

SHARED MOBILITY DEVICES

National and Regional Trends

Michael Farrell
Senior Transportation Planner

Access for All Committee
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Shared Micromobility in the DC Region



Station-based Bikeshare (Capital Bikeshare)

- Regional
- Publicly provided
- Mostly long-term memberships



Dockless Shared Mobility

- e-scooter
- e-bike
- pedal-bike (2017-2018)
- smartphone-based
- Private providers
- Per-minute charge



E-scooter Boom

- E-scooters have largely replaced dockless bike share
 - A national trend, driven by the operators
 - E-scooters have higher demand, generate more revenue
 - Jump offers e-bikes and e-scooters
 - No shared pedal bikes still in operation
- E-scooters are driving rapid growth in SMD trips
 - Ex: In DC dockless vehicle monthly trips increased from 140,000 (May 2018) → 590,000 (May 2019)
- Capital Bikeshare (station-based) ridership is flat

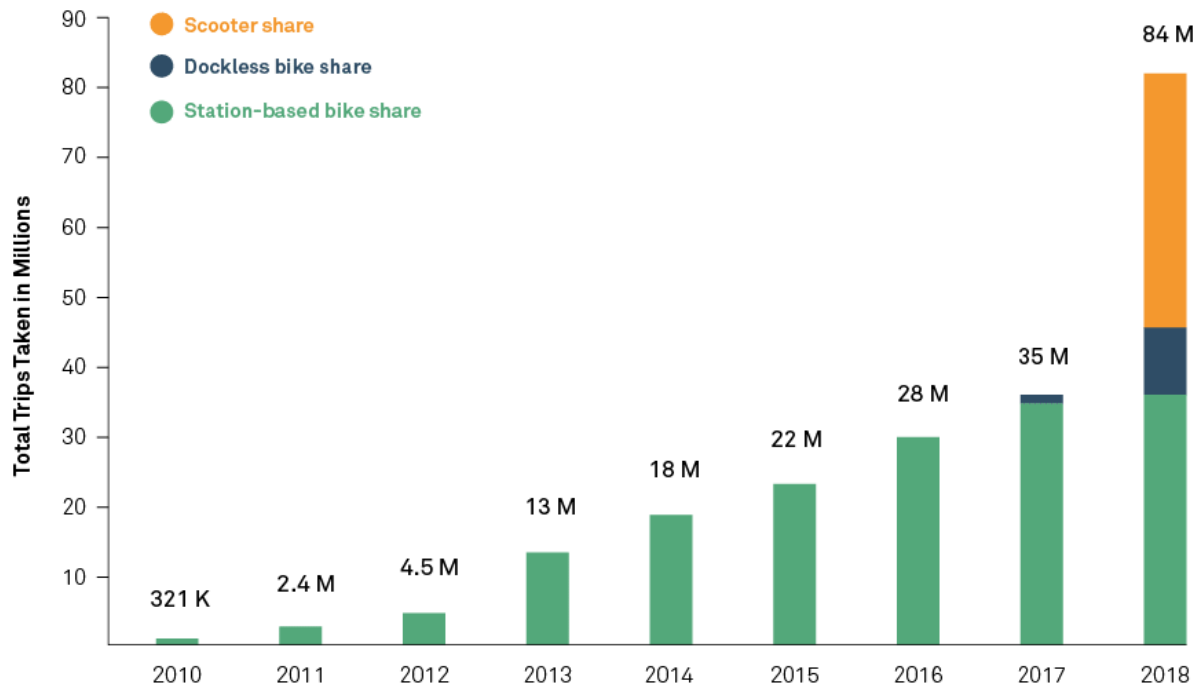


Photo Credit: Arlington



National Trends

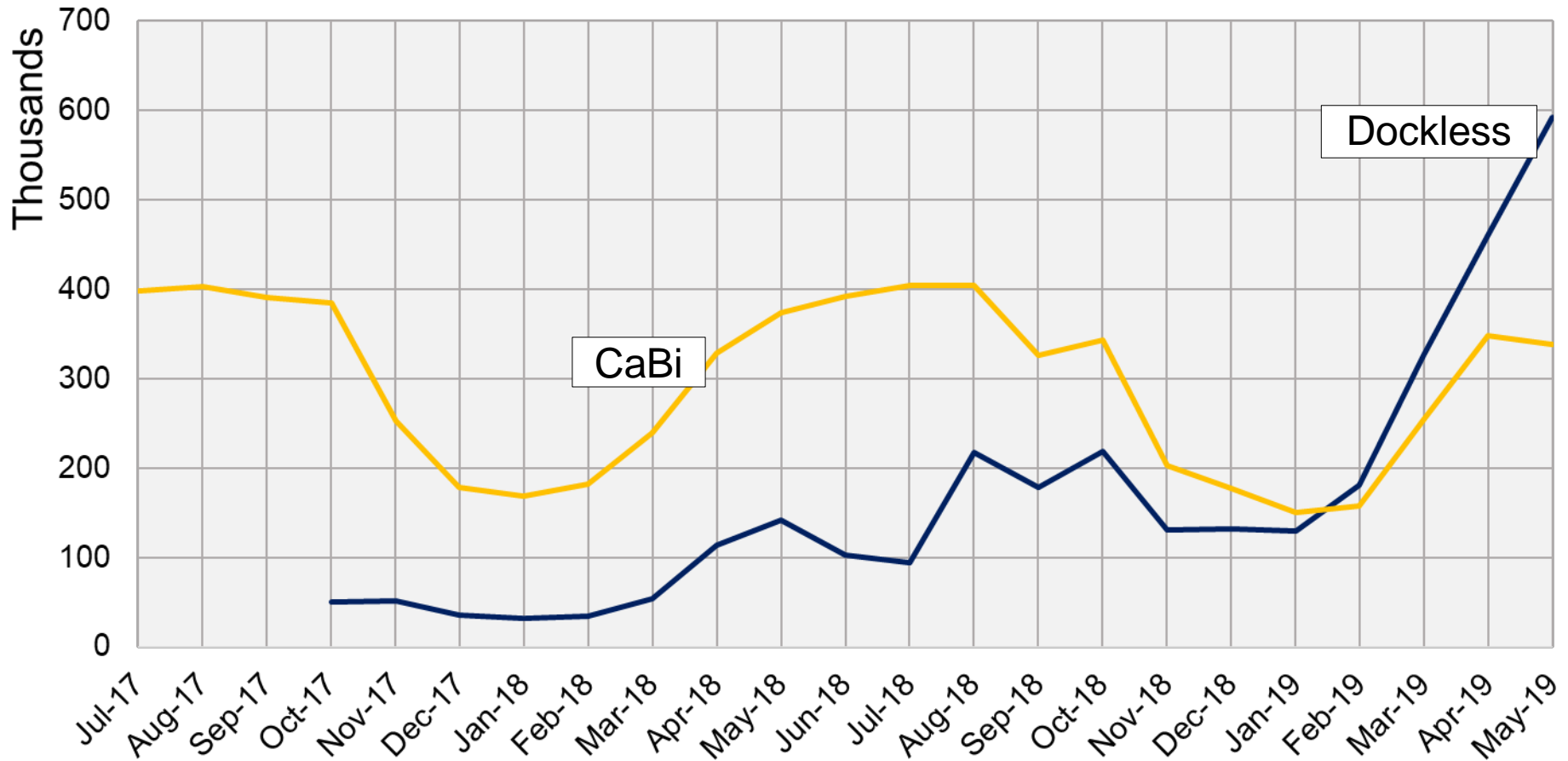
84 Million Trips on Shared Micromobility in 2018



Source: NACTO



E-scooter Boom - DC



Content Credit: DDOT



Shared Dockless Mobility Permit Programs in the Washington Region

	DC	Arlington, VA	Alexandria, VA	Montgomery County, MD
Permitted Fleet Size as of 9/2019*	6210	2700	1400	2000 (e-scooters and e-bikes)
Number of Operators	8	7	7	4
Trips/Month	590k	80k	40k	
Coverage	All	All	All	Silver Spring, Rockville
Start Date of Pilot	9/2017 e-bike 3/2018 e-scooter	9/2018	11/2018	6/15/2019 (replaced pedal bikes)
End Date	12/31/2019	12/31/2019	12/31/2019	12/15/2019



