The latest in automated delivery

The last mile of delivery will remain a sticking point for retailers, especially if consumers' interest in in-store pickup wanes in the future, as some have predicted. A number of grocery chains, including Walmart and Albertsons, have been experimenting with the latest in drone technology and/or autonomous vehicles to see how these tools might aid them.

In the drone market, new opportunities seem to be opening up. "Recently, we've seen a dramatic push toward the rapid integration of drones into our airspace," observes Beth Flippo, EVP of Florham Park, N.J.-based Telegrid, the parent company of Drone Express, a new package delivery service that aims to work with large supermarket chains. "Since COVID-19, we have also seen the public perception of drones shift from overly cautious to incredibly positive and favorable."

Flippo notes that the U.S. Federal Aviation Administration is a "big proponent" of the drone industry and is actively working to ensure the technology's safe integration into the National Airspace System. She explains that Drone Express' heavy-lift drones will provide "low-cost, seamless integration between store order management systems and last-mile delivery," adding that the company's analysis suggests that large chains with a considerable store footprint and a technology-friendly philosophy are its ideal partners.

Albertsons banner Safeway is piloting "the Safeway cart," a remote-controlled delivery cart from Tortoise, in northern California. The cart can hold up to 120 pounds of groceries in four lockable containers.

Walmart is using Gatik's Autonomous Box Trucks (below) to move customer orders between a dark store and a Neighborhood Market in Bentonville, Ark. Meanwhile, in drone news, Telegrid has launched Drone Express (bottom), a service for retailers.

Rian Whitton, senior analyst at Oyster Bay, N.Y.-based ABI Research, thinks that delivery drones will mostly be used in rural areas and for facility deliveries, as opposed to residential delivery. "There are real challenges around privacy, safety and the ability of an unmanned traffic management system to track hundreds of thousands of small, low-flying systems," he observes. "This market will also require remote ID to be implemented, which could take years."

Drones are already being used more frequently in warehouses and other indoor environments, however, as they can reach areas that place humans at possible risk, Flippo points out.

As for autonomous vehicles, Whitton observes that "the autonomous car space has been saturated with investment without the requisite payoff in commercial value," and that autonomy will still need to be managed by humans. "That said, the scaled-down autonomous pods that are delivering groceries are certainly gaining traction in well-defined, structured areas like university campuses," he adds, citing San Francisco-based Starship Technologies as a good example.

Gary Hawkins, CEO of the Walnut, Calif.-based Center for Advancing Retail & Technology (CART), predicts that self-driving delivery vehicles will become the most popular last-mile solution over time. "Customers will place their order online, the order will be fulfilled and placed into the van, and then the van will self-drive to their driveway and text them when it has arrived," he envisions.