



Case Study

Robotics ROI at Scale

Beamup

Case Study

Robotics
ROI at Scale

Product <> Bin Optimization – 8 Events with 12 Transactions

Overview Insight Resolution Activity Ownership Taken JL

Insight

Assigned Bin	Bin 27
Item ID	458921
Recommended Bin Type	Medium Tote
Related Events	8
Total Transactions	12
Score	62/100
Units Affected	96
Est. Cost Impact	\$420
Insight Date	Jan 6, 2026
Date Resolved	–

Recommended Action

SKU 458921 continues to fall or improperly fit when stowed in small bin size, resulting in \$420 in lost margin over the past 10 days. Update master catalog with corrected product dims and re-slot SKU to medium bin size. Verification audit triggered for next 5 pick cycles.

Properties

Insight Domain	Product / Bin
Facility	FC-01
Region	EMEA
Insight Cadence	Daily

Investigate Further

The Paper Cut Problem:

A top-tier global retailer deployed Goods-to-Human automation in multiple fulfillment centers. Global throughput immediately improved, but fell short of the promised ROI. The retailer tasked Beamup to deploy a scalable solution that identified where losses were occurring in order to achieve their ROI goals for the robotics initiative.

Learnings

Beamup identified 3 key areas of savings erosion:

1. Team member training. Identify the specific team members breaking SOP who will benefit from in-the-moment training.

For Example, Team member 104133 incorrectly stowed a product, which has fallen in the automation grid, preventing efficient robotics navigation and impacting orders including this SKU. The team member continues to do so for products of this type. Beamup pushes the relevant training module directly to the team member's monitor, requiring training and acknowledgement before proceeding.

Beamup segmented behavior patterns to differentiate true training needs from normal "off-days," then targeted coaching only where it drove measurable lift.

2. Damaged bins. Damaged shelves and bins were only pulled from circulation when proactive team members went above and beyond. Most of time, damaged bins continued to be replenished only to drop products and hurt fill rates. Spilled inventory caused obstructions in the automation zone, triggering safety stops and requiring manual intervention to clear the path.

For example, Bin ID 1029491 is associated with an abnormally high (34%) partial order fill rate. Recommend pulling bin and inspecting for damage or blockage.

3. Product < > Bin optimization. Systemic issues were pushing products to be stowed in the incorrect bins. This prevented the optimal quantity from being stowed in each bin and slowed pick productivity.

For example, SKU 10241111 has an incorrect product dims in the catalog, restricting the expected stow quantity. This creates unplanned replenishments.

Root Cause Analysis

Beamup's unique differentiators are its ability to:



Pinpoint the true root cause of a supply chain inefficiency and...



Prescribe a hyper-actionable insight to resolve it.

By ingesting scan data, order data, robotics data, CRM notes, and CCTV footage, Beamup isolates systemic loss patterns worth investigating vs one-off missed metrics.

