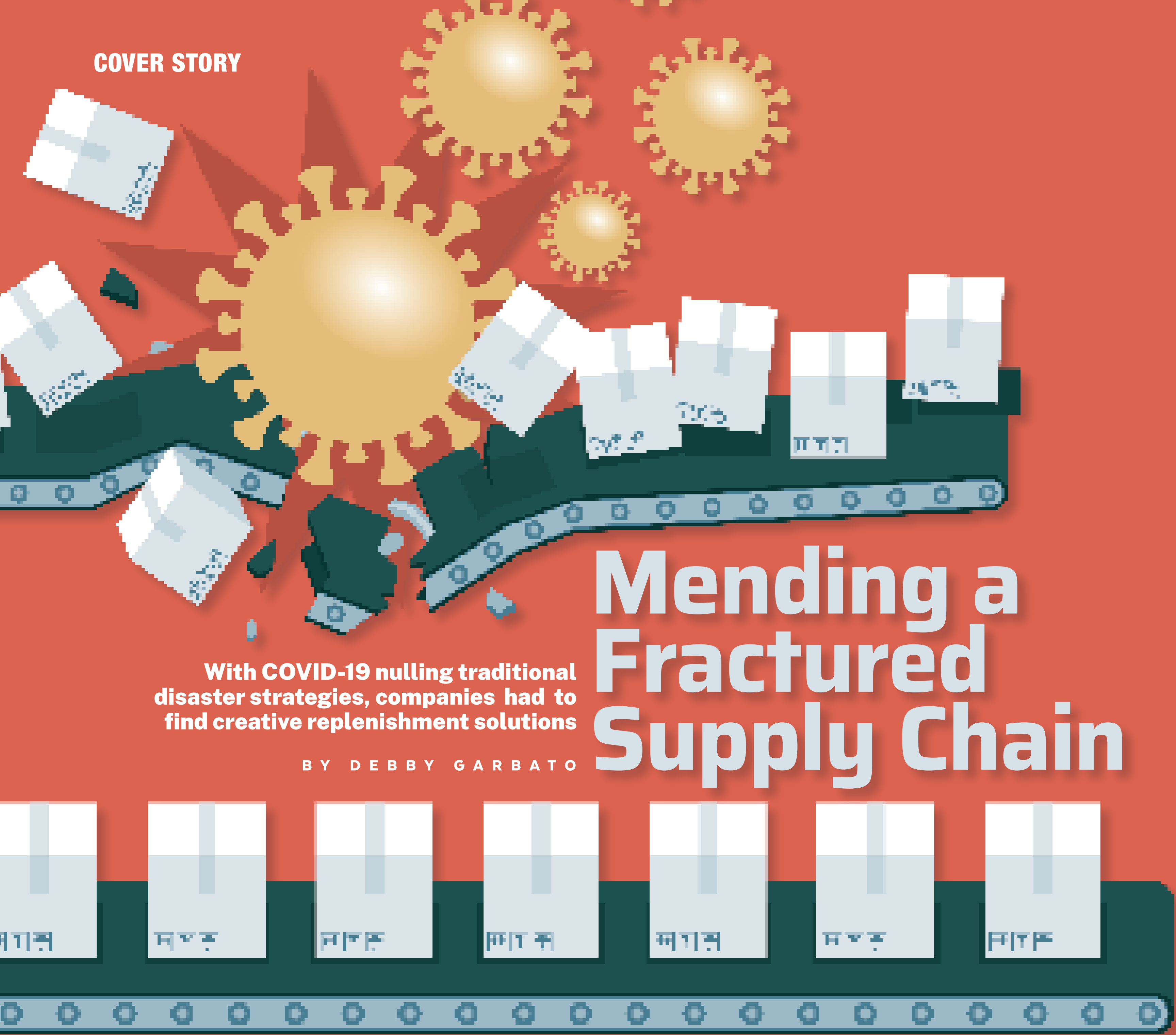


Mending a Fractured Supply Chain

With COVID-19 nulling traditional disaster strategies, companies had to find creative replenishment solutions

BY DEBBY GARBATO

On Oct. 29, 2012, Superstorm Sandy wreaked havoc on New York and New Jersey. Labeled the "Storm of the Century," it incurred $70 billion in losses. Many stores and distribution centers were damaged, flooded and without power for days. New Jersey's ports were closed to container ships, making replenishment of much needed supplies challenging.

