

CASE STUDY

# The Autonomous Logistics Operations

How we replaced 4+ hours of daily manual dispatch with an AI Powered agentic system, achieving full ROI in 45 days.

01 THE CHALLENGE

## 4+ Hours Lost Every Single Day

The client's dispatchers were spending over four hours daily manually matching loads, analyzing weather conditions across fragmented systems, and hand processing Bills of Lading. The result was a fragile operation built entirely on human effort, with no room to scale.



### Delayed Shipments

Manual load matching created bottlenecks, causing cascading delivery delays across the entire logistics network.



### High Manual Dependency

Entire operations hinged on a small overworked team, the sole knowledge holders for critical routing decisions.



### Compliance Errors

Frequent mistakes in BOL (Bill of Lading) documentation created regulatory risk, audit exposure, and potential financial penalties.

02 THE SOLUTION

## Unified Workflow

Claude + MCP  
**01 AI Dispatcher Agent**

Claude-powered intelligent agent with MCP connectivity to the internal load board, matching loads in seconds, not hours, with full contextual awareness.

Real-time APIs  
**02 Dynamic Routing Engine**

Automated rerouting powered by real-time traffic feeds and live weather data, optimizing every shipment path dynamically as conditions change.

BOL Automation  
**03 Document Intelligence**

Instant verification and processing of Bills of Lading and compliance documents, eliminating manual data entry and reducing error rates to near zero.

03 TRANSFORMATION

## Before vs After

LOAD	ROUTE	STATUS	DRIVER
LD-4421	CHI → DAL	DELAYED	Unassigned
LD-4422	ATL → MIA	PENDING	TBD
LD-4423	DEN → PHX	BOL_ERROR	J. Smith

⚠️ 6 loads unmatched  
Manual review required

LOAD	ROUTE	STATUS	ETA
LD-4421	CHI → DAL	On Route	14:30 CST
LD-4422	ATL → MIA	On Route	16:15 EST
LD-4423	DEN → PHX	Rerouted	11:45 MST

All 247 loads matched • 0 pending • System healthy

Manual Operations

- Fragmented Systems**  
Dispatchers juggling spreadsheets and multiple disconnected platforms.
- Reactive Decisions**  
Routing based on outdated data, always behind real conditions.
- Peak Volume Stress**  
Team overwhelmed during surges with no ability to scale up.
- Error Prone Compliance**  
Frequent BOL mistakes creating regulatory and financial exposure.

AI-Powered System

- Centralized Dashboard**  
Single pane of glass with real time load matching and visibility.
- Data Driven Routing**  
Automated decisions powered by live traffic, weather, and demand.
- Proactive Alerts**  
Early warnings for delays, weather, and compliance gaps before they hit.
- Near Zero Errors**  
Seamless document validation with automated compliance checks.

04 SCALABILITY

## Built to Scale Without Limits



### 24/7 Operations

No fatigue, no downtime, continuous dispatch coverage around the clock.



### Multiple Requests

Handle various Logistics decisions in parallel without delays.



### Consistent Accuracy

Maintains precision regardless of workload spikes or complexity.



### Instant Scaling

Handles seasonal and unexpected surges without added resources.



⚡ Whether managing 10 shipments or 10,000, performance remains consistent and reliable.

05 RESULTS

## Measurable Impact, Rapid ROI



**75%**

REDUCTIONS

In manual dispatching time, freeing the team for strategic operations.

**98%**

ERROR ELIMINATION

Of data entry errors in compliance documents, near zero error rate.

**45**

DAYS TO FULL ROI

Complete return on investment achieved within 45 days of deployment.

NEXT STEPS

## Your Operations could be next

See how TechYard's agentic AI solutions can eliminate inefficiency and scale your logistics operations.