Improving Inventory Accuracy & Online Fulfillment at Dick's Sporting Goods.

A Pilot Proposal Using Autonomous RFID & Computer Vision to Protect Omnichannel Sales.



~1,000 STORES
across the U.S.

MORNING ORDER QUEUES

~150

orders to fulfill

PHANTOM INVENTORY
Inaccurate counts lead to canceled orders and lost sales.

COMPROMISED PACKAGING
Mis-picks and incomplete sets erode customer trust.

High order volumes meet imperfect inventory, driving cancellations, eroding trust, and reducing athlete lifetime value.

PRESENTED BY SCMINDS

MINH DOAN
CUONG PHAM
BAO DOAN

Manual Scanning Accuracy Has Plateaued Below Auto-Adjust Threshold.

Locking Phantom Inventory In Place

MANUAL SWEEPING

Two associates perform RFID sweeps morning and night with handheld wands and Zebra devices.

91%

ACCURACY

Store-visit data impacted by human variance

Observed ~91% accuracy driven by walking pace and wand angle.

WMS AUTO-ADJUST LOCKED

Requires >95% accuracy gate disables automated inventory corrections

Phantom inventory persists because the accuracy threshold is not met.

PILOT HYPOTHESIS

Autonomous auditing can increase accuracy >95% to enable automated inventory healing and break the stalemate.

The Current Anti-Decline Protocol Creates a Labor-Intensive Escalation

Loop Slowing Order Fulfillment

PICKER
Fails to Find Item

→

PEER ASSOCIATE
Checks availability

→

DEPARTMENT LEAD
Leads store hunt

→

STORE MANAGER
Conducts floor sweep

→

ORDER DECLINE
Customer notified

Average 15–20 minutes per exception.

Operational Drag

- Associates carry two separate devices (RFID sled and Zebra scanner), increasing handling friction.
- Manager time diverted from leadership to manual search.

Pilot Validation Targets

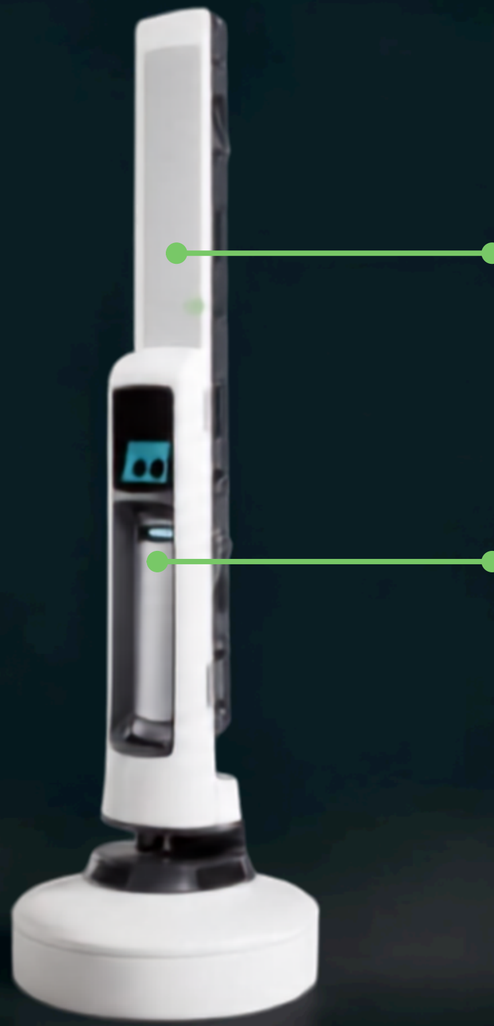
- Measure time per exception vs. target **<5 minutes.**
- Assess operator device handling efficiency improvements via device integration.

TIME, NOT ITEM AVAILABILITY, IS THE BOTTLENECK

15–20

MINUTES PER EXCEPTION

Autonomous Spatial Auditing With Simbe Tally RFID Can Deliver >99% Data Fidelity And Detect Damaged Packaging.



Publicly Supported Evidence

>99% — RFID read accuracy clears 95% WMS auto-adjust threshold.

80+ → 3 — Decathlon reduced inventory audit hours 80+ → 3 hours, improved accuracy >99%.

50% — Faster online order fulfillment on scaled deployments.

Pilot Validation Targets

Validate >95% accuracy in DSG footwear, apparel, and backroom confirm damaged packaging detection effectiveness.

Raising Inventory Accuracy Above 99% Transforms Fulfillment from Labor-Intensive Search to Directed 4-Minute Picks

3:00 AM
Autonomous Audit



3D Spatial
Exception Map



5:30 AM
Action Feed to Zebra



Under 4-minute
Directed Picking



100%
Curbside Readiness



PILOT HYPOTHESES

65% Reduction in Decline Rates.

Elimination of manager floor **sweeps.**

Estimated +6 to +8 OmnicChannel NPS point lift.

Transparent Pilot Economics Framework Under Robotics-as-a-Service Model Shows Potential for Payback Within 24 Months.

Subscription cost	**$1,200** Per month per store
Labor Capacity Unlocked	**$17,520** Per year per store elimination of ~3 hours/day manual sweep per store.
Margin recovery	**$10K-$31K/year** Per year per store avoided canceled BPIS orders.
Net value	**~$13K-$34K/year/store** Per year per store Illustrative, to be validated

Recovering Just 1–3 Orders/Day Could Unlock ~$10K–$31K in Annual Margin.

Recovered Orders	Daily Margin	Annual Margin
1 order/day	$28	$10.2K
2 orders/day	$56	$20.4K
3 orders/day	$84	$30.7K

Illustrative Assumption | $80 AOV × 35% contribution margin × 365 days.

The Financial Case Is Conservative — Better Fulfillment Also Protects Customer Lifetime Value.

Inventory Accuracy → Failed BOPIS Orders → Successful Fulfillment → CSAT / NPS → Retention → Reacquisition Pressure

FULFILLMENT	CUSTOMER EXPERIENCE	RETENTION
↓ Cancellation rate	↑ BOPIS CSAT	↑ Repeat purchase rate
↓ Failed picks	↑ NPS	↓ Customer churn
↑ Order completion	↓ Complaints	↓ Reacquisition pressure

Customer retention upside is excluded from the ~$13K–$34K store annual value case — providing additional potential upside.

Phased 12-Month Rollout Roadmap With Clear Gates And Board Authorization Request.

PHASE 1
MONTHS 1-3

Proof of Value in
3 high-volume omni hubs.

GATE

>95% RFID read accuracy, validate damaged packaging detection.

PHASE 2
MONTHS 4-8

Operational pilot in
25 regional hubs.

GATE

50% reduction in escalations, pick time <5 minutes.

PHASE 3
MONTHS 9-12

Enterprise rollout blueprint for top 100 fulfillment stores.

GATE

Verified store economics, adoption, and executive approval.

BOARD AUTHORIZATION REQUEST

Authorize 90-day, 3-store proof of value pilot.

THANK YOU