CLOUD INVENTORY®

MOBILE-FIRST INVENTORY SOLUTIONS™

From Warehouse to Production Line: Smarter Inventory Management for Food & Beverage Operations

An operational guide for Food & Beverage supply chain leaders

EXECUTIVE SUMMARY

Food and beverage manufacturers operate in one of the most demanding inventory environments in any industry. Perishable raw materials, strict regulatory requirements, multi-site distribution networks, and razor-thin margins leave virtually no tolerance for the inventory inaccuracies, production delays, and compliance gaps that paper-based and legacy system-dependent operations routinely produce.

Cloud Inventory offers real-time visibility at every touchpoint in the food and beverage supply chain — from ingredient receiving and production floor execution through warehouse operations and outbound fulfillment. By adding a mobile-first inventory control layer on top of existing ERP systems, Cloud Inventory helps F&B companies increase productivity, ensure compliance, optimize inventory levels, and drive revenue growth — without the burden of a full WMS overhaul.

This white paper examines how Cloud Inventory's core capabilities — End-to-End Visibility, Production Materials Management, Warehouse Optimization, Compliance, and ERP Integration — address the specific challenges facing food and beverage companies, grounded in real customer outcomes and CI's proven platform capabilities.

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01 THE INVENTORY CHALLENGE IN FOOD & BEVERAGE

Food and beverage manufacturers face a convergence of pressures that make inventory management uniquely difficult: ingredients with shelf-life constraints, production schedules that cannot tolerate material shortages, regulatory mandates for traceability and compliance documentation, and multi-site distribution networks that demand real-time visibility across warehouses, production facilities, and distribution centers.

Yet many F&B companies still rely on the same tools that have failed them for years: ERP systems forced to accommodate warehouse workflows they were never designed for, paper-based receiving and cycle count processes, manual reclassification procedures that consume hours of warehouse staff time per day, and pick, pack, and ship processes that depend on tribal knowledge rather than system-directed execution.

The result is a persistent gap between what the system of record shows and what is actually on the shelf — a gap that drives overproduction, excess safety stock, missed customer orders, and the compliance exposure that comes from incomplete traceability records.

1.1 CORE PAIN POINTS

- ! ERP systems forcing operations teams to alter business processes rather than the other way around
- ! Time-consuming manual inventory reclassification — processes that take 20–30 minutes per pallet
- ! Rigid pick, pack, and ship workflows that slow order fulfillment and reduce warehouse throughput
- ! Inventory inaccuracies causing production downtime when materials are not available at the line
- ! Limited real-time visibility into stock levels across warehouses, production facilities, and distribution centers
- ! Excess safety stock tying up working capital due to lack of real-time inventory confidence
- ! Inability to support unique warehouse processes within out-of-the-box ERP configurations

> INDUSTRY INSIGHT
>
> Food and beverage companies that operate with inaccurate inventory data consistently carry 20–40% more safety stock than necessary — a direct drain on working capital. Meanwhile, stockouts on the production floor cost the industry billions annually in unplanned downtime, rushed procurement, and missed customer shipments.

02 CLOUD INVENTORY: BUILT FOR FOOD & BEVERAGE OPERATIONS

Cloud Inventory is a mobile-first inventory management platform that gives food and beverage operations teams real-time visibility and control across the entire supply chain — from ingredient receiving through production execution, warehouse management, and outbound fulfillment. The platform is designed to integrate with, not replace, existing ERP systems, making it the fastest path to inventory discipline without the risk and cost of a full WMS replacement.

For food and beverage companies, this means the flexibility to do things according to how the business actually operates — not according to the rigid workflows that out-of-the-box ERP systems impose. Cloud Inventory's no-code/low-code platform makes it straightforward to tailor applications to specific production, warehousing, and compliance requirements without custom development.

> CUSTOMER RESULT — J&J SNACK FOODS
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> "With Cloud Inventory, we're now at a 98% inventory accuracy in our warehouses." J&J Snack Foods, a manufacturer and distributor of branded snack foods including SUPERPRETZEL and ICEE, implemented Cloud Inventory on top of Oracle JD Edwards — reducing a 20–30 minute per-pallet reclassification process to 15–30 seconds through scan-driven automation.