Yet, there was one saving grace: Unlike COVID-19, Hurricane Sandy was a regional event, allowing retailers to enact traditional disaster response measures. These involved rerouting products from distribution centers in adjacent regions, installing generators and contracting third-party suppliers to fill merchandise gaps.

COVID-19, on the other hand, has affected product production and movement worldwide, invalidating common emergency solutions. Traditional forecasting methods that utilize historic shopping data became useless, since consumers dramatically changed lifestyles and shopping routines. And unlike a weather disaster, COVID-19 has dragged on for months.

Today, there are still some food and CPG shortages. Yet, stock levels are better than they were when coronavirus hit the United States last March, with retailers and suppliers turning to SKU optimization and some other very creative ways to manage inventory and find new resources.

"We've all been working together as an industry, trying to find new, innovative solutions," said Maria Brous, director of communications at Publix Super Markets, a Florida-based chain with a well-practiced hurricane response strategy. "When COVID-19 hit, there was nowhere to divert product because every area needed it. Everybody was pulling on the supply chain. That usually doesn't happen; most disasters are regional."

Shortages began in March, driven by panic buying and increased purchasing of products for home consumption. The situation was compounded by truck drivers and factory employees being out sick or social distancing at work. Then, there was vendors' already tight inventory management, a strategy initially intended to minimize surplus merchandise.

"There's been a big shift," said Barb Renner, vice chairman and consumer products leader at Deloitte Services. "Transportation and warehousing became disrupted. And inventories were already lean, since CPGs had been making products on a demand schedule and didn't have surge capacity. There were also materials and packaging shortages."

The *Wall Street Journal* pegged grocers' current out of stocks at about 10%, down from 13% early in the pandemic, but above the pre-pandemic average of 5% to 7%. The most depleted packaged categories include cleaning products, frozen food, shelf-stable vegetables, bakery, refrigerated meals, barbecue, paper products and household plastics/storage indicated by IRI's CPG Supply Chain Index (see chart). Big names like Campbell's Soup, B&G Foods, Kimberly-Clark and General Mills are among suppliers that continue to struggle building inventory, per *WSJ*.

In fresh, Deloitte's "Future of Fresh Food" study found that since March, 65% of shoppers said desired items were out of stock, prompting them to buy alternative fresh items (40%) or frozen or processed replacements (29%).

Top-Selling SKUs

SKU optimization has been the most popular means of improving stock levels. Retailers have also turned to alternative brands or institutional suppliers. And, they have made better use of artificial intelligence tools that track shopping patterns in real time. Among suppliers, some are running additional shifts, outsourcing production, and/or adjusting equipment or ingredients to produce high-demand items. Companies also cite strong collaboration.

SKU optimization involves focusing on top-selling varieties or sizes, expediting production, and shipping. Brands' shelf space is unchanged. "Early on, CPGs looked at inventories and what they can quickly turn over," Brous said. "If they offered

Products/Categories with Lowest or Declining In-stock Rates

CATEGORY/ PRODUCT	AVERAGE IN-STOCK RATE WEEK OF 9/27*
Food & Beverage	
Nonalcoholic Beverages	84%
Frozen food	83%
Shelf-stable vegetables	82%
Cookies, crackers	85%
Breakfast	84%
Bakery	82%
Refrigerated meats	84%
Refrigerated meals	83%
Refrigerated dough	83%
Refrigerated beverages	85%
Refrigerated baked goods	84%
Non-Food	
Pest control	53%
Barbecue	64%
Household cleaning	80%
Air fresheners	83%
Tobacco	83%
Paper products	78%
Office/school supplies	75%
Household plastics/ storage	78%

Source: IRI CPG Supply Index

*Includes grocery, club, dollar, mass and drug

15 to 20 SKUs, they now feature five to 10. This means fewer production disruptions. We've seen this across the board."

Pandemic or not, some experts said they believe SKU rationalization has been sorely needed, since myriad varieties of toothpaste do not make consumers brush more. "COVID-19 drove rationalization," said Doug Baker, vice president of industry relations at FMI – the Food Industry Association. "Companies stepped back, asking what all these products really offered." SKU rationalization also frees up investment money "that can go back into R&D, creating innovation opportunities," Bakers said.

Shortages opened the door for new vendors. Launched at the beginning of the pandemic, Los Angeles-based eOn Mist promised national retailers delivery of its eOn Sanitizing Mist personal size hand sanitizer within 24 days. CVS Pharmacy, Target, Rite Aid, Vons, Albertsons and Jewel Osco seized the opportunity to increase stock of this high-demand item. In its first 120 days, eOn made $25 million.

