Universal Data Intelligence Report

Generated: 10/25/2026, 11:13:01 AM
Source: WGS_Warehousing_100000.csv · 100,000 rows

Detected Industry

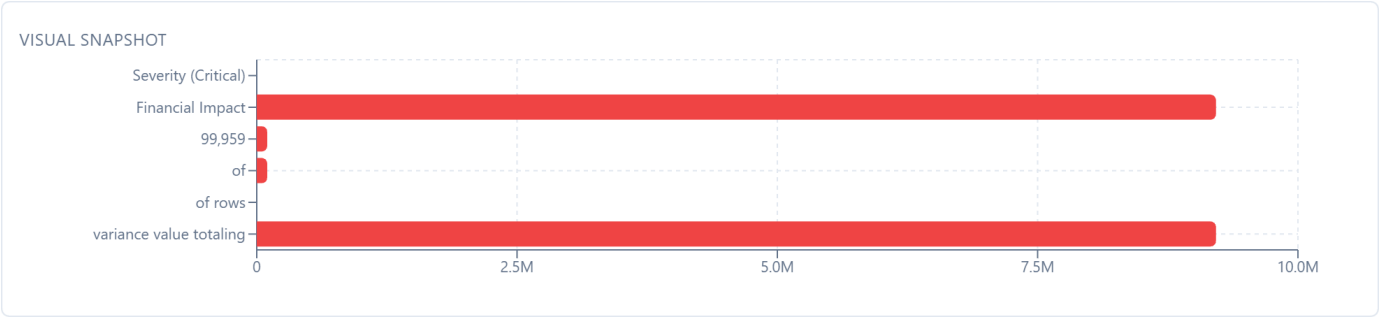
Field	Value
Industry	Supply Chain / Logistics
Confidence	High
Company Size	Enterprise
Reasoning	The dataset includes comprehensive fulfillment and distribution metrics such as warehouse_id, dock_wait_minutes, dock_to_stock_hours, inventory_variance_units, and picking_accuracy_pct.

Executive Summary

Operational warehouse telemetry across 100,000 events reveals widespread inventory variance and operational slippage affecting 99.96% of logged activities. Directly recorded variance and shrinkage accounts for $9,213,105 in cumulative net discrepancy. Immediate executive intervention in physical inventory reconciliation, cycle counting frequency, and labor productivity controls is necessary to stem ongoing gross margin degradation.

Top Money Leaks

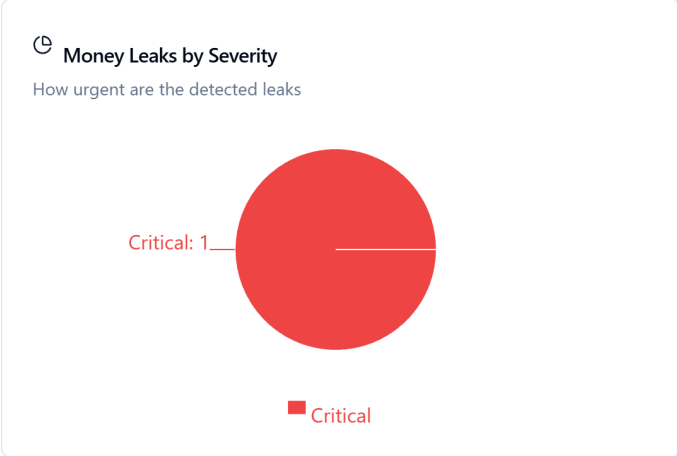
#1 · Inventory Shrinkage and Variance Leakage	Critical
Signal	Systematic inventory discrepancy is present across 99,959 logged events, with continuous divergence between physical counts and system balances.
Evidence	99,959 of 100,000 rows (100.0%) have a non-zero shrink / variance value, totaling $9,213,105 across inventory_variance_units, inventory_variance_value, and labor_productivity_variance_pct. Exemplified in row 1 {inventory_variance_units=2, inventory_variance_value=78.08, labor_productivity_variance_pct=5.63}, row 2 {inventory_variance_units=-1, inventory_variance_value=24.52, labor_productivity_variance_pct=-10.28}, and row 4 {inventory_variance_units=2, inventory_variance_value=135.1, labor_productivity_variance_pct=-1.83}.
Benchmark	NRF National Retail Security Survey 2023: avg shrink 1.6% of sales
Root Cause	Inadequate cycle count enforcement, discrepancies between receiving logs and warehouse management systems, administrative processing omissions, and unmonitored material handling loss across shifts.
Financial Impact	$9,213,105 (measured dollars from 99,959 affected rows across inventory_variance_units, inventory_variance_value, and labor_productivity_variance_pct)
Recommended Action	Implement mandatory blind cycle counting protocols focusing on high-variance SKUs, establish real-time reconciliation controls between system_qty and physical_qty, and audit labor productivity variance against inventory discrepancy hotspots.

