

LOGISTICS REPORT

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BUSINESS | LOGISTICS REPORT

Guest Voices: Delivery Companies are Redefining the Last Mile in Crowded Cities

Demographic trends and changing retail trends are making urban parcel delivery more complicated, and triggering new strategies to get goods through packed city centers



Sao Paulo, Brazil, at rush hour, one of the congested urban landscapes that logistics experts demand new distribution strategies. *PHOTO: BLOOMBERG NEWS*

By **MATTHIAS WINKENBACH AND DANIEL E. MERCHÁN**

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The Coca-Cola Co. bottler in Rio de Janeiro used to deliver crates of drinks in the city's Copacabana area by truck until a parking ban forced the company to rethink its distribution strategy. The big cargo vehicles now arrive early in the

morning, park at designated sites and transfer the goods to motorcycles that make the final delivery to customers.

Logistics changes like this will become more common in crowded urban centers around the world as local communities cope with growing congestion and companies develop new last-mile distribution models.

Big cities are growing in both size and complexity, especially in the world's emerging economies. In an effort to curb traffic congestion and pollution, local governments are restricting the movement of commercial vehicles in city centers. At the same time, the explosive growth of e-commerce is changing consumer buying patterns, and disrupting traditional delivery services that use trucks.

The changing demands put a premium on innovative distribution models that are efficient, flexible, and resilient. The new emphasis is on multi-tier systems that employ different combinations of transportation modes and technologies.

There are several models being used in cities around the world, and shippers and logistics operators should pay close attention because the combination of demographic trends and improving technology will only add to the demand for delivery in densely-packed city centers.

Here are some examples of the strategies currently in use.

Urban Transshipment Centers . These are a new generation of city-based facilities in which incoming freight is sorted out and transferred to smaller, less disruptive vehicles.

The Legazpi Transshipment Center in Madrid was set up by the city to provide an incentive for companies to create environmentally-friendly local deliveries. Three companies—Calidad Pascual, TNT Express, and Seur—use the center to shift freight from large trucks and complete deliveries using electric vans and even tricycles with cargo baskets. The city also will ease vehicle-size restrictions on some roads and provide tax breaks as incentives to participants.

Another variation is the use of micro “de-consolidation” platforms that facilitate the transshipment of goods from large to small vehicles. Amazon.com Inc. is exploring micro-warehouses that store a limited supply of goods to be ready for fast deliveries in London and in large U.S. cities.

Automated Parcel Terminals . These are networks of lockers located for convenient parcel pickup by individuals that offer an alternative to home delivery. The concept is a variation on the mail dropbox in post offices but is enhanced by advances in technology. For example, Deutsche Post DHL operates automated called Packstations on streets across Germany.

DHL recently integrated its parcel terminals with the company's online grocery store so that customers can place an order directly from the Packstations using their cellphones.

Mobile Warehouses . Truck-trailers adapted for multi-tier distribution can increase the flexibility, speed and transfer capabilities in distribution. The trailers feed lighter freight vehicles with small containers packed with goods for particular zones.

TNT has piloted this strategy in Europe. The trucks carry sets of modular containers that are picked up by last-mile delivery vehicles. TNT also tested a similar concept called a Mobile Depot in which vehicles equipped with special cages for parcels would unload the cargo onto bikes.

Other strategies include night delivery programs that are implemented in partnership with retailers and freight carriers, and leveraging mobile phone technology to organize city deliveries. New types of delivery vehicles are under development, including autonomous and semi-autonomous vehicles that carry passengers and freight.

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Work also is going on to use rapid transit systems for moving freight in cities.

Innovative packaging also has a place in emerging urban logistics models. More efficient packaging translates into fewer units of cargo, streamlined loading and unloading and protection against rough handling.

Companies that have bridled at the potential for higher costs and complications in changing urban strategies are discovering that redefining last-mile distribution can yield a number of benefits.

The Coca-Cola bottler's truck/motorcycle operation in Rio de Janeiro uses a network of about 30 motorcycles to serve 50 routes in the city. The system flexes with shifts in demand, and reduces carbon emissions by an estimated 50%.

There also are challenges. A difficult one for the Coca-Cola bottler is coordinating the movement of trucks and motorcycles, for instance.

Still, shippers and logistics operators should pay close attention to the refining strategies that are being tested and put into place in cities. The combination of population trends and improving technology will only add to the demand for delivery in densely-packed city centers, and multi-tier distribution provides an important option for the developing world of urban logistics.

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