Retailers also turned to commercial suppliers. For many CPGs, up to 50% of business is commercial, leaving them with a glut of merchandise, Baker said. Dairy producer Land O'Lakes, for example, repurposed products destined for food service channels. At CVS Pharmacy, Wexford Innovations' potent Thymo-Cide general cleaning liquid is part of a 4-ft. section, offering household disinfection and personal sanitization products from commercial and other vendors.

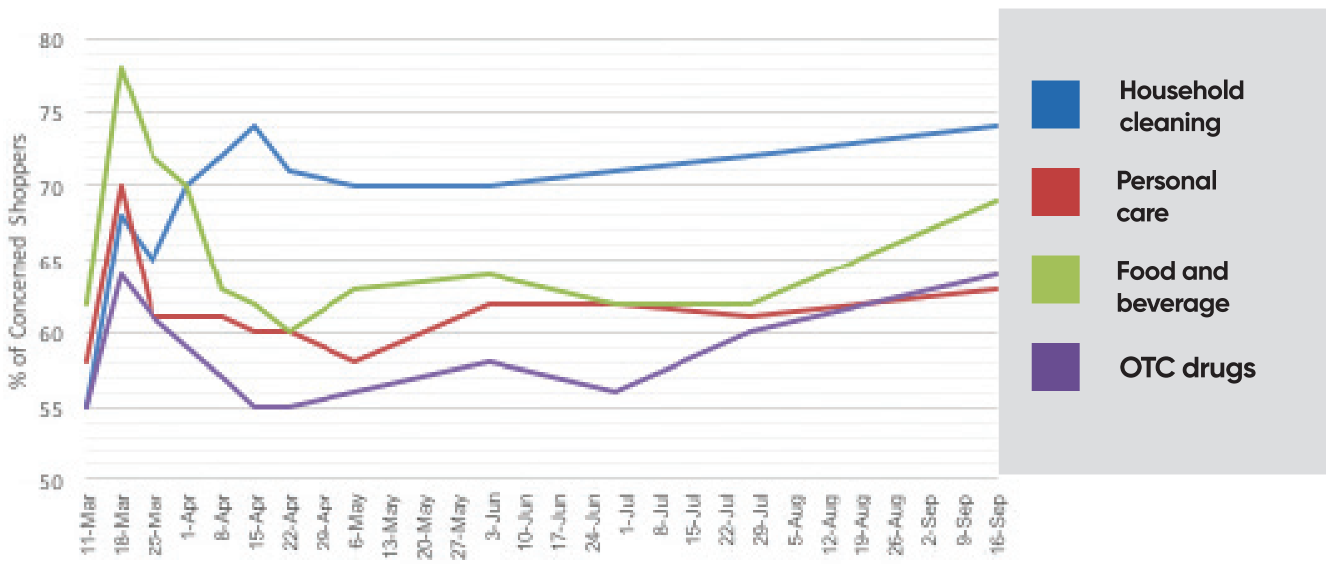
When severe shortages made shoppers desperate, Publix bought some commercial items "as is" from Sysco and other commercial suppliers. These included large, institutional-style toilet paper rolls and bulk meat packages. And lettuce and micro greens from Kalera Produce, an Orlando, Fla.-based hydroponic greenhouse grower, are now offered in 165 stores. "We looked for nontraditional venues rather than be without," Brous said.

The Manufacturing Side

For manufacturers, increasing production seems like the best solution for improving stock levels. Yet, it has limitations. In the heavily depleted cleaning category, for example, demand for scrubbing sponges has risen 20%, while demand for ammonia- and bleach-based cleaners has increased as much as 300%, according to Matt Kirk, vice president of sales and marketing at Armaly Brands, a direct manufacturer of Parsons' ammonia and Brillo products. Yet adding factory space or equipment is an ROI balancing act, since suppliers do not know how long increased demand will continue, he said.

Howard Bochnek, vice president of technology and scientific affairs at disinfectant supplier American Infection Control, said most manufacturers cannot increase capacity more than 10% to 20%. Securing new machinery can be difficult. For companies wanting to begin making high-demand,

Products/Categories with Lowest or Declining In-stock Rates

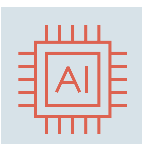


Source: Consumer Brands Association, "Covid-19 Polling: Fall Look Ahead," Sept. 2020 alcohol-based products, for example, face such issues as equipment orders backlogged six to 12 months, he said.

Outsourcing production also has drawbacks. Bochnek began doing more business with an overseas company in September. Yet, he must wait weeks for products to arrive, pay duties and have goods cleared by the Environmental Protection Agency and U.S. Customs and Border Protection.

