



## OVERVIEW

The rapid roll-out of dockless electric scooter (e-scooter) sharing systems in the past couple of years has marked a major disruption in urban mobility. As of spring 2019, about 10 scooter companies were operating in approximately 70 U.S. cities. E-scooters, electric bicycles (e-bikes) and other new devices offer new mobility options, but they have also raised concerns and issues about how they are being deployed and used in relation to bike share systems, especially related to low-income communities. Over the next few years, as cities and operators determine how these new devices fit into the overall mobility landscape - it is critical that they are intentional in maximizing the benefits of these services for residents with the greatest need and the most barriers.

## CURRENT APPROACHES

In our recent national survey of cities and bike share operators, most indicated that it was too early to tell the real impact that e-scooters will have on bike share programs, systems and users. The rollout of e-scooters has changed the business model for docked and dockless bike share, especially privately-owned systems like Lime and JUMP. Many of the approximately 44,000 dockless pedal bikes in the U.S. at the end of 2017 are no longer in operation or have transitioned to e-scooters. Many dockless bike share companies have retooled their fleets to focus primarily on e-scooters.

E-bikes and seated e-scooters are also broadening the micromobility options in some cities, which may complement existing bike share systems and appeal to residents looking to make longer trips, overcome disabilities or physical limitations, and navigate steep terrain. Research has found that lower-income people of color were more likely to perceive distances as being too long to ride on a bike and also more likely to say physical limitations or health issues pose significant barriers to cycling (McNeil et al., 2017). E-bikes, including adaptive ones, are often targeted at people of all abilities and viewed as a means of increasing ridership and access for people not able to ride a standard pedal bike.

**Are e-scooters taking ridership from bike share systems?** The City of Portland found that only 5% of e-scooter trips replaced a personal bicycle, and most riders were not members of the bike share system BIKETOWN. Nice Ride in Minneapolis estimates that e-scooters took away 10% of bike share trips in 2018. E-scooter use is more likely poaching casual bike share users, which has the potential to impact the bottom line. Erosion of revenue could challenge the business model for public bike share systems. Most operators have kept these systems independent of each other, especially related to low-income discount programs.

Powered  
Bicycle



Powered  
Self-Balancing  
Board



Powered Standing  
Scooter



Powered Seated  
Scooter



[SAE J3194™ Taxonomy & Classification of Powered Micromobility Vehicles](#)

# CONSIDERATIONS

E-bikes and e-scooters have the potential to expand mobility options for underserved residents, but cities will need to ensure they are accessible, affordable, and complement existing bike share offerings.



**Pricing:** The issue of cost has been raised with systems that have both electric and standard bicycles, where the use of e-bikes can cost an additional \$1-2 per ride or more. Equity fares should be available and priced at comparable rates as the bike share system.



**Type of Vehicle:** E-bikes and e-scooters enable individuals to travel farther, easier and faster. In addition, seated e-scooters and adaptive bicycles allow a broader range of individuals to travel.



**Integration:** Services should be easily accessible to all people, including ensuring data feeds for open trip planner applications and payment options for unbanked and non-digital access.



**Permitting:** Often the e-scooter companies fall under a separate permitting system. This has created independent systems that have different pricing and user interfaces.



**Payment:** The ability to access and pay with cash to use dockless vehicles should be made available. Some companies, like Lime, have national programs focused on low-income individuals to reduce the cost of rides and the ability to pay cash through partnerships like PayNearMe.



**Access:** Often the people that have the least travel options are the ones with the biggest needs, including for recreational purposes. Consider requiring a percentage of level of service in areas of need. Portland, OR requires 15% of its fleet to be deployed daily within neighborhoods that have limited transportation options and have higher percentages of low-income and minority residents.



**Education & Outreach:** Create educational and outreach programs to explain these new technologies, how and where to use the vehicles in a safe manner. Cities need to work with operators to provide culturally appropriate information and programs.

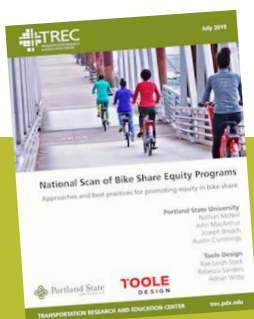
## RESOURCES

Cities will need innovative planning, contracting, permitting, data collection, and revenue models as well as dedicated staff to creatively manage these programs to meet the city's equity goals. Data sharing across the systems is crucial to determining how the different systems are being used and by whom. Cities should work with operators and third-party organizations to create data sharing agreements that will allow cities to track usage and understand how services are supporting equity goals. In addition, cities should work with operators to provide education materials on appropriate use of vehicles.

## MEASURING AND EVALUATING

Potential ways to evaluate the integration of bike share and new mobility vehicles include:

- **MAP** all new mobility services and usage data, especially in communities of concern.
- **SURVEY** residents and users to understand the needs, potential usages, mode substitution and barriers of all transportation options. Why do people use or don't use the different vehicles?
- **TRACK** the number of trips and distance travelled for each service, ridership of people using discount passes/memberships, intercept surveys of riders using both systems.



Adapted from the "National Scan of Bike Share Equity Programs" report, this is part of the "Breaking Barriers to Bike Share" resource series. Comprised of ten topics, this series looks at bike share through an equity lens and provides successful approaches and recommendations for stakeholders to implement.