

# Understanding & Tackling Micromobility: Transportation's New Disruptor







Lifesavers 2021



[www.ghsa.org](http://www.ghsa.org)

# Micromobility

## TYPES OF POWERED MICROMOBILITY VEHICLES<sup>1</sup>

|                             | Powered Bicycle   | Powered Standing Scooter  | Powered Seated Scooter   | Powered Self-Balancing Board  | Powered Non-Self-Balancing Board  | Powered Skates  |
|-----------------------------|---|---|--|---|---|---|
|                             |  |  |  |  |  |  |
| Center column               | Y   | Y   | Y  | Possible  | N   | N   |
| Seat                        | Y   | N   | Y  | N   | N   | N   |
| Operable pedals             | Y   | N   | N  | N   | N   | N   |
| Floorboard / foot pegs      | Possible  | Y   | Y  | Y   | Y   | Y   |
| Self-balancing <sup>2</sup> | N   | N   | N  | Y   | N   | Possible  |

<sup>1</sup>All vehicles typically designed for one person, except for those specifically designed to accommodate additional passenger(s)

<sup>2</sup>Self-balancing refers to dynamic stabilization achieved via a combination of sensors and gyroscopes contained in/on the vehicle

Source: Society of Automotive Engineers

# Micromobility

## Micromobility Ridership



**2010**

Since 2010, there have been **207 million** trips on shared bikes (pedal and electric-powered) and e-scooters in the United States.

2011

2012

2013

2014

2015

2016

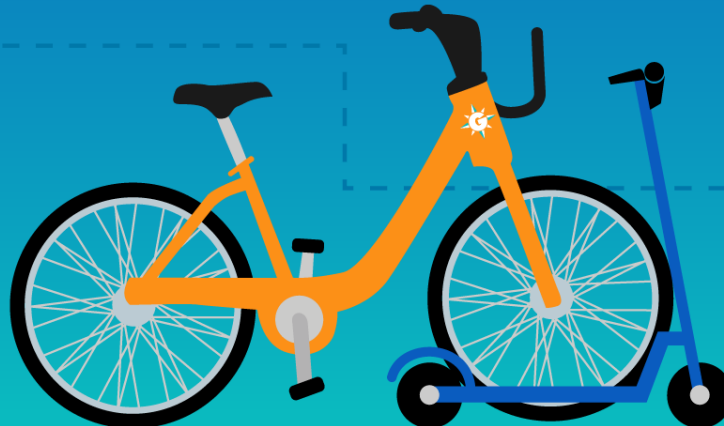
2017

2018



**2019**

There were **135 million** trips in 2019 alone, including 40 million on station-based bike share, 10 million on dockless bikes, and 86 million on e-scooters.



# Micromobility

## A Quicker Way to Get Around

Car speeds in cities have slowed, making micromobility a faster mode of travel.

**4.7 mph**

average car speed  
in midtown  
Manhattan  
in 2017

**15 mph**

average maximum  
e-scooter speed



Source: Agrawal as cited in Lee, Loucks, Stewart, Jarvis & Arkenberg



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## Micromobility Fatalities

### E-bikes

**4 fatalities**

associated with bike share programs since 2007



### E-scooters

**22 fatalities**

with all but three involving motor vehicles since 2018



**90%** >> of micromobility fatalities are the result of a collision between a personal transportation device and motor vehicle.

# Challenges

Consistent  
statutes/regulations

Dedicated funding

Universal reporting  
standard

Separate  
infrastructure

Law enforcement  
training

Education for all  
road users



# Panelists



- Annie Chang, Director of Safety Programs, Lime
- Katie Harmon, Research Associate, UNC Traffic Safety Research Center
- Melissa McMahon, Transportation Research & Site Plan Development, Arlington County (VA)
- Eric Miesse, Commander, Austin (TX) Police Department