

Managing the Mobility Revolution: Policy Framework for Dockless Mobility

JOHN HICKS

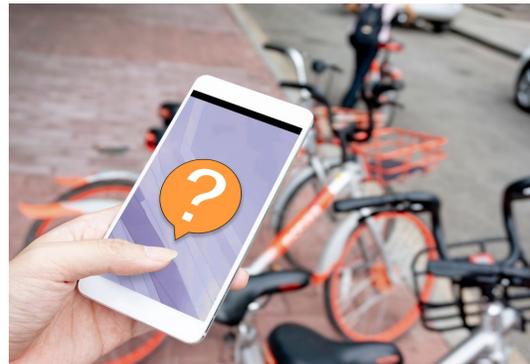
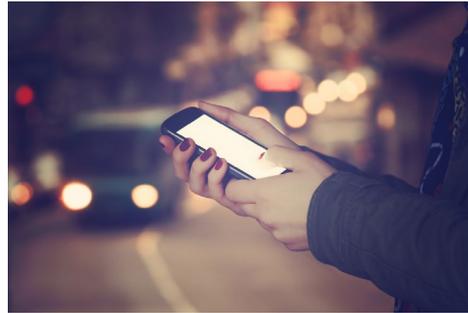
MASTERS OF URBAN AND REGIONAL PLANNING (MURP)

JUNE 17, 2019



VIRGINIA TECH™

BACKGROUND



- Micromobility (dockless mobility) is a rapidly evolving industry, fueled by enabling technologies, venture capital, and new trends in urban mobility.
- Dockless mobility riders find, pay for a trip, and unlock a device using a pin number or QR code within companies' mobile apps.
- Hundreds of cities in the U.S. are experimenting with dockless mobility to understand operators, market demand, and approach to regulations and vendor relationships



PURPOSE & OBJECTIVES

- To date, cities' regulatory approaches have struggled to keep pace with the emerging mobility services, creating a hodgepodge of regulatory frameworks.

Research Objectives:

- Conduct a state of the practice scan of cities engaged in dockless scooter and bikeshare programs.
- Develop in-depth case studies and evaluate regulatory structures of 4 "first-mover" cities from across the country.
- Conduct interviews of city staff to document lessons learned, challenges, and opportunities moving forward for regulating dockless mobility programs.



PARKING AND RIGHT-OF-WAY (ROW)

Reducing illegally parked devices blocking ROW and “sidewalk clutter”



