

AI-Powered Planogram Compliance for Large-Scale Retail Execution

The Client

Ithina Inc is a global provider of electronic shelf label and AI-driven in-store execution technology, now part of a broader AI platform, deployed across millions of connected devices serving major retail chains.



Business Challenges

Large retail chains operating 500 or more stores often struggle to keep shelves consistent with the approved planogram. Manual shelf audits are slow, infrequent, and inconsistent, allowing issues such as ghost inventory and incorrect product placement to go unnoticed for days.

- Shelf consistency with approved planograms is hard to maintain at scale
- Manual audits remain slow, infrequent, and inconsistent across store staff
- Headquarters teams lack real-time visibility into shelf compliance across regions and categories

The Solution

An AI-driven planogram compliance solution was implemented, enabling store staff to photograph shelves via a mobile app with no special hardware. Computer vision then compares each image against the approved digital planogram within seconds, flagging discrepancies and alerting store managers in real time.

- Flags missing SKUs, wrong placement, and facing deviations with location and timestamp
- Sends real-time corrective alerts with location and product details
- Provides a dashboard of compliance scores by store, region, or category



Impact Delivered

The solution delivered measurable gains in shelf compliance and operational speed across the retail network. Industry research links improved planogram compliance to an 8.1% profit increase, while AI-powered audits cut shelf-check turnaround to around 90 seconds, enabling corrective action during the same store visit.

- 8.1% profit increase associated with improved planogram compliance (NARMS Research)
- 90-second shelf audit turnaround using AI vision (Vision Group Store360)
- Real-time corrective action possible during the store visit itself

Technology Stack

- Mobile app for in-store photo capture
- Computer vision for shelf-to-planogram comparison
- Automated gap detection and real-time alerting
- Headquarters compliance dashboard and reporting

Services Delivered

- Mobile-based shelf photo capture solution
- Computer vision-driven planogram compliance analysis
- Automated gap detection and store manager alerting
- Headquarters dashboard and reporting implementation

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