted interventions rather than reactive firefighting

Deviation & Compliance Control

• Geo-fence alerting cut monthly deviation incidents by ~60% — from ~340 to ~135 — with automated escalation reducing manual monitoring burden

• Speed and stoppage alerts enabled proactive intervention for high-value convoy dispatches across long-haul routes

• Automated milestone notifications eliminated manual status follow-up across all stakeholder groups

• Exception dashboard with severity classification enabled control tower teams to prioritize interventions effectively

Revenue Visibility

• Delivery GPS validation reduced billing location discrepancy cases from ~9% to ~1% of dispatches, protecting invoice accuracy and reducing dealer disputes

• Damage analytics with pre- and post-delivery image capture resolved transit damage accountability, cutting unverifiable claim disputes

• ePOD capture rose from <10% to >92%, giving the OEM a complete digital audit record of every delivery for warranty and compliance purposes

• All stakeholders — OEM logistics, transporters, and dealers — receive automated milestone notifications, eliminating manual follow-up calls

STRATEGIC IMPACT

"We went from near-zero outbound visibility to a live control tower for every vehicle leaving the plant. Enmovil changed how we manage the last mile of our manufacturing output." — Head of Outbound Logistics, Commercial Vehicle OEM