EQUITY

Providing reliable and equitable mobility for all users



INSTITUTIONAL & POLICY BARRIERS

Overcoming institutional and policy barriers with limited city capacity

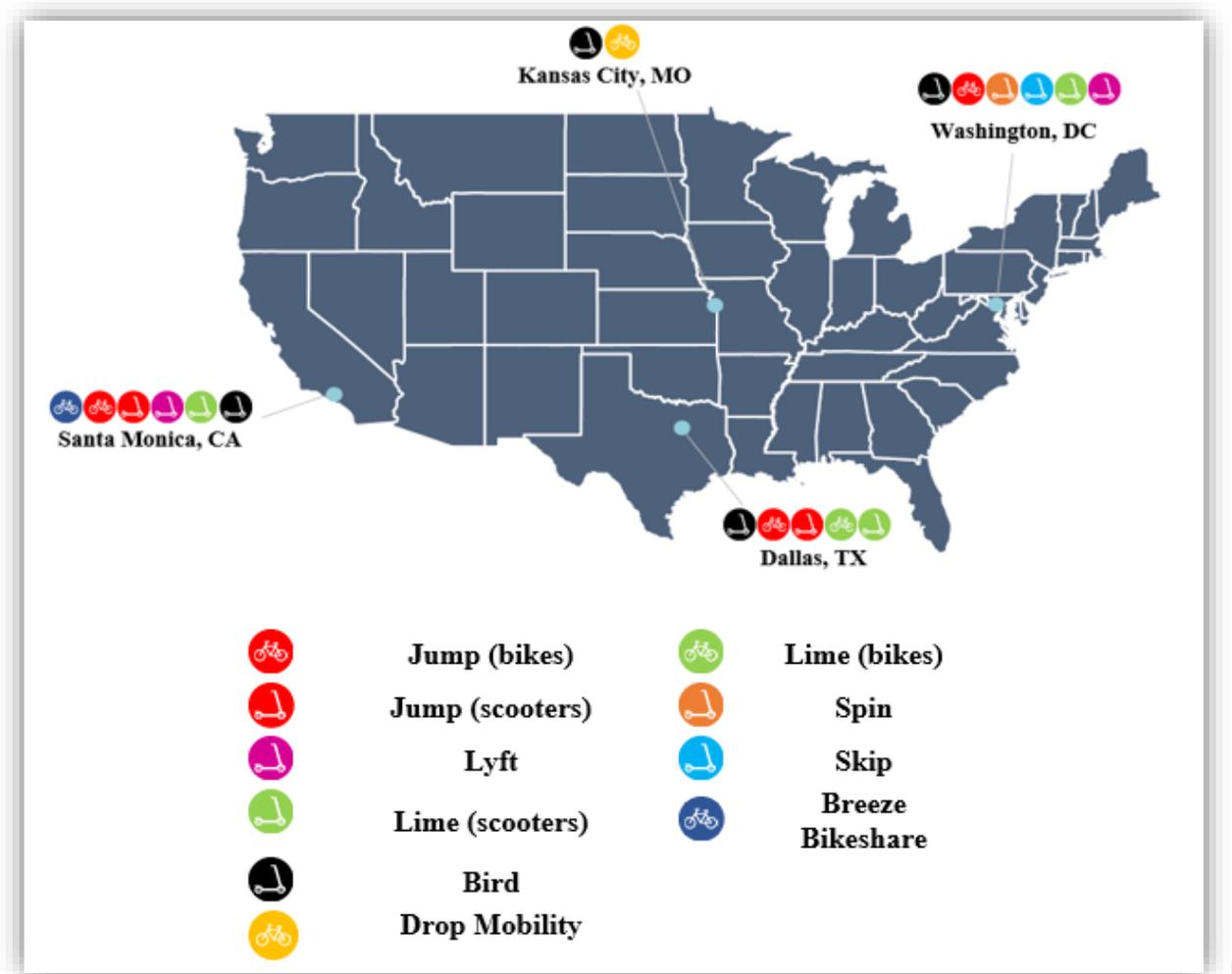
KEY QUESTIONS

- What are the main concerns for cities regarding right-of-way (ROW) and micromobility?
- What are the best practices to ensuring equitable access to dockless mobility?
- What institutional and policy barriers have cities come up against in response to the growth of these new mobility services?



METHODOLOGY

- Conducted background research and documented contact information on over 20 early-adopter cities as potential interview candidates
- Categorized cities as high, medium, low priority for interviews
- Four cities selected for interviews/ case studies were Santa Monica, Kansas City, Dallas, and Washington DC
- Two additional “special topic” interviews with Louisville and Raleigh



PARKING & ROW



Incorrectly parked dockless devices remain one of the biggest public concerns. ROW obstructions have a particularly high impact on people with disabilities, older adults, and other pedestrians.



Cities are piloting several strategies to reduce the number of devices blocking the ROW, including lock-to requirements for bikes, enforcement regulations, and designated parking zones.



Over-saturation of devices may lead to increased ROW blockages, but undersupply may hinder usage and business model vitality for operators. Performance-based caps may allow cities to find a balanced approach.



The private automobile has long dominated public space allocation. Dockless mobility provides an opportunity to shift this paradigm and plan for a new era of mobility.

EQUITY



Geographic equity regulations, including distributional requirements, are increasingly common to help ensure a diverse user group has convenient vehicle access



Cities are increasingly pushing companies to adapt business models that address broader equity goals, including providing options for the unbanked, people without smartphones, and low-income travelers.



Dockless mobility providers have launched numerous equity programs, including PayNearMe and low-income rider discounts.

INSTITUTIONAL & POLICY BARRIERS



Interim agreements or open permit systems can establish initial dockless service regulations. This approach provides flexibility for cities to welcome operator competition, evaluate impacts, refine permit processes, and eventually establish ordinances through more formal rule-making processes.



Initially, cities often lacked staff capacity to manage dockless mobility programs. Cities are working to establish cross-cutting communication channels to clearly define roles and responsibilities to help administer a successful dockless mobility program.



Data sharing remains a key challenge for cities and operators. The vast quantity of data is pushing cities to better articulate what specific data they need to solve their problems. Operators and cities are increasingly working constructively to find alternative strategies (e.g. third-party data storage) to share useful data.

CONCLUDING THOUGHTS

- In just over 18 months, the market for personal mobility has shifted dramatically
- As with other disruptive technologies, there are legitimate concerns that should be addressed
- Collaborative approach between cities and operators can provide some fair certainty to vendors while allowing cities time to adapt their legal frameworks
- Dockless e-scooters and e-bikes offer cities great potential. Planning for emerging mobility services will be a defining challenge for cities





ADDITIONAL RESOURCES

- **National Association of City Transportation City Officials (NACTO):** Guidelines for the Regulation and Management of Shared Active Transportation
- **Remix:** Micromobility policy survey
- **UC Berkeley:** Shared Micromobility Policy Toolkit: Docked and Dockless Bike and Scooter Sharing
- **Centers for Disease Control:** Dockless Electric Scooter-Related Injuries Study
- **Populus:** The Micro-Mobility Revolution: The Introduction and Adoption of Electric Scooters in the United States



IMAGE CREDITS

- Kavanagh, Gary (2018) Santa Monica e-scooter corral [Photograph] Retrieved from <https://la.streetsblog.org/2018/11/08/santa-monica-installs-in-street-e-scooter-parking-corrals/>
- Lime Access. (n.d.) [Photograph] Retrieved from <https://www.li.me/community-impact>
- Getty Images (n.d.) City Hall [Photograph] Retrieved from <https://www.gettyimages.com/detail/photo/sign-showing-city-hall-on-a-building-royalty-free-image/184661001>
- Getty Images. (n.d.) Businessman riding scooter along building [Photograph] Retrieved from <https://www.gettyimages.com/detail/photo/businessman-riding-scooter-along-office-building-royalty-free-image/1125234178>
- Getty Images. (n.d.) JUMP Bike and Bird Scooter [Photograph] Retrieved from <https://www.gettyimages.com/detail/news-photo/people-ride-a-uber-technologies-inc-jump-bike-pedal-news-photo/948153734>
- Getting Image. (n.d.) E-scooter in Copenhagen [Photograph] Retrieved from <https://www.gettyimages.com/detail/news-photo/february-2019-denmark-kopenhagen-a-cyclist-in-downtown-news-photo/1128167644>



QUESTIONS?

Thank you to committee chair **Dr. Ralph Buehler** and members **Dr. Maggie Cowell** and **Dr. Shelley Mastran** for their guidance throughout the project.



SUPPLEMENTAL SLIDES

LIMITATIONS

- The micromobility industry is rapidly evolving
- Interviews conducted only with cities and no private dockless mobility operators
- With over 200 dockless mobility deployments in cities with unique state and local contexts, it is difficult to generalize findings



FUTURE RESEARCH

- Safety
- Data sharing Agreements
- Socio-Demographic Impacts
- Operational challenges and business models
- Public-private partnerships
- Vehicle design
- Standardized definition of micromobility

