Understanding & Tackling Micromobility: Transportation’s New Disruptor

Lifesavers 2021
Understanding and Tackling Micromobility: Transportation's New Disruptor

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## Micromobility

### Types of Powered Micromobility Vehicles

<table>
<thead>
<tr>
<th></th>
<th>Powered Bicycle</th>
<th>Powered Standing Scooter</th>
<th>Powered Seated Scooter</th>
<th>Powered Self-Balancing Board</th>
<th>Powered Non-Self-Balancing Board</th>
<th>Powered Skates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center column</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Possible</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Seat</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Operable pedals</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Floorboard / foot pegs</td>
<td>Possible</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Self-balancing</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Possible</td>
</tr>
</tbody>
</table>

1. All vehicles typically designed for one person, except for those specifically designed to accommodate additional passenger(s).
2. Self-balancing refers to dynamic stabilization achieved via a combination of sensors and gyroscopes contained in/on the vehicle.

Source: Society of Automotive Engineers
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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.

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.

Source: NACTO
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.

Sources: NACTO, K. Harmon
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