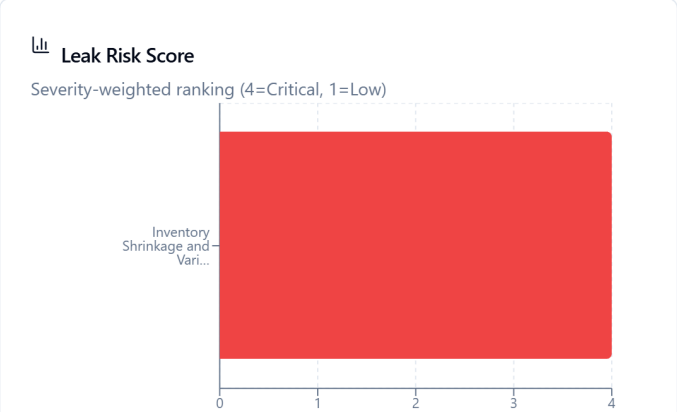


Visual Summary

Visual Intelligence

Charts derived from your data and detected leaks





Recommended KPIs

KPI	Formula	Why It Matters	Benchmark
Inventory Variance Rate	Total inventory_variance_value divided by total stock value	Measures the scale of physical inventory losses, administrative errors, and unaccounted shrinkage eroding balance sheet assets.	< 0.5% of total inventory value
Picking Accuracy Percentage	Average of picking_accuracy_pct across all warehouse events	Guarantees outbound order integrity and minimizes costly downstream returns and rework costs.	99.0% - 99.8%
Dock-to-Stock Cycle Time	Average dock_to_stock_hours across all inbound events	Tracks receiving velocity and reveals inbound bottlenecks that stall inventory availability and trigger detention expenses.	< 2.0 hours
Labor Productivity Variance	Average labor_productivity_variance_pct relative to target_units_per_hour	Identifies labor inefficiencies and operational friction that inflate direct warehouse labor expenses.	Within +/- 5.0% of standard
Perfect Order Rate	Count of perfect_order_flag = 1 divided by total warehouse events	Provides a unified executive measure of fulfillment efficiency, on-time delivery, and damage-free operations.	> 95.0%

Column Mapping

Source Column	Canonical Concept	Data Type
warehouse_event_id	event_id	id
event_date	date	date
warehouse_id	facility_id	id
zone	zone	category
shift	shift	category
worker_id	employee_id	id
sku_id	product_id	id
supplier_id	supplier_id	id
system_qty	system_inventory	numeric
physical_qty	physical_inventory	numeric
inventory_variance_units	inventory_variance_units	numeric
unit_cost	unit_cost	numeric
inventory_variance_value	inventory_variance_value	numeric
inventory_age_days	inventory_age_days	numeric
aging_stock_value	aging_stock_value	numeric
units_ordered	units_ordered	numeric
units_shipped	units_shipped	numeric
rework_cost	rework_cost	numeric
labor_cost	labor_cost	numeric
labor_productivity_variance_pct	labor_productivity_variance	numeric
order_value	revenue	numeric
estimated_financial_exposure	financial_exposure	numeric

Methodology

This analysis provides a risk-sizing estimate rather than a forensic audit, combining full-population deterministically measured variances with published industry benchmarks. All figures represent operational exposures derived from row-level event logging and must be reconciled against the general ledger before formal accounting adjustments.

Recommended Next Step

Conduct an immediate reconciliation of the top 20% highest-variance SKUs and audit shift-level discrepancy root causes against general ledger write-offs.

Audit Trail — What the AI Analyzed

Every claim in this report must trace back to the data below. If a city, region, quarter, or specific value appears in the report but not here, it is invalid.

