

# Decarbonizing On-Demand Last-Mile Deliveries Globally Requires Electrifying Modes Locally




RMI's ***Decarbonizing Last Mile Delivery: A Courier-Centered Modal Shift Study*** provides city officials, app-based delivery platforms, community-based organizations (CBOs), and other stakeholders with a framework to electrify and reduce emissions from on-demand last-mile deliveries (LMDs) globally.

The report's insights come from quantitative modeling and qualitative interviews with couriers, city officials, and CBOs in London, Mexico City, and Seattle.

The on-demand LMD industry is growing across the globe with a market value of over **\$150 billion**<sup>1</sup>. Couriers (or delivery people) on LMD platforms primarily use gas-powered delivery modes including cars, mopeds/motorcycles, and scooters. Electrifying and shifting couriers' modes of transport will significantly reduce emissions, bringing improved air quality, public health benefits, and potential transportation savings to the local level.

To accelerate zero-emissions LMD efforts, city officials, app-based delivery platforms, CBOs, and other stakeholders need to focus on three areas:


 **Reducing the upfront cost of purchasing an electric mode of transportation**

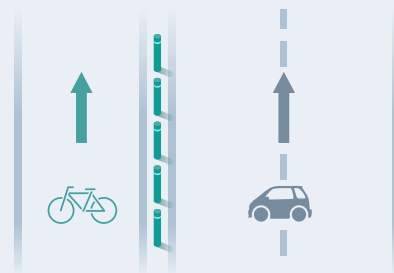


 **Providing convenient and accessible charging infrastructure**

"I might run out of battery; I hope I can find a charger!"



 **Improving road safety through built environment enhancements and courier safety education**



<sup>1</sup> Kabir Ahuja, Vishwa Chandra, Victoria Lord, and Curtis Peens, "Ordering In: The Rapid Evolution of Food Delivery," McKinsey & Company, September 22, 2021, <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/ordering-in-the-rapid-evolution-of-food-delivery#>

# To drive LMD electrification and modal shift, stakeholders should focus solution efforts on:

## REDUCING UPFRONT COST

Local governments can provide financial incentives directly to couriers that can be used for transport mode, associated gear, and charging.

App-based delivery platforms can partner with local vendors and dealers to offer couriers discounted prices or leases on low- and zero-emission transport modes.

## INCREASING ACCESS TO CHARGING AND BATTERY SWAPPING

Local governments can develop infrastructure plans with charging (including fast charging) and battery swapping stations placed along convenient delivery routes and high-volume corridors to maintain delivery efficiency and courier earnings.

Public- and private-sectors can invest in charging infrastructure through partnerships between cities, app-based delivery platforms, and charging infrastructure providers to create accessible, convenient charging for a variety of modes.

## ADDRESSING ROAD SAFETY CONCERNS

Local governments can develop dedicated, protected, and connected lanes and paths for e-bikes and e-motorcycles/mopeds.

App-based delivery platforms can partner with local governments and CBOs to provide couriers with safety education and equipment.

### On-demand LMD electrification and modal shift will require:



Purchase incentives and infrastructure investment



Equitable and convenient charging and battery swapping sites



Public/private collaboration to address barriers to modal shift



Knowledge and data insights sharing among stakeholders



A courier-centric lens when designing incentives, safety programs, and infrastructure