Role of MWCOCG

COG holds a Regional Dockless Workshop every Six Months

Goal:

- Share information on evolving practices

Attendance:

- DDOT, Arlington County, Montgomery County, and City of Baltimore
- Interested agencies, consultants, dockless operators, and members of the public
- Transportation Planning Board Access for All Committee Chair

Workshops were held

- May 31, 2018
- October 31, 2018
- May 30, 2019
- Next workshop will be held on December 9, 2019



Successes

- SMD use is growing rapidly, with positive response from riders
- SMDs increase mobility options for short trips (typically 0.5 – 1.5 miles)
- Reduction in motorized trips, especially ride-hailing and personal motor vehicles



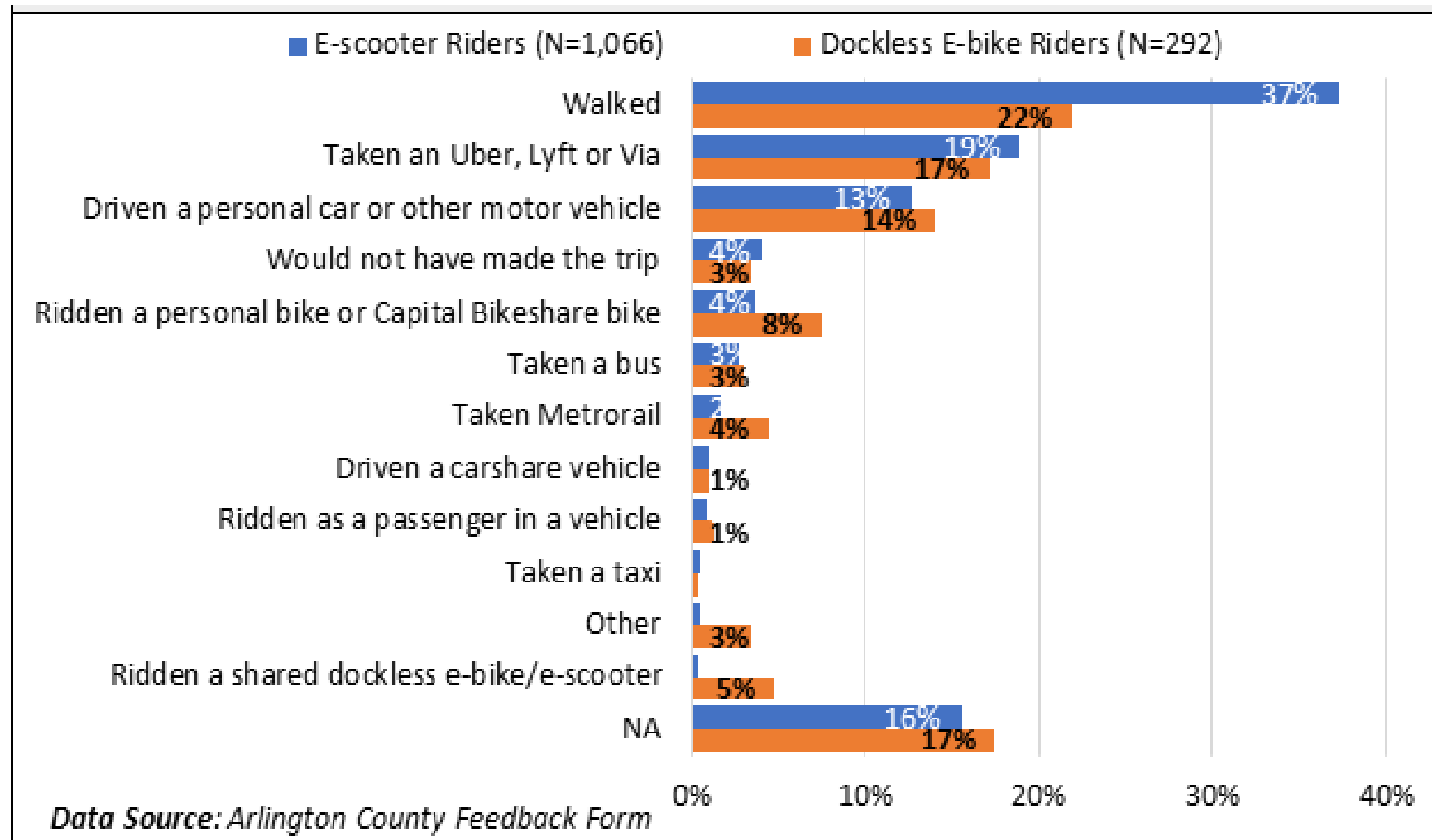
All four jurisdictions are extending their pilot permit programs