Labor is another issue. While adding a third shift can boost production by 50%, it can be difficult to fill skilled positions, Bochnek said. And many unemployed people who normally would take lesser skilled jobs were dissuaded by unemployment supplements. Then there is COVID-19 itself. “Factory outbreaks have shut down entire shifts or plants,” he said.

Securing additional warehouse space is less problematic. Baker said some vendors have signed short-term leases. Many also have forward warehouse space, letting high volume items move in and out quickly without workers going deep inside. “Everyone was focused on ‘just in time’ inventory; now they’re looking at ‘just in case’ inventory,” he said.



Artificial Intelligence

AI is playing a larger role in alleviating out of stocks since it forecasts consumer demand and preferences in real time. Other technologies, in contrast, use last year’s sales to predict this year’s shopper demand. Since COVID-19 created demand surges in certain categories, those numbers became inaccurate.

“The demand for analytical insights is higher than ever, since last year is no longer relevant,” said Gary Saarenbirta, CEO of Daisy Intelligence, which supplies AI technology for category and risk management. “Tools are becoming ‘must haves,’ not just ‘nice to haves.’” He also said that half of Daisy’s existing customers have requested additional resources to meet pandemic-induced challenges. “They didn’t have manpower in house,” Saarenbirta said. “We’ve been helping.” Key focus areas have been assortment planning, SKU rationalization, forecasting, pricing and resuming regular promotional activities.

Kevin Sterneckert, chief marketing officer at Symphony Retail AI, said AI is most beneficial when conditions are out of sync. “Under typical circumstances, linear systems can be sufficient. When there’s disruption, you need AI. It shines at handling anomalies.”

Underestimating demand, he said can lead to lost sales. “Anything to do with cleaning, baking and meal prep have been explosive. Many retailers are seeing a 17% increase in year-over-year sales,” Sterneckert said “In this environment, retailers must quickly understand how to determine demand.” In June, Symphony concluded one of the strongest quarters of software sales in its history, he said.

The pandemic is making Wall Street take more notice of AI’s retail benefits.

“There’s panic in the retail sector over shipping out enough products,” said Burt White, executive vice president of consumer goods and retail at Maine Pointe. “Demand and predictability will stabilize over time. But retailers with these tools have good visibility and are seeing benefits. AI tools will come up in earnings calls. Retailers will have to increase use of them and explain what they’re doing.”

Among manufacturers, Colgate-Palmolive has used AI to quickly identify situations that would have caused setbacks in toothpaste tube production. AI has also allowed it to increase manufacturing volume during the crisis. Technology monitors ‘machine health’ 24/7 via wireless sensors combined with AI-powered analytics. It detects potential problems early, eliminating down times incurred by complete equipment failures and manual maintenance checks.

Price Increases

While consumers may not be privy to supply chain issues, they ultimately do care about the bottom line, and knowing just how much COVID-19 has increased the cost of products at retail.

The *Wall Street Journal* said COVID-19 has increased retail prices about 5%, about three points higher than they typically increase in a year. However, use of alternative suppliers, shipping partial truck loads, hazard pay, additional cleaning and implementation of employee protective measures have increased costs, said Deloitte Service’s Renner. “[COVID-19] has shifted the probability model.”

This shift — and the importance of controlling pricing and inventory — has made retailer/supplier collaboration more meaningful. “AI and predictive demand are important in supply and replenishment,” said Tom Madrecki, vice president of supply chain and logistics at the Consumer Brands Association. “But you can’t adjust collaboration with a new app. You must understand policies, procedures and how you work with a retail partner. COVID-19 has raised the bar on collaboration.”

Andrew Csicsila, a managing director in Alix Partners’ consumer products practice, said retailers are ordering ahead to keep inventories above normal levels. For this to be effective, CPGs efficiently must communicate availability, what they can produce and delivery dates. “This can help CPG companies push better margin SKUs, more efficient SKUs or more available SKUs to help with operations and inventory levels,” Csicsila said. “In turn, margins can improve without raising prices.”

Looking ahead, experts said it is hard to predict when inventories will normalize. Much depends on when the pandemic ends or if there is a vaccine. “We’ll have COVID-related out of stocks for months,” Baker said. “Manufacturers are working on filling stores and DC’s. Some SKU optimization will be permanent. But there’s one positive underlying message: The grocery industry is resilient. They may not have every flavor and brand, but they’ve learned to be flexible.” **dsn**