A Review of Last-Mile Cold-Chain Logistics

Findings from the 2026 regional pilot

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Outline

1 The Pilot

2 Method

3 Results

4 Recommendation

Why last-mile cold chain

- Temperature excursions in the final delivery leg account for most reported spoilage
- Existing routing software optimises for time, not for thermal exposure
- The 2026 pilot ran 14 weeks across three distribution hubs

Two routing strategies compared

Baseline

- Shortest-path routing
- Fixed delivery windows
- No thermal telemetry

Pilot

- Thermal-aware routing
- Dynamic window reordering
- Per-parcel temperature logging

Spoilage rate by hub

Hub	Baseline	Pilot	Change
Northgate	4.8%	2.1%	-56%
Riverside	6.2%	3.0%	-52%
Harborview	3.9%	2.4%	-38%

Thermal-aware routing lowered spoilage at every hub, with the largest gain where baseline routes crossed the most traffic congestion.

What we recommend

1. Roll out thermal-aware routing to all hubs by Q2
2. Keep per-parcel logging as a permanent QA signal, not just a pilot instrument
3. Re-run the comparison after a full winter season before committing capital spend

Thank you