2.1 PLATFORM ARCHITECTURE AT A GLANCE

WHAT CLOUD INVENTORY DELIVERS FOR FOOD & BEVERAGE
✓ Real-time inventory execution without a complex WMS rollout or ERP replacement
✓ Mobile-first applications for production floor, warehouse, and receiving teams
✓ Transaction-level inventory control: lot/serial traceability, location enforcement, LPN tracking
✓ Customizable workflows that match how the business operates — not how the ERP dictates
✓ Scan-verified receiving, directed putaway, and real-time ERP synchronization
✓ Cycle count programs replacing time-consuming full physical inventory counts
✓ No-code configuration enabling self-sufficient application development without IT overhead

2.2 PROVEN ROI

CAPABILITY	MEASURED RESULT	WHAT IT MEANS FOR FOOD & BEVERAGE
98% Inventory Accuracy	Up from typical 80–85%	Fewer production stoppages from missing materials; accurate lot tracking
40% Increase in Productivity	Warehouse and production teams	Staff spend time on value-added work, not manual paperwork and reconciliation
Reclassification: 30 min → 15 sec	Per pallet, scan-driven	Drastic reduction in dock labor; faster inbound processing and put-to-production

03 FIVE CORE CAPABILITIES FOR FOOD & BEVERAGE

Cloud Inventory’s approach to food and beverage manufacturing is organized around five operational capabilities that directly address the sector’s most significant inventory challenges: end-to-end supply chain visibility, production materials management, warehouse optimization, regulatory compliance, and ERP integration. Each is a proven, deployable capability — and together they create a continuous thread of inventory control from supplier receipt to customer shipment.

3.1 END-TO-END VISIBILITY

In food and beverage manufacturing, the cost of not knowing is high: production lines starved of ingredients, warehouse staff searching for misplaced materials, supervisors making planning decisions based on stale data. Cloud Inventory provides every stakeholder — from leadership to shop floor — with real-time inventory data that reflects what is actually happening, not what the system recorded at the end of yesterday's shift.

> CUSTOMER QUOTE
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> "The more information our supervisors have at their fingertips, the better we can plan production." — Ed Hickenbottom, VP of Information Technology. Cloud Inventory enabled the company to double production volume without doubling staff, by giving supervisors real-time material visibility and automated workflow control on the shop floor.

END-TO-END VISIBILITY — KEY CAPABILITIES
✓ Real-time data capture at every point of inventory activity — receiving, production, transfer, shipment
✓ Visibility from leadership dashboards down to individual production line and warehouse team views
✓ Monitor inventory levels, track movements, and optimize inventory turns in real time
✓ Proactively identify critical inventory issues for faster resolution and minimal workflow disruption
✓ Track availability and usage of production materials at the point of activity
✓ Inflow and outflow monitoring for regional distribution centers — know capacity status at all times
✓ Real-time stock availability checks
✓ Performance analytics enabling informed decisions about inventory levels and replenishment timing

3.2 PRODUCTION MATERIALS MANAGEMENT

Keeping production lines running in food and beverage manufacturing requires more than a sufficient quantity of ingredients — it requires that the right materials are at the right location on the production floor at the right time, with accurate consumption tracking that feeds back into inventory and ERP records in real time.

PRODUCTION MATERIALS MANAGEMENT — KEY CAPABILITIES
✓ Control the location and delivery of precise material quantities to production lines
✓ Real-time tracking of raw materials from inventory receipt through production consumption
✓ Mobile applications providing production workers with only the information they need to see
✓ Configurable workflows and process controls to address shop floor inefficiencies
✓ Integration with manufacturing automation software and warehouse control systems
✓ Boost production volumes by ensuring materials are always available at the line
✓ Prevent production downtime caused by material shortages or misplaced inventory
✓ Maximize revenue per employee by minimizing downtime and streamlining material flow

3.3 WAREHOUSE OPTIMIZATION

For food and beverage companies, warehouse operations are the connective tissue between ingredient supply and production execution, and between finished goods production and customer fulfillment. Cloud Inventory transforms warehouse operations through mobile-first applications that capture data at the point of activity, streamline inbound and outbound processes, and give warehouse staff system-directed guidance that replaces tribal knowledge and manual paperwork.

WAREHOUSE OPTIMIZATION — KEY CAPABILITIES
✓ Scan-driven inventory reclassification reducing 20–30 minute manual processes to 15–30 seconds per pallet
✓ Mobile-first receiving and directed putaway — no manual key entry, no paper-based receiving logs
✓ Configurable cycle counts for efficient, accurate inventory counts without full physical inventory
✓ Real-time visibility into warehouse capacity — know when distribution centers are at or near capacity
✓ Optimize inventory turns and reduce carrying costs through accurate, real-time consumption data

The impact on warehouse productivity is measurable. Cloud Inventory customers consistently report productivity improvements of 20% or more after deploying mobile-first warehouse applications, with inventory accuracy reaching 98% or higher — a significant improvement over the 80– 85% accuracy typical of manual or ERP-extension approaches in food and beverage operations.