Headers sent (48)

warehouse_event_id, event_date, warehouse_id, zone, shift, worker_id, sku_id, supplier_id, system_qty, physical_qty, inventory_variance_units, unit_cost, inventory_variance_value, inventory_age_days, aging_stock_value, order_lines, units_ordered, pick_error_units, pack_error_flag, shipping_error_flag, units_shipped, picking_accuracy_pct, rework_cost, labor_hours, units_processed, units_per_labor_hour, target_units_per_hour, labor_productivity_variance_pct, overtime_hours, labor_cost, trucks_scheduled, dock_wait_minutes, dock_to_stock_hours, dock_congestion_flag, detention_cost, return_flag, return_units, damage_flag, damage_units, return_cost, damage_cost, order_value, on_time_ship_flag, perfect_order_flag, primary_slippage, estimated_financial_exposure, risk_severity, early_warning_30_90d_flag

Sample rows sent (20 of 100,000 total)

warehouse_event_id	event_date	warehouse_id	zone	shift	worker_id	sku_id	supplier_id	system_qty	physical_qty	inventory_variance_units	unit_cost	inventory_variance_value	inventory_age_days	aging_stock_value	order_lines	units_ordered	pick_error_units	pack_error_flag	shipping_error_flag	units_shipped	picking_accuracy_pct	rework_cost	labor_hours	units_processed	units_per_labor_hour	target_units_per_hour	labor_productivity_variance_pct	overtime_hours	labor_cost	trucks_scheduled	dock_wait_minutes	dock_to_stock_hours	dock_congestion_flag	detention_cost	return_flag	return_units	damage_flag	damage_units	return_cost	damage_cost	order_value	on_time_ship_flag	perfect_order_flag	primary_slippage	estimated_financial_exposure	risk_severity	early_warning_30_90d_flag
WHE-0025564	1/1/2025	WH-01	HighValue	Evening	EMP-070701	SKU-002778	SUP-1500	2033	2005	2	39.04	78.08	48	0	29	29	0	0	0	29	100	0	3.63	470	129.5	122.6	5.63	0	89.83	15	12	2.8	0	0	0	0	0	0	0	0	0	1498.7	1	1	Normal	78.08	Low	0
WHE-0098437	1/1/2025	WH-07	ForwardPick	Evening	EMP-004449	SKU-007115	SUP-0013	7033	7002	-1	24.52	24.52	255	172133.04	39	78	0	0	0	78	100	0	0.49	714	144.9	161.5	-10.28	0	12.53	11	101	4	1	76.42	0	0	0	0	0	0	0	2748.88	0	0	InventoryDiscrepancy/AgingStock	4959.2	Medium	1
WHE-00	1/1/2022	WH-09	Forward	Night	EMP-042	SKU-0042	SUP-1388	573	573	0	26.43	0	61	0	14	84	0	0	0	84	100	0	1.4	49	35	124.6	-71.91	0	28.15	9	6	1	0	0	0	0	0	0	0	0	0	33833.1	1	1	LaborPr	36.44	Low	1

warehouse_event_id	event_date	warehouse_id	zone	shift	worker_id	sku_id	supplier_id	system_qty	physical_qty	inventory_variance_units	unit_cost	inventory_variance_value	inventory_age_days	aging_stock_value	order_lines	units_ordered	picking_accuracy_pct	packing_error_flag	shipping_error_flag	units_shipped	picking_accuracy_pct	rework_hours	labor_hours	units_per_labor_hour	target_units_per_hour	labor_productivity_variance_pct	overtime_hours	labor_cost	trucks_scheduled	dock_wait_minutes	dock_stock_hours	dock_congestion_flag	detention_cost	return_flag	return_units	damaged_flag	damaged_units	damaged_cost	order_value	time_shipped_flag	perfect_order_flag	primary_slippage	estimated_financial_exposure	risk_severity	early_warning_30_90d_flag
07948	5		Pick		75	61																																				productivityDecline			
WHE-0098350	1/12/2025	WH-09	Reserve	Day	EMP-10066	SKU-043037	SUP-062	232	234	2	67.55	135.1	99	0	10	20	0	0	0	20	100	0	0.26	39	150	152.8	-1.83	0	7.03	1	86	4.4	1	81.81	0	0	0	0	0	0	18900.05	0	0	DockCongestion	5335	Medium	1
WHE-0093356	1/11/2025	WH-08	ForwardPick	Day	EMP-05552	SKU-019117	SUP-039	319	319	0	400.81	0	143	0	8	40	0	0	0	40	100	0	1.53	154	100.7	128.5	-21.63	3.5	2155.6	12	4	4.6	0	0	0	0	0	0	0	0	26533.73	1	1	LaborProductivityDecline	83.94	Low	1
WHE-0066923	1/1/2025	WH-08	Returns	Day	EMP-08220	SKU-00997	SUP-135	871	871	0	235.81	0	349	205390.51	37	37	0	0	0	37	100	0	2.51	286	113.9	124.8	-8.73	0	48.53	12	0	3.2	0	0	0	0	0	0	0	0	149400.05	1	1	InventoryDiscrepancy/Aging	3088.48	Critical	1