Results

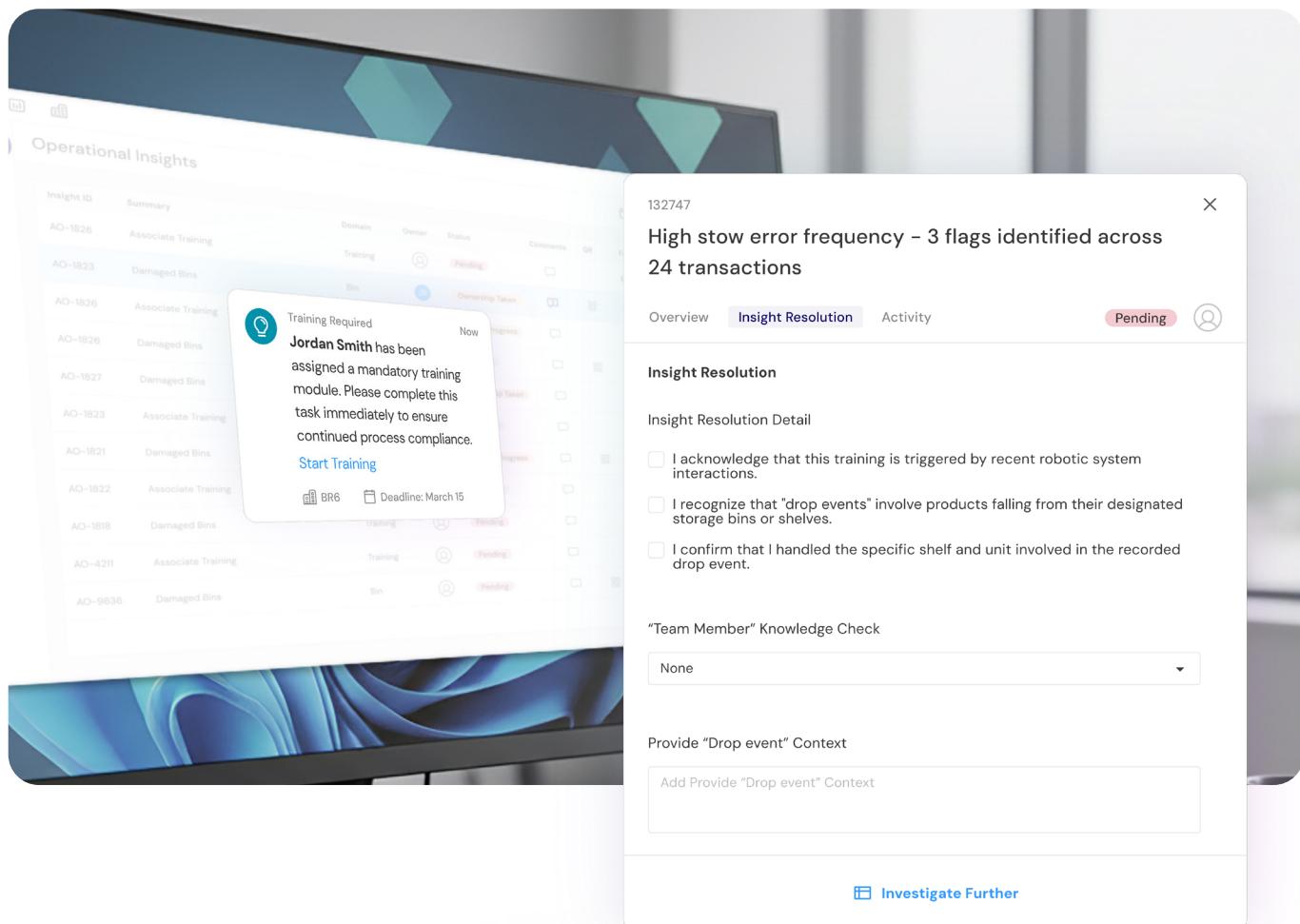
By deploying Beamup's agentic AI, this retailer saw a **5% efficiency gain** across the entire network, translating to **\$20M in saved labor dollars** annually.



This ROI improvement not only achieved the originally proposed robotics ROI, but surpassed it. Below details how Beamup was able to solve their 3 key areas of savings erosion:

Team Member Training

Beamup stopped the team member in the moment, forcing them to immediately complete on-screen training before continuing to perpetuate the incorrect procedure. Once team members knew this behavior was not only tracked, but also being corrected, the improved results spread throughout each facility nearly overnight.



132747

High stow error frequency – 3 flags identified across 24 transactions

Overview **Insight Resolution** Activity Pending

Insight Resolution

Insight Resolution Detail

I acknowledge that this training is triggered by recent robotic system interactions.

I recognize that "drop events" involve products falling from their designated storage bins or shelves.

I confirm that I handled the specific shelf and unit involved in the recorded drop event.

"Team Member" Knowledge Check

None

Provide "Drop event" Context

Add Provide "Drop event" Context

Investigate Further

Damaged Bins

By identifying problematic bins the same day, Beamup agentic AI was able to pull bins from rotation before errors propagated across the entire operation.

DB-1823

Damaged Bins -
6 Events with 4 Transactions

Overview Insight Resolution Activity Ownership Taken JR

Insight	
Source Bin	Bin 12
Shelf Face	A
Shelf ID	5469874
Related Events	6
Total Transactions	4
Score	46/100
Units	3
Cost	\$15
Insight Date	Jan 6, 2026
Date Resolved	-

Recommended Action

Structural failure detected in Bin 12; 6 fall events recorded in the last 24 hours.
Flag Bin 12 as 'Out of Service' immediately to prevent further navigation delays.

Properties

Insight Domain	Bin
Facility	FC-01
Region	EMEA
Insight Cadence	Daily

[Investigate Further](#)

Product <> Bin Optimization

By continuously monitoring structured and unstructured data sets, Beamup identifies product-to-bin type error patterns, correcting allocation errors as soon as they are introduced.

PB-2356

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Ready to transform your supply chain?
Please contact us at sales@beamup.ai