



Suhas Bhairav

AI Inventory Shortage Early Warning Checklist

**Detect supply delays and flag stock-out risk
weeks ahead with AI-driven alerts.**

A practical, weekly AI-based inventory health
checklist that prevents stock-outs.

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suhasbhairav.com

Automate Signals, Review Exceptions

Identify repeatable signals to automate and pin down what requires human review. Set success criteria and the data you'll trust weekly.

Key move Pilot with 2 critical SKUs for 2 weeks

PRACTICAL CHECKLIST

- 01** Automate signals for supplier lead times, on-time delivery, and seasonal order trends to surface stock risk automatically.
- 02** Human review on flagged SKUs, exceptions, and new suppliers; require approvals for auto-reorder when thresholds are exceeded.
- 03** Data sources: ERP stock levels, supplier lead times, PO receipts, shipment notices, and seasonal demand forecasts.
- 04** Tools: AI agents (Claude, ChatGPT), time-series models, dashboards, and alerting rules.
- 05** Guardrails: thresholds, approvals, and audit logs to prevent over-ordering.
- 06** Ownership: Assign a weekly process owner in Operations and a data steward.

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Data Needs and Tooling

Identify data sources, interfaces, and data quality requirements. Prototype AI-driven signals and automatic alerts with safe defaults.

Key move Document data flows and ownership in the OPS playbook.

PRACTICAL CHECKLIST

- 01** Data sources: ERP stock levels, supplier lead times, PO receipts, shipment notices, and seasonal demand forecasts.
- 02** Data quality: Ensure data freshness, completeness, accuracy, and time synchronization across systems.
- 03** Interfaces: Connect ERP/WMS and supplier feeds via standardized APIs or CSV imports.
- 04** AI tooling: Leverage time-series forecasting, anomaly detection, and agent-driven alerting.
- 05** Automation layers: Score risks, trigger alerts, and queue exceptions for human review.
- 06** Data governance: Define data owners, access controls, and audit trails for changes.
- 07** Security & privacy: Protect supplier data with retention rules and encryption where applicable.

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Weekly Adoption Plan

Follow a 4-week starter plan with milestones you can measure weekly. Each week adds scope, validation, and governance.

Key move Assign a weekly OPS owner and data steward to maintain this checklist.

PRACTICAL CHECKLIST

- 01** Week 1: Map critical SKUs, top suppliers, and baseline lead times; define risk criteria.
- 02** Week 2: Connect data sources (ERP, WMS, PO feeds); build initial risk score and threshold alerts.
- 03** Week 3: Enable automated alerts for high-risk SKUs; establish human-review queue with SLA.
- 04** Week 4: Run a 2-cycle pilot; calibrate thresholds; document ownership and approvals.
- 05** Guardrails: Define escalation paths, audit logs, and change control for the model rules.
- 06** Metrics & ownership: Track stock-out weeks ahead, alert response time, auto-reorder rate; assign weekly reviews.

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ABOUT THE CREATOR

Suhas Bhairav

I build AI systems that combine distributed architecture, retrieval, knowledge graphs, security, and practical workflow design. My focus is AI that can be used repeatedly by real teams: understandable, reliable, and grounded in the work people already do.

EXPERTISE

- Principal systems architecture and applied AI engineering
- Production-grade AI systems, agentic workflows, RAG, and knowledge graphs
- Full-stack workflow applications across AWS, Google Cloud, Azure, on-premise, and hybrid environments
- Practical AI implementation patterns for automotive, manufacturing, finance, logistics, cybersecurity, sales, and customer operations
- Security, governance, observability, approvals, and failure-mode thinking for operational AI systems

WEBSITE

suhasbhairav.com

EMAIL

suhasbhairav@gmail.com