3.4 COMPLIANCE AND TRACEABILITY

Regulatory compliance in food and beverage is non-negotiable. Whether driven by FDA food safety requirements, customer audit obligations, or internal quality standards, F&B companies must be able to demonstrate — quickly and completely — what materials were used in which production runs, where finished goods were shipped, and that all required process controls were followed.

COMPLIANCE AND TRACEABILITY — KEY CAPABILITIES
✓ Lot and serial traceability linking materials from supplier receipt through production and customer shipment
✓ Real-time data capture for every inventory transaction creating a complete, immutable audit trail
✓ Configurable process controls ensuring required steps are completed before inventory moves downstream
✓ Receiving inspections with quality holds and release approval workflows
✓ Role-based access controls ensuring only authorized personnel perform sensitive inventory transactions
✓ Ensure regulatory and contractual compliance with automated process controls and real-time data capture
✓ Reduce the risk of compliance penalties or operational disruptions from incomplete records
✓ Audit-ready reporting enabling rapid response to internal reviews and regulatory inspections

By capturing audit information through normal inventory transactions, Cloud Inventory reduces the gap between operational execution and compliance documentation. Audit preparation becomes a search-and- export exercise rather than a labor-intensive data collection effort — freeing operations teams to focus on production rather than paperwork.

3.5 ERP INTEGRATION — CONNECT TO YOUR SYSTEM OF RECORD

A critical differentiator for food and beverage companies evaluating Cloud Inventory is what sets it apart from both standalone WMS systems and basic ERP extensions: the ability to integrate deeply with any ERP system while adding the operational flexibility that out-of-the-box ERP workflows cannot provide.

CUSTOMER QUOTE — J&J SNACK FOODS

"We're a full JD Edwards shop, and Cloud Inventory is the number one third-party integrator with JD Edwards for WMS." "Cloud Inventory gives us the flexibility to do the things we need to do within our business. We can tailor it to us." — Heather Kepley, Director of Enterprise Systems, J&J Snack Foods

ERP INTEGRATION — KEY CAPABILITIES
✓ Real-time bi-directional ERP synchronization — every transaction posts immediately to the system of record
✓ No modification required to existing ERP systems — Cloud Inventory adds control on top
✓ Eliminate the reconciliation gap between warehouse activity and ERP inventory records
✓ Flexible enough to support unique business processes that out-of-the-box ERP cannot accommodate
✓ Self-sufficient development capabilities allowing teams to build or adjust applications without IT dependency
✓ Performance analytics accessible in real time, not just at end-of-period ERP reporting cycles

04 PLATFORM CAPABILITIES: THE TECHNOLOGY BEHIND THE SOLUTION

The five operational capabilities above are delivered through a platform architecture that is uniquely suited to the operational realities of food and beverage manufacturing: distributed across multiple facilities, dependent on accurate real-time data, and requiring the flexibility to support diverse and often unique business processes.

4.1 MOBILE-FIRST APPLICATIONS

- Comprehensive library of mobile-first apps for receiving, putaway, production floor execution, cycle counting, and order fulfillment
- Role-specific interfaces
- Barcode scanning for rapid, accurate material identification — eliminating manual key entry errors
- Replaces paperwork and manual processes, increasing both productivity and staff satisfaction

4.2 NO-CODE CONFIGURATION AND FLEXIBLE WORKFLOWS

Food and beverage operations are diverse — a frozen novelty manufacturer's inventory workflows differ significantly from a snack food distributor or a beverage company with co-packing relationships. Cloud Inventory's no-code/low-code platform allows organizations to tailor applications and workflows to their specific requirements without expensive custom development or IT dependency.

- Build or modify applications, workflows, and business logic without coding
- Create custom workflows that replace time-consuming manual processes
- Adapt rapidly to new SKUs, facility changes, new regulatory requirements, or customer-specific processes

4.3 INVENTORY ACCURACY AND CYCLE COUNTING

Moving from annual or periodic physical inventory counts to continuous cycle counting is one of the highest-impact operational changes a food and beverage company can make.

- Configurable cycle count applications tailored to product category or location
- Blind and guided counting modes with variance validation workflows
- Audit-ready reporting for internal review and customer or regulatory audits
- Reduce reliance on full physical counts — and the production disruptions they cause

4.4 COLLABORATIVE INVENTORY

In multi-facility food and beverage operations, managing inter-facility material transfers, identifying surplus inventory available for redistribution, and fulfilling urgent production line requests efficiently are persistent operational challenges. Cloud Inventory streamlines these processes.