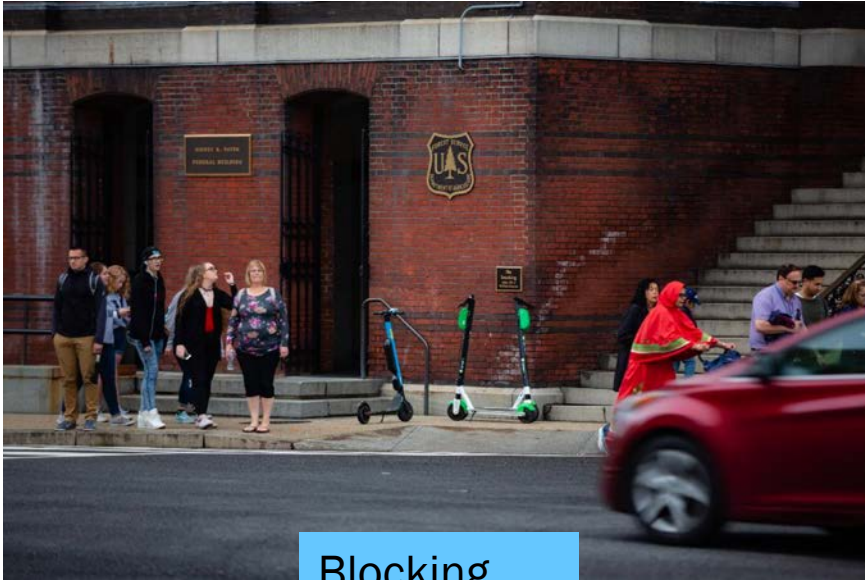
Photo Credit: DDOT



SMD Mode Replacement (Arlington)



Areas of Concern: Parking



Blocking
the ramp

Photo Credit: DDOT



Parking Solutions

Biketown, Portland OR



Photo Credit: DDOT Corral



Alexandria Scooter Corral

- In-street parking corrals, in high use areas (DC, Arlington, Alexandria)
- Geofencing to exclude scooters from selected areas
- Offer discounted trips for parking the e-scooter in a corral
- Lock-to devices/hybrid
- Take photo to end ride (Baltimore)



Sidewalk Riding/Inadequate Facilities

Hazard/discomfort for pedestrians due to sidewalk riding

Responses:

