



# How Micro-mobility is Transforming First/Last Mile Travel in Cities

The way people commute to their jobs, go out for entertainment or do their shopping is changing radically. Technological opportunities on the one hand and concerns about the climate on the other are changing consumer behavior. Future mobility will improve the quality of life by providing seamless and frictionless door-to-door transport that is fast, flexible and sustainable. First and last mile mobility solutions are rapidly changing the way people move around.

'The last mile' is a phrase coined in the communications industry, meaning the stretch between the provider's district control hub and the customer's front door. Used in mobility and transportation, 'last mile' describes the movement of people and goods from a transportation hub to a final destination (home, workplace, shopping center, institution, etc.). It could just as easily be called 'first mile', depending on the direction of movement: going out (first mile) or reaching the destination (last mile).

The last mile is always the least efficient part, comprising up to 28% of the total cost of moving goods, and consuming much time and effort from the individual on the move, as public transport doesn't take us fully to the doorstep, parking space is hard to find, and having a car or bicycle is not always an option. And it may be getting worse, as city populations keep growing. That opens up opportunities for micro-mobility service providers such as bike and electric scooter-sharing companies, as powerful additions to the current transit mix for the last mile.



## LOW-CARBON TRANSPORTATION

There's lots going on in the last mile, both on mobility's supply side and the user's demand side. On the supply side, developments are driven by technology, new service concepts and partnerships. These include car and bike sharing services, transportation and navigation apps, electric vehicles or taxi platforms. And in the future 5G data communications, self-driving vehicles and drones will change mobility even more.

On the demand side, consumer behavior and attitudes are also developing fast. Consumers are embracing the Mobility-as-a-Service model. They prefer low-carbon transportation, and would rather spend their travel time on other activities like reading or working remotely in public transport, than sitting behind the steering wheel in a traffic jam.

To illustrate the rapid changes and expansion of travel options, you just have to recall the travel options for the city dweller in the year 2000. He or she could walk, take a cab or the car or go by public transport (if available). Twenty years later, the array of choices has expanded with (shared and electrical) bicycles and scooters and shared rides. And soon self-driving vehicles and drones will also come into play as factors in the mobility ecosystem.

While there certainly are some challenges accompanying this trend, lack of regulation being just one, shared micro-mobility services are already disrupting the mobility industry massively all around the world. They ease access to public transportation, reduce the volume of cars on the road, and lower our environmental footprint – all while being cost-effective.

Electric scooters, for example, are more efficient than other modes of transport. One kilowatt hour of energy can get a gasoline-powered car to travel 1.2 kilometers. An electric car can travel 6.5 kilometers. An electric scooter travels 133 kilometers using the same amount of energy. In the last mile, human-powered vehicles (bicycles, longboards) are even more energy-efficient. The effects of these new modes of mobility will take shape over time. Their effects will be significant and mostly unpredictable. But decision-makers here and now already need to prepare their domains and their assets for what's coming their way. How should urban decision-makers and planners prepare for the accelerating changes that future mobility brings about?

## PUT THE USER FIRST

First decision-makers and planners need to shift their thinking. Typically they focus on their assets, their 'hardware', as the starting point for providing mobility. But it is citizen demand that mostly decides the success or failure of new modes of travel – and that tends to occur before policy has caught up, as the electric scooter introduction or taxi service platforms in cities have demonstrated. So decision-makers should put the user first and adopt a people-centric approach. Just as the major consumer brands have done in embracing customer-centric ways of doing business as the only way to survive.

Future mobility has the potential to provide more efficient and more sustainable transportation options for citizens. But cities first need to understand what this will mean for their current infrastructure assets, and how to plan for the future.