

Intelligent Supply Chain Visibility Increasing On-Time Deliveries by 24%

Testimonial

“KPI Partners enabled real-time supply chain intelligence across our global operations. We now anticipate disruptions, trigger automated interventions, and maintain delivery commitments with greater confidence.”

— Chief Supply Chain Officer
Global Manufacturing & Distribution Enterprise

Client

A multinational manufacturer managing 15 global distribution centers, 400+ suppliers, and complex multimodal logistics operations across North America, Europe, and APAC.

Overview

Supply chain disruptions—from port delays to supplier variability—were impacting delivery performance and increasing costs. Visibility was fragmented across ERP, logistics providers, and warehouse systems.

The company needed AI-powered, real-time supply chain visibility with automated response triggers to reduce delays and optimize inventory positioning.

Challenges

- Limited end-to-end shipment visibility
- Reactive response to supplier delays
- Manual exception management
- Inventory imbalance across regions
- Inconsistent ETA predictions

Our Approach

KPI Partners implemented an intelligent supply chain control tower:

- Real-time shipment tracking integration
- ML-based ETA prediction models
- GenAI disruption explanation engine
- Automated exception triggers and escalation workflows
- Inventory optimization analytics

Solution Overview

The AI-driven control tower provided real-time risk visibility and automated response orchestration.

- IoT and logistics data ingestion
- Predictive delay modeling
- GenAI-powered disruption summaries for planners
- Automated re-routing recommendations
- Inventory rebalancing analytics

How Enterprise AI Lab Approach Was Applied

1. AI Strategy Alignment

Focused on measurable KPIs: CSAT uplift, disruption recovery time, and service cost reduction.

2. Unified Passenger 360 Foundation

Integrated flight operations, loyalty, baggage, CRM, and digital touchpoints into a single governed data layer.

3. Predictive AI Models

- Flight delay prediction
- Passenger journey risk scoring
- Missed connection probability models

4. GenAI Personalization Engine

- Context-aware passenger communications
- Automated disruption messaging
- Dynamic compensation and rebooking workflows

5. AI at Operational Scale

- Real-time event streaming
- Automated triggers for service recovery
- Integrated operations dashboard

Key Technologies

- AI Supply Chain Control Tower
- GenAI Operational Intelligence Engine
- Cloud Data Platform
- Real-Time Event Streaming
- Executive Analytics Dashboards

Business Impact

24% Increase in On-Time Deliveries

Improved predictability across global routes.

30% Reduction in Manual Exception Handling

Automated triggers reduced operational workload.

18% Lower Inventory Holding Costs

Better forecasting and rebalancing reduced excess stock.

\$26M Annualized Cost Savings

Combined logistics and inventory optimization gains.

Real-Time Global Visibility

Unified control tower across suppliers, shipments, and warehouses.

Why This Worked

End-to-end intelligence

Unified fragmented logistics systems into one AI layer.

Predictive + prescriptive
Not just alerts—but automated recommendations.

Scalable architecture
Designed to support global expansion without operational strain.

About KPI Partners

KPI Partners is a global analytics and digital transformation firm delivering solutions across Data Science, GenAI, AI/ML, Data Engineering, Analytics & Visualization, Cloud Data Platforms, and DevOps/DevSecOps/MLOps. Founded in 2006 and headquartered in Newark, California, KPI Partners has delivered over 1,000 engagements for 300+ clients across multiple industries.

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