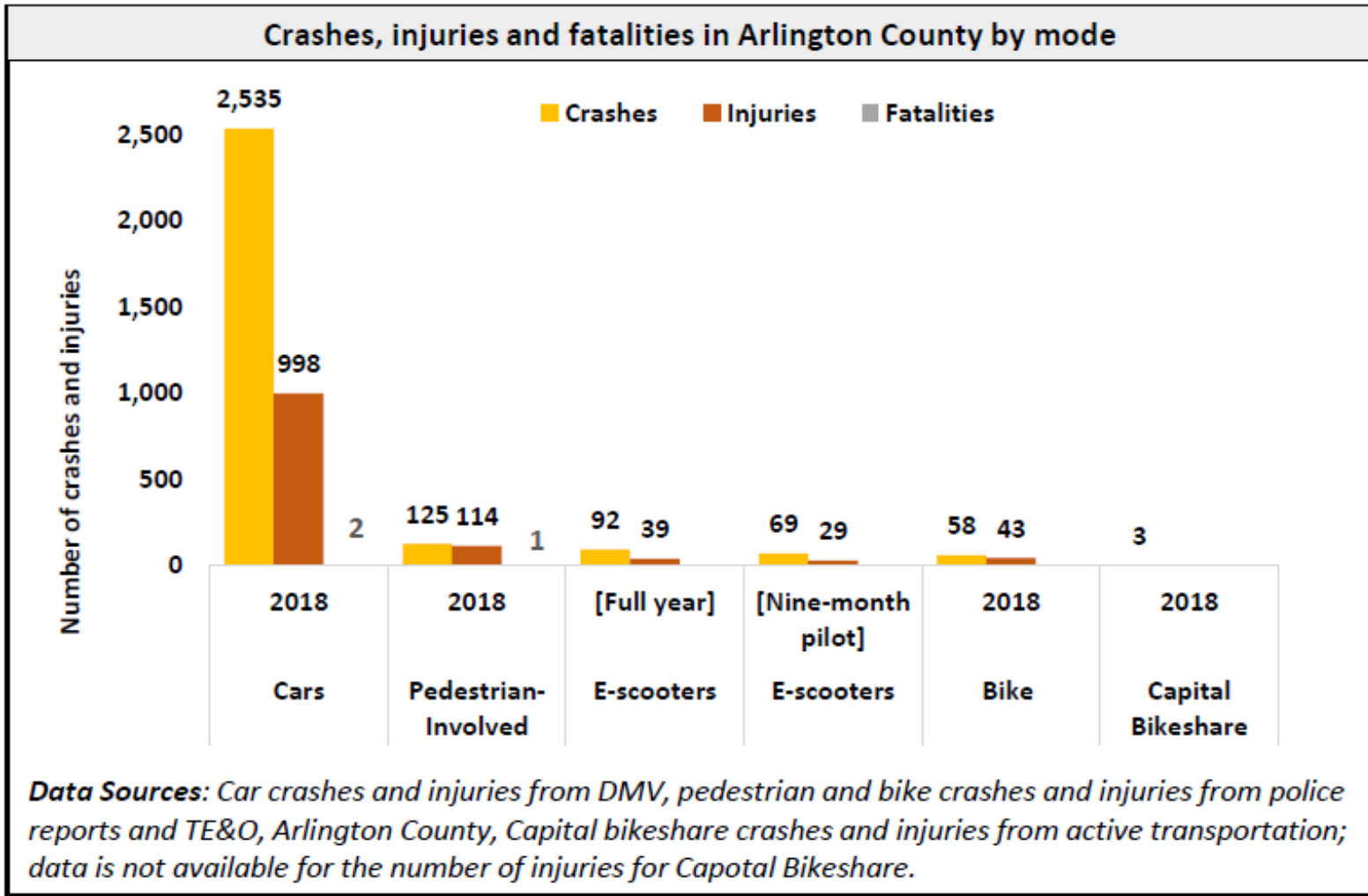
- DC, Arlington: 10 mph built-in speed limit
- Accelerate bike lane, protected lane construction
- Rider training



14th Street NW Protected Bike Lane



Safety – Arlington Data



E-scooter Injury Rates

- Arlington: Approximately 0.64 injury crashes/10,000 e-scooter trips during the 9 month pilot
- Baltimore: About 0.9 emergency room visits per 10,000 e-scooter rides
- Crash rates can be expected to decline as users become more experienced*



Safety problem has not been judged sufficiently serious to cancel the SMD program

*A study in Austin showed that a third of incidents happen on the first use and that sixty-three percent of people interviewed said they had ridden a scooter less than nine times when they were injured



Training/Regulatory Responses

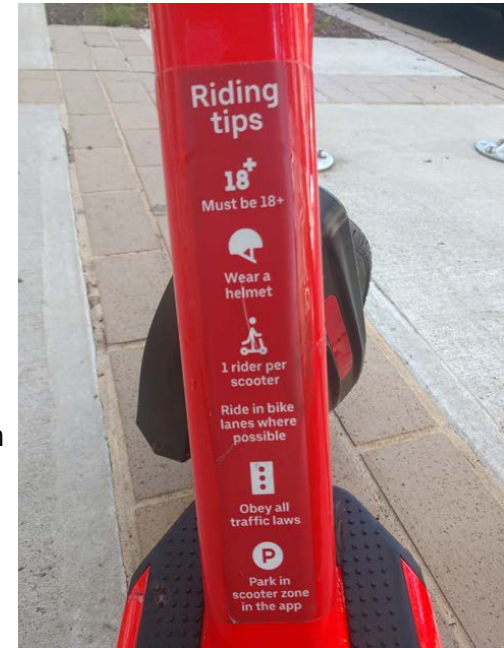
Training

- Mostly app-based
- A third of incidents happen on the first use
- Some agencies/operators sponsor training events
- “Push” safety reminders from the app