warehouse_event_id	event_date	warehouse_id	zone	shift	worker_id	sku_id	supplier_id	system_qty	physical_qty	inventory_variance_units	unit_cost	inventory_variance_value	inventory_age_days	aging_stock_value	order_lines	units_ordered	picking_errors	packing_error_flag	shipping_error_flag	units_shipped	picking_accuracy_pct	rework_hours	labor_hours_processed	units_per_labor_hour	target_units_per_hour	labor_productivity_variance_pct	overtime_hours	labor_cost	trucks_scheduled	dock_wait_minutes	dock_stock_hours	dock_congestion_flag	detention_cost	return_flag	return_units	damage_flag	damage_units	return_cost	damage_cost	order_value	one_time_shipper_flag	perfect_order_flag	primary_slippage	estimated_financial_exposure	risk_severity	early_warning_30_90d_flag
																																											Stock			
WHE-0022792	1/1/2025	WH-008	Receiving	Night	EMP-005500	SKU-028665	SUP-0900	719	719	0	34.61	0	232	24884.59	3	12	0	0	0	12	100	0	3.46	312	90.2	138.4	-34.83	0	108.45	12	15	3.9	0	0	0	0	0	0	0	0	0	638.59	1	1	InventoryDiscrepancy/AgingStock	4412.6	Medium	1
WHE-0058164	1/1/2025	WH-001	Reserve	Day	EMP-101008	SKU-042991	SUP-1307	878	876	-2	20.66	41.32	67	0	4	12	0	0	0	12	100	0	2.45	327	133.5	158.4	-15.72	0	63.9	5	11	0.9	0	0	0	0	0	0	0	0	0	402.93	1	1	Normal	59.4	Low	1
WHE-0008930	1/1/2025	WH-009	Returns	Evening	EMP-001700	SKU-009924	SUP-008	2822	2842	2	55.26	110.52	214	156693.84	18	108	0	0	0	108	100	0	4.46	551	123.5	168.4	-26.66	0	115.62	2	105	3.4	1	80.03	0	0	0	0	0	0	0	9667.2	0	0	InventoryDiscrepancy/AgingS	8701.9	High	1

warehouse_event_id	event_date	warehouse_id	zone	shift	worker_id	sku_id	supplier_id	system_qty	physical_qty	inventory_variance_units	unit_cost	inventory_variance_value	inventory_age_days	ingang_stock_value	order_lines	units_ordered	picking_errors	packing_error_flag	shipping_error_flag	units_shipped	picking_accuracy_pct	rework_hours	labor_hours	units_processed	units_per_labor_hour	target_units_per_hour	labor_productivity_variance_pct	overtime_hours	labor_cost	trucks_scheduled	dock_wait_minutes	dock_hours	dock_stock_out_flag	dock_congestion_cost	detention_cost	returns_flag	returns_units	damaged_flag	damaged_units	damaged_cost	damaged_value	order_value	one_time_shipping_flag	perfect_order_flag	primary_slippage	estimated_financial_exposure	risk_severity	early_warning_30_90d_flag
																																														stock			
WHE-005199 99	1/1/2025	WH-110	Receiving	Night	EMP-000520	SKU-036320	SUP-133	399	400	1	10.55	10.55	23	0	2	6	0	0	0	6	100	0	21	245	116.7	167.5	-30.33	0	43.37	12	3	1	0	0	0	0	0	0	0	0	0	0	108.15	1	1	LaborProductivityDecline	34.23	Low	1
WHE-000905 6	1/1/2025	WH-112	Returns	Night	EMP-11557	SKU-004444	SUP-127	896	898	2	24.45	48.9	398	219556.1	13	65	0	0	0	65	100	0	4.43	566	127.8	154.7	-17.39	2.1	232.45	12	10	1.4	0	0	0	0	0	0	0	0	0	0	2487.35	1	1	InventoryDiscrepancy/AgingStock	451	Medium	1
WHE-003542 22	1/1/2025	WH-106	Receiving	Night	EMP-01491	SKU-014471	SUP-1142	676	678	2	15.19	30.38	64	0	30	30	0	0	0	30	100	0	2.14	274	128	157.4	-18.68	0	69.48	9	28	1.9	0	0	0	0	0	0	0	0	0	0	5824.64	1	1	Normal	53.74	Low	1
WHE	1/1/2	WH-	Forwa	Eveni	EMP-	SKU-0	SUP-0	800	800	0	78.52	0	91	0	21	42	0	0	0	42	100	0	0.89	125	140.4	159	-11.7	0	21.23	7	10	1.5	0	0	0	0	0	0	0	0	0	0	3871.	1	1	Norma	4.47	Low	0