- Track and manage inventory usage across facilities with real-time visibility into available stock
- Identify surplus items and facilitate quick redistribution, reducing waste and carrying costs
- Reduce time spent locating or chasing inventory across facilities

05 THE FINANCIAL CASE FOR CLOUD INVENTORY IN FOOD & BEVERAGE

The ROI calculation for Cloud Inventory in food and beverage is grounded in operational improvements that directly affect the income statement: higher inventory accuracy reduces carrying costs and production downtime, faster warehouse processes increase throughput without adding headcount, and better compliance documentation reduces audit risk and regulatory exposure.

5.1 COST REDUCTION AND REVENUE IMPACT DRIVERS

VALUE LEVER	TYPICAL IMPROVEMENT	F&B APPLICATION
Inventory Accuracy	Up to 98%+	Fewer production stoppages; accurate lot-level records for compliance
Warehouse Productivity	+20–40%	Mobile-directed workflows replacing manual paperwork across all warehouse tasks
Reclassification Speed	120x faster	Scan-driven reclassification: 30 min per pallet reduced to 15–30 seconds
Inventory Carrying Cost	15–25% reduction	Data-driven replenishment replacing estimate-based safety stock decisions
Production Uptime	Improved	Right materials available at the production line when scheduled — not after delay
Order Fulfillment Accuracy	+10% OTIF	Scan-verified pick, pack, and ship
IT and Development Costs	Reduced	Self-sufficient no-code customization eliminates dependency on IT for workflow changes

5.2 IMPLEMENTATION APPROACH

Cloud Inventory is designed for fast time-to-value. Because it layers inventory control on top of existing ERP systems rather than replacing them, implementations are measured in weeks and months, not years.

> IMPLEMENTATION NOTE
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> Cloud Inventory is built for teams that need inventory discipline without WMS complexity. The platform requires no modification to existing ERP systems and no proprietary connectors — reducing implementation risk and accelerating the path to measurable ROI.

06 SECURITY, RELIABILITY, AND DATA INTEGRITY

Food and beverage companies require the highest standards of data integrity, system availability, and access control for their inventory platforms. Inventory records are not just operational data — they are compliance documentation, quality assurance records, and in some cases, food safety evidence.

- SOC 2 Type 2 certification ensuring rigorous controls over data security, availability, and confidentiality
- Role-based access controls limiting transaction authority to authorized personnel by function and facility
- 99.9%+ uptime SLA backed by geographically distributed, redundant data centers
- Multi-factor authentication and SSO integration for enterprise identity management
- Automated daily backups with tested point-in-time recovery capabilities

07 CONCLUSION: INVENTORY CONTROL FROM INGREDIENT TO CUSTOMER

Food and beverage manufacturers face inventory challenges that are fundamentally different from other industries — and the cost of getting it wrong is measured not only in financial losses but in production downtime, compliance exposure, and customer service failures.

Cloud Inventory delivers the real-time visibility, operational flexibility, and inventory control discipline that food and beverage companies need — organized around the capabilities that matter most in the sector: end-to-end supply chain visibility, production materials management, warehouse optimization, compliance and traceability, and seamless ERP integration.

UNDERSTANDING THE IMPACT

In our experience, the greatest opportunities for operational improvement and cost savings in food and beverage organizations are often found in the management of ingredients, finished goods, and warehouse inventory processes. Begin your evaluation with a few key areas where we frequently see significant gains:

- Measure inventory accuracy across your warehouse and production locations — identify the gap between what your ERP shows and what is physically on the shelf
- Calculate the true cost of manual processes — how many labor hours per week are consumed by reclassification, cycle counting, and pick-pack-ship workflows that could be scan-driven?
- Audit your expired product write-offs over the last 12 months — what percentage of that loss could have been prevented with automated FEFO enforcement and real-time expiry alerts?

GET STARTED

Cloud Inventory's team of supply chain experts is ready to show you exactly how the platform addresses your specific food and beverage inventory challenges. Visit cloudinventory.com or contact the team to

schedule a personalized demo.

ABOUT CLOUD INVENTORY

Cloud Inventory delivers modern, mobile, cloud-based inventory solutions for organizations managing inventory inside and beyond the warehouse. Formerly known as Data Systems International (DSI), Cloud Inventory has served customers in food & beverage, manufacturing, oil & gas, telecommunications, engineering & construction, and minerals & mining for more than 40 years. Learn more at cloudinventory.com or call to schedule a personalized demo.

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