Regulation

- Age restrictions
- Drivers License requirements
- Late night use restrictions
- Built-in speed governors enforce speed
- Geo-fence slow zones and no-service zones
- Patchwork of regulations governing where and how e-scooters e-bikes can be used
 - Complicates enforcement
 - Ex: In Montgomery County e-scooters can be used on trails run by the DOT, but not on most trails run by the parks department

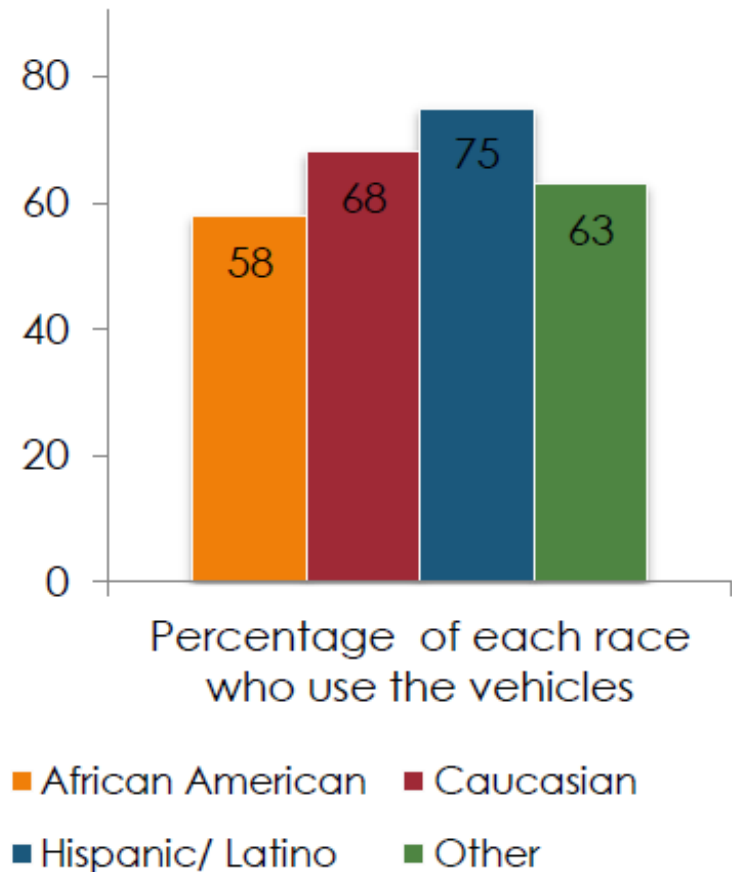
Photo
Credit:
Arlington



Equity

- Higher percentage of low-income and minority people use e-scooters than Capital Bikeshare
 - Baltimore survey found high proportions of Latinos reported using e-scooters
 - Major differences were by age, not race. >55 don't use
- Per-trip pricing structure is attractive to low-income people
- Discount/cash memberships
- Min % of e-scooters deployed to disadvantaged neighborhoods