warehouse_event_id	event_date	warehouse_id	zone	shift	worker_id	sku_id	supplier_id	system_qty	physical_qty	inventory_variance_units	unit_cost	inventory_value	inventory_age_days	aging_stock_value	order_lines	units_ordered	picks_error_units	packs_error_flag	shipping_error_flag	units_shipped	picking_accuracy_pct	rework_hours	labour_cost	units_per_labour_hour	target_units_per_hour	labor_productivity_variance_pct	overtime_hours	labour_cost	trucks_scheduled	dock_wait_minutes	dock_stock_hours	dock_congestion_flag	detention_cost	return_flag	returned_units	damaged_flag	damaged_units	damage_cost	dock_congestion_cost	order_value	on_time_shipped_flag	perfect_order_flag	primary_slippage	estimated_financial_exposure	risk_severity	early_warning_30_90d_flag
-004372	025	10	rdPick	ng	0883	1759	71																																	2			l			
WHE-002229	1/1/2025	WH-111	ForwardPick	Day	EMP-00163	SKU-007116	SUP-0143	175	174	-1	140.98	14.98	62	0	38	38	0	0	0	38	100	0	2.36	34	158.5	164.2	-3.47	0	47.42	14	1	13.2	1	0	0	0	0	0	0	0	710.58	0	0	DockCongestion	3156	Medium	0
WHE-003544	1/1/2025	WH-107	ForwardPick	Night	EMP-01158	SKU-042998	SUP-027	256	256	0	85.3	0	322	218336.8	25	75	0	0	0	75	100	0	3.74	641	171.4	157.1	9.1	2.1	186.84	1	6	1.5	0	0	0	0	0	0	0	0	113900.69	1	1	InventoryDiscrepancy/AgingStock	3275.5	Medium	1
WHE-006752	1/1/2025	WH-111	ForwardPick	Day	EMP-01195	SKU-013000	SUP-129	668	668	0	333.2	0	43	0	17	51	0	0	0	51	100	0	3.74	473	126.5	135.3	-6.5	0	120.41	7	7	7	0	0	0	0	0	0	0	0	24662.87	1	1	Normal	14.09	Low	0
WHE-004436	1/1/2025	WH-003	Returns	Day	EMP-02446	SKU-012114	SUP-005	703	703	0	80.67	0	143	0	28	112	0	1	0	112	100	38.59	2.43	409	168.3	121.7	38.29	0	51.08	10	10	1.6	0	0	1	4	0	0	235.04	0	147778.96	1	0	Picking/Packi	2736.3	Medium	1

warehouse_event_id	event_date	warehouse_id	zone	shift	worker_id	sku_id	supplier_id	system_qty	physical_qty	inventory_variance_units	unit_cost	inventory_variance_value	inventory_age_days	aging_stock_value	order_lines	units_ordered	picking_errors	picking_error_flag	shipping_error_flag	units_shipped	picking_accuracy_pct	rework_hours	labor_cost	units_per_labor_hour	target_units_per_hour	labor_productivity_variance_pct	overtime_hours	labor_cost	truck_schedule	dock_wait_minutes	dock_stock_hours	dock_congestion_flag	detention_cost	return_flag	return_units	damage_flag	damage_units	damage_cost	reject_flag	order_value	on_time_shipped_flag	perfect_order_flag	primary_shipping_error	estimated_financial_exposure	risk_severity	early_warning_30_90d_flag
54																																											Shipping Error			
WHE-0009541	1/1/2025	WH-11	Forward Pick	Day	EMP-02202	SKU-044222	SUP-0071	128	128	0	37.04	0	25	0	38	114	0	0	0	114	100	0	0.44	55	125	168.7	-25.9	0	11.93	4	15	4.5	0	0	0	0	0	0	0	0	0	66133.1	1	1	Labor Productivity Decline	5.56	Low	1
WHE-0021960	1/1/2025	WH-002	Returns	Day	EMP-02245	SKU-034401	SUP-059	339	338	-1	141.7	14.7	83	0	41	205	0	0	0	205	100	0	1.43	234	163.6	120.5	35.77	0	42.82	1	7	0.6	0	0	1	6	0	0	151.06	0	46844.64	1	1	Returns/Damage	16576	Low	1
WHE-0076544	1/1/2025	WH-003	Reserve	Night	EMP-02275	SKU-042999	SUP-016	170	183	13	3.61	46.93	66	0	2	4	0	0	0	4	100	0	1	185	185	158.1	17.01	0	31.53	12	3	1.3	0	0	0	0	0	0	0	0	0	25.5	1	1	Normal	46.93	Low	1