



Solution Brief

# Beamup Middle Mile Integrity Intelligence



# AI-Powered Visibility for Hubs, Transit, and Carrier Performance

The middle mile is the supply chain's "black box", a complex network of sorting facilities, long-haul transit, and handoffs where visibility often fades and risk accumulates. **Beamup provides a continuous integrity layer**, transforming raw telematics and scan data into actionable intelligence.

The screenshot displays the Beamup interface. On the left is a navigation sidebar with 'Agents', 'Insights', 'Reports', and 'Data Center'. The main area shows a list of shipments, with one selected for a detailed view. The detailed view for shipment IN-2237764 is titled 'Potential in-transit theft detected: Suspicious unplanned stop' and is in 'In Progress' status. It features an 'Insight' section stating: 'An unplanned stop of 35 minutes outside of route geofence was detected on Shipment 3244 from Facility F14 to Facility D88 by Carrier ISXP. Shipment contains High Value Risk items worth \$18,000'. Below this is an 'Actions' panel with two tasks: 'Contact carrier dispatch office and confirm reason for unplanned stop' and 'Notify facility security to inspect trailer for missing inventory upon arrival'. A 'Reasoning Trace' section follows, detailing four key findings: 1. High value parcel (Shipment 3244, Outbound, Destination: Facility D88 via Carrier ISXP); 2. GPS data showed the shipment went outside of the approved route geofence and made an unplanned stop for 35 minutes (GPS tracker deviation at 11:42, stop from 11:45 to 12:20, location 2.3 miles off route); 3. Shipment transit time took longer than normal compared to average transit time for this lane (Actual: 8 hours 45 minutes, Average: 6 hours 30 minutes, Delay: 2 hours 15 minutes, 35% longer); 4. This carrier ISXP has a prior defect rate of 12% historically (Carrier ISXP rate: 12%, Industry average: 3%).

# The Three Missions of Middle Mile Integrity

Beamup monitors your operations through three distinct lenses to ensure that every shipment stays on track and every partner remains accountable.

## Guard Alerts: Real-Time Risk Detection

### MISSION

Monitor transit and hub operations against the "Promise Date."

### HOW IT WORKS

Beamup backward-schedules every milestone. If a geofence exit or a hub scan is missed, recovery protocols fire immediately.

#### MIDDLE MILE FOCUS

Detecting **Suspicious Delays** or **GPS Signal Loss** in to prevent en-route theft or carrier negligence.

## Detective Insights: Historical Pattern Analysis

### MISSION

Surface systemic weaknesses in your logistics network.

### HOW IT WORKS

By analyzing resolved issues, Beamup identifies which lanes, carriers, or shifts consistently underperform.

#### MIDDLE MILE FOCUS

Identifying **High-Risk Zones** or specific **Carrier Risks** where losses or "bricked packages" (tampered boxes) are statistically higher.

## Predictive Alerts: Upstream Risk Signals

### MISSION

Intervene before the "floor" or the customer is impacted.

### HOW IT WORKS

Detects risks early in the chain, such as inbound ASN delays, to reroute volume or adjust labor.

#### MIDDLE MILE FOCUS

Flagging **Hub-Level Misrouting** before the package leaves the sorting facility, saving days of transit time and preventing "lost in system" claims.

# Key Use Case Scenarios

CATEGORY	ROOT CAUSE / SCENARIO	BEAMUP CAPABILITY	SUCCESS OUTCOME
<b>Driver Risk</b>	<b>Theft &amp; Signal Loss:</b> GPS goes dark in a high-risk zone; driver claims "technical issue."	<b>Guard:</b> Immediate alert on signal deviation/loss with automated escalation to security.	Immediate asset recovery and the elimination of untraceable transit shrink.
<b>Operational Risk</b>	<b>Carrier Negligence:</b> Frequent delays or missed departure times in specific lanes.	<b>Detective:</b> Ranks carrier performance and flags lanes with recurring "integrity gaps."	Shift volume to high-reliability carriers, increasing overall network OTIF.
<b>Network Risk</b>	<b>Misrouting:</b> Incorrect transfer at sorting hub.	<b>Predictive:</b> Flags "Destination Mismatch" signals the moment a package is staged for the wrong trailer.	Elimination of recovery costs associated with cross-country misroutes.

## The Beamup Advantage



### End-to-End Signal Fusion

Combines long-haul GPS, hub scan events, trailer telematics, and historical carrier behavior into a single "Source of Truth."



### Human-Validated AI

Risk signals are prioritized for your Operations or Loss Prevention teams, ensuring your experts focus only on high-probability threats.



### Carrier Accountability

Move beyond anecdotes. Use hard data to hold third-party logistics (3PL) providers accountable for transit integrity and handling standards.

Ready to transform your Middle Mile?

Schedule a custom demo today: [sales@beamup.ai](mailto:sales@beamup.ai)

Visit us at [beamup.ai](https://beamup.ai)