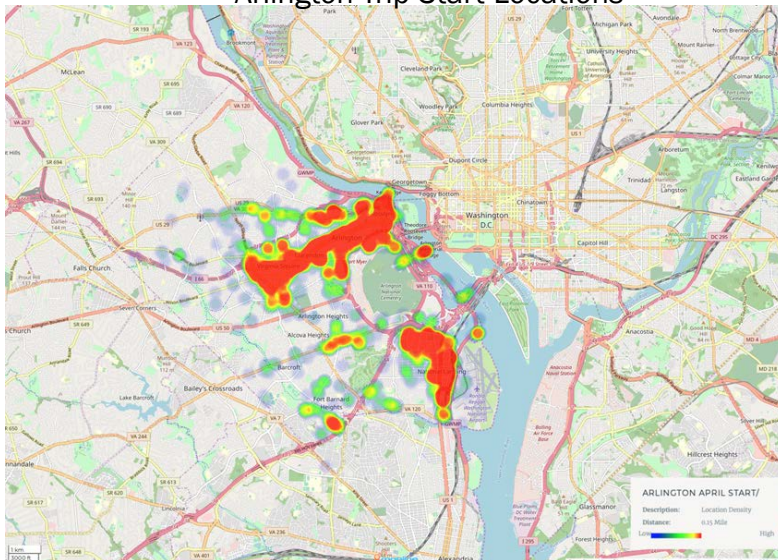
Baltimore Dockless Survey



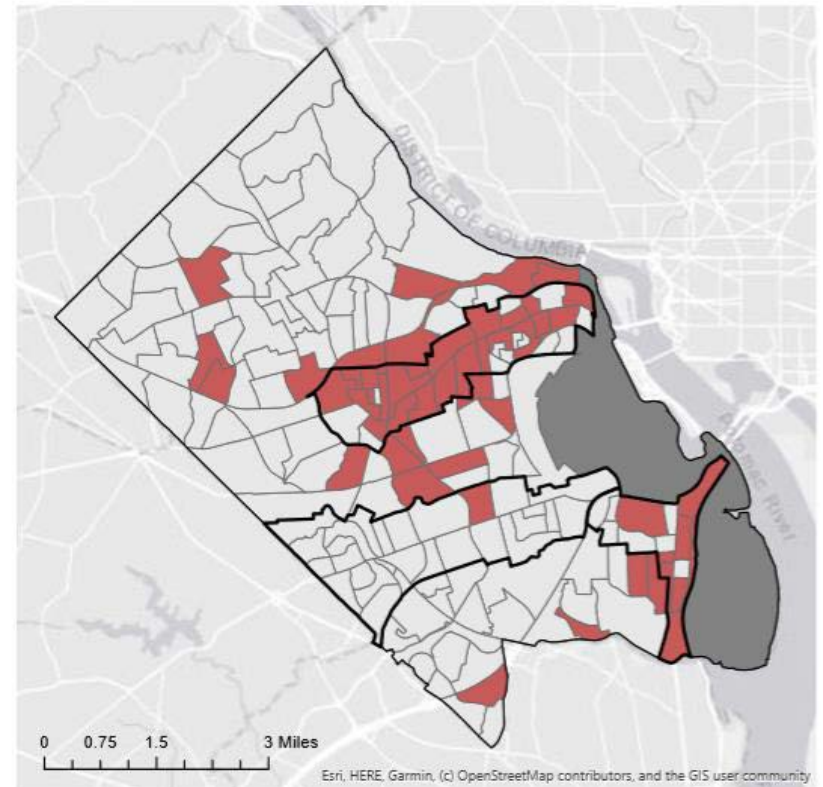
Equity in Arlington

- E-scooters mostly in denser and more affluent areas with Metro access, developed bike networks
- Daytime population should be considered

Arlington Trip Start Locations



Arlington



Major Planning Corridors

Daily Vehicles/1000 People
(based on 2019 census block group population)

0 - 4
4 - 22
Population <10 people



Outlook/Next Steps

- Dockless Shared Mobility is likely to continue for the immediate future
 - Safety, sidewalk riding, parking issues need mitigation
- Growth in dockless micromobility has come mostly at the expense of ride-hailing, driving, and walking
- MWCOG will continue to hold regional Dockless workshops twice a year
- Long-term threats
 - Companies are not yet profitable
 - Theft/vandalism – low vehicle lifespan
 - Rising permit fees
 - Rising rates



Michael Farrell

Senior Transportation Planner

(202) 962-3760

mfarrell@mwkog.org

mwkog.org/TPB

Metropolitan Washington Council of Governments

777 North Capitol Street NE, Suite 300

Washington, DC 20002



National Capital Region
Transportation Planning Board