

Stop Losing Margin to Silent Cold Chain Failures

How a Malaysian convenience-retail operator used TreeAMS to connect temperature checks, maintenance tickets and product wastage into a single intelligence layer — catching equipment drift days before it bleeds margin.

Pilot Overview

CVS

Industry
Convenience Retail

50

Pilot Outlets
Klang Valley

11

Cold Units
Per Outlet

90

Day Pilot
Window

1 The Challenge

Every store opens with a paper temperature log. Crew write fridge, freezer, slurpee and coffee-machine readings into a binder four times a day. **Nobody reads the binder unless there's a customer complaint or a regulatory visit.** By then, drift has been silent for days, fresh stock has been quietly written off, and the maintenance team is reacting to breakdowns instead of preventing them.

The operator wanted to know: **how much margin is leaking through equipment we never knew was failing — and can we see it in time to act?**

Drift Hidden in Paper

Temperature readings logged on paper. No aggregation, no trend view. A unit can drift 5°C for a week before anyone notices.

Maintenance Reacts, Doesn't Predict

Tickets get raised after a unit fails. By then, hundreds of ringgit of fresh stock is in the bin and customer experience has taken the hit.

Wastage Disconnected from Cause

Wastage shows up on the COGS line at month-end. The root cause — a fridge running warm three weeks ago — is invisible to finance and to ops.

Compliance Risk in a Binder

If MOH or the franchise auditor visits, the cold-chain record is only as complete as the crew's handwriting on that day.

Cold Chain Intelligence Dashboard • Pilot, Day 90

RM 218K

Wastage Avoided (90d)
vs prior 90d baseline

14x

Faster Drift Detection
~28h vs ~17 days on paper

37

Pre-Failure Tickets
Auto-raised pre-breakdown

3

Chronic-Risk Stores
Surfaced for asset review


2 The Solution

TreeAMS replaced the paper log with a 30-second mobile check, then connected those readings to maintenance tickets, asset history and wastage data. Drift no longer waits in a binder — it triggers a workflow within the hour.

Data Streams that became connected

- ✦ Temperature checks
- ✦ Maintenance tickets
- ✦ Asset & service history
- ✦ Wastage/expiry log
- ✦ COGS variance (SAP)

Real Time Information Gained

- ✦ Drift detection in hours
- ✦ Auto maintenance tickets
- ✦ Wastage root-cause trail
- ✦ Equipment risk heatmap

3 Equipment Risk Scorecard · Sample Cluster, Week 12

Outlet	Cold Units	Drift Hrs/Wk	Wastage RM (30d)	vs Cluster	Tickets	Status
KL-Bangsar 24h	12	2.1	RM 1,840	-18%	0	Green
PJ-Damansara Utama	11	3.4	RM 2,210	-6%	1	Green
KL-Wangsa Maju	10	8.7	RM 3,480	+48%	2	Watch
Subang-USJ 19	12	14.2	RM 5,920	+152%	4	Critical
Klang-Bukit Tinggi	11	11.6	RM 4,710	+101%	3	Critical

4 Priority Actions

Subang-USJ 19 • Critical

Walk-in #2 drifting +5.8°C · 14.2h/wk · RM 5,920 wastage

7+ yr asset, 3 compressor events in 12 months. Replace, don't repair. Swap ROI: 4 months.

KL-Wangsa Maju • Watch

8.7h drift/wk · Single unit · 14-day worsening trend

Pre-failure trajectory. Pre-emptive service ticket auto-raised before peak weekend.

Klang-Bukit Tinggi • Critical

Slurpee + display fridge amber-to-red · 30-day pattern

Drift tracks crew shift-handover gaps — 22:00 check skipped. Equipment fatigue + checklist discipline.

Cluster Insight

Chronic drift >2 wks → 3.1x wastage vs clean peers

Wastage now has a named cause, a named asset, and a named outlet — visible weeks earlier.

5 Business Outcomes

-16%

Wastage Cost
Cluster-wide, 90 days

14x

Faster Detection
Drift caught in hours

100%

Digital Audit Trail
MOH-ready, by outlet

Ready to see your cold chain from one command centre?

See how TreeAMS turns 30-second temperature checks into a continuous early-warning system for your fresh, frozen and prepared-food categories — across every outlet.

Purpose-built for multi-outlet convenience, F&B and franchise operators in Southeast Asia.



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