

# THE COLD CHAIN'S NEW FINAL MILE

**Commitments made by the industry over decades in optimizing the cold chain and food safety standards do not apply to home delivery.**

BY JOHN HAGGERTY

**C**OVID-19 accelerated e-commerce food purchases, but refrigerated and frozen fulfillment is often executed poorly. Food safety, product handling and cold chain integrity all need improvement. The final mile to the consumer's door is especially complex and costly.

Let's view home delivery of perishable food by type of shipper. First, the more local and grocery focused, delivered by traditional retailers, Amazon, and third-party delivery services. Second, being more long-distance, shipped Direct-To-Consumer (DTC) from producers of specialty goods, often fulfilled by 3PLs, and likely part of a subscription plan.

For example, Nutrisystem is a company with a long history selling DTC. Others growing rapidly include Wild Alaskan, Splendid Spoon, The Farmer's Dog, and Hungryroot. The investment community recently valued Hungryroot at \$750 million.

Despite rapid growth and innovation by entrepreneurial companies, the cold chain's new final mile and/or last 50 feet faces several challenges.

#### **Factors impacting all deliveries:**

—Unattended deliveries leave food exposed to heat, contamination, and pilferage.

—The current lack of standards and skilled labor in the new final mile completely bypasses traditionally stringent cold chain training, food safety and handling standards, and regulated practices present in virtually all other parts of the cold chain.

**More specific to long-distance DTC fulfillment:**



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—Dry van shipments of refrigerated goods in insulated boxes with dry ice or gel packs allow no room for delays in transit. It is estimated as much as 5% of these shipments go out of temp range and fail.

—Dry ice shortages have been reported as demand has increased over 1,000% year-over-year.

—Rates at FedEx and UPS have skyrocketed. Few competitors with scale exist.

#### **More specific to local retail delivery:**

—Many services performed by "gig" contractors and fledgling start-ups with little or no cold chain expertise and process integrity are highly suspect.

—Fresh produce, seafood, meats, frozen food, and other perishables should not be riding around in unsanitary, uninspected, unmonitored, personal vehicles without refrigeration, yet it's happening.

#### **THE 'OLD' FINAL MILE**

Regulations and standards assuring cold chain excellence and food safety have always ended at the retail distribution level — "the old final mile." Commitments made by

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the industry over decades in optimizing the cold chain and food safety standards do not apply to home delivery.

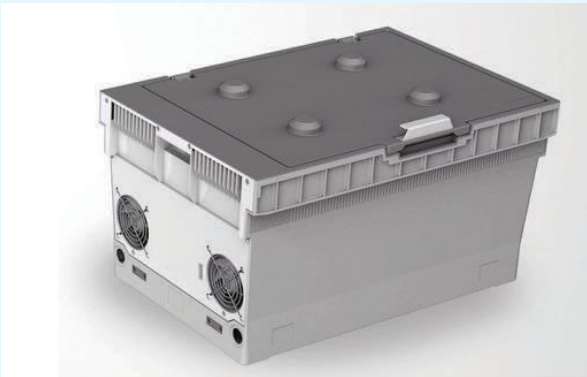
Today, consumer experience ranges from excellent to unacceptable. Some industry observers think federal regulation, perhaps from the FDA, may be coming someday.

Local delivery excellence was pioneered in 1999 by FreshDirect in metro New York. The firm was acquired in ▶



**Retailers are taking steps to improve upon 'the final mile' of delivery to shoppers' homes, but experts agree there's still room for improvement. Here's signage from Vons, Costco and Target.**

## PUT THESE ON YOUR RADAR!



### 1. Refrigerated Mobile Totes

Durham, N.C.-based Phononic ([phononic.com](http://phononic.com)) has introduced a solid-state mobile refrigerated tote to help maintain the cold chain from the point of order selection and while in transit. The units use patented microprocessor/chip-based thermoelectric cooling technology originally tested within NASA. They operate without conventional compressor-based mechanics, and can run continuously while docked to power at the point of selection, staged for pick-up, or in a vehicle in transit. They can run unplugged on battery power for hours, and can provide temperature stability for final mile delivery.



### 2. Software-Controlled Locking Porch Freezer/Refrigerator.

To solve problems associated with unattended delivery, entrepreneur (and recent Shark Tank winner) Rebecca Romanucci founded DynoSafe ([dynosafe.com](http://dynosafe.com)), Scottsdale, Ariz. DynoSafe's technology serves the needs of the final mile delivery service provider and delivery recipient. Mobile app access codes are issued to the delivery service, and each delivery is assigned a unique code controlling temperature setting, access for delivery and special instructions. Units can function at multiple temperatures and protect food from pest infestation and porch pirates.

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January by Ahold Delhaize, which also acquired Peapod in 2000. Walmart continues to make substantial investments to expand home delivery, including testing new technologies.

In 2018 Kroger partnered with Ocado and operates automated micro-distribution centers (MDCs) which they call customer-fulfillment centers (CFCs). Several other MDCs are popping up. Amazon Fresh continues to expand, leveraging its Whole Foods acquisition and dominance and scale in home delivery. Other retailers have decided to outsource delivery and sometimes in-store order selection. It's unclear who owns, monitors, and is ultimately responsible for quality and food safety in such situations.

Instacart built a quick empire promising to “partner” with retailers on its way to a recent valuation of nearly \$40 billion. With Instacart now looking to compete with its retailer partners, many view it more as a Trojan Horse than a partner. It's a bold move, which may prove dangerous.

Some 3PLs have provided temperature-controlled pick and pack order fulfillment services from refrigerated warehouses for decades, and more are coming onstream.

According to John Gaudet, vp of business development for RLS Logistics, Newfield, N.J. ([rlslogistics.com](http://rlslogistics.com)), “We started decades ago working with customers selling specialty items in the mail order and QVC space. We have been able to leverage our expertise in serving a new DTC model and see tremendous growth.”

Novi, Mich.-based Lineage Logistics ([lineagelogistics.com](http://lineagelogistics.com)) recently acquired Crystal Creek Logistics ([crystalcreeklogistics.com](http://crystalcreeklogistics.com)), Hastings, Neb. This DTC innovator has five locations.

DTC shippers use refrigerated 3PLs to provide warehousing and order selection services. Critical to their needs are perfect order selection as these are one-way-only shipments. Shippers also rely on 3PLs for the ability to scale up with rapid sales growth.

Even if perfect orders are selected at these warehouses — with buffer levels of dry ice added — delays in transit can be problematic.

### ‘TICKING TIME BOMBS’

Temperature-controlled direct-to-consumer shipments are effectively ticking time bombs with only so much coolant supplied, points out Matt Burke, chief technology officer of Stockton Cold Storage & SPWG, Modesto, Calif. ([spwg.com](http://spwg.com)), which also specializes in DTC fulfillment. Companies sending perishable items through non-perishable logistics channels may see extremely costly losses, he says. “Any type of delay typically leads to a full refund of product, and companies are at the mercy of the logistics partner.” ■

*To discuss further, feel free to connect with me on LinkedIn, [www.linkedin.com/in/John-haggerty-a242908/](http://www.linkedin.com/in/John-haggerty-a242908/) or email me at [jhaggerty@a8strategic.com](mailto:jhaggerty@a8strategic.com)*