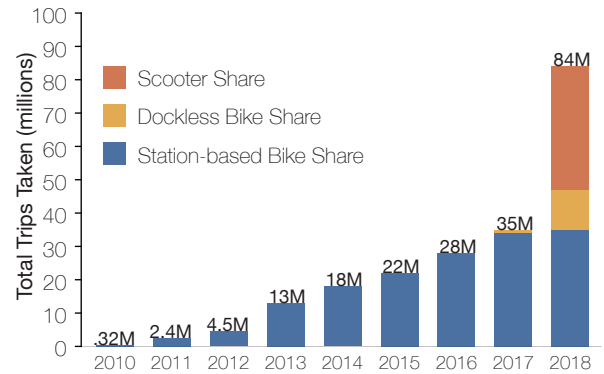


MICROMOBILITY (SHARED BICYCLES, E-BIKES, E-SCOOTERS)

DEPLOYMENT FACTS:

- In the US, bike share programs have existed at scale since 2008. **Shared e-scooters launched in the US in late 2017 and quickly grew to nearly half of total shared micromobility trips.**¹ (See Figure 1)
- In 2018, **85,000 e-scooters** were deployed nationwide, vs. **57,000 station-based bikes.**¹
- In the US, **e-scooters accounted for 38.5M trips**, compared with **36.5M station-based bike share trips** and **9M dockless bike share trips.**¹
- By 2019, **a dozen e-scooter companies operated in Paris with a combined fleet of 20,000 scooters.**²

Fig. 1: Breakdown of Micromobility Trips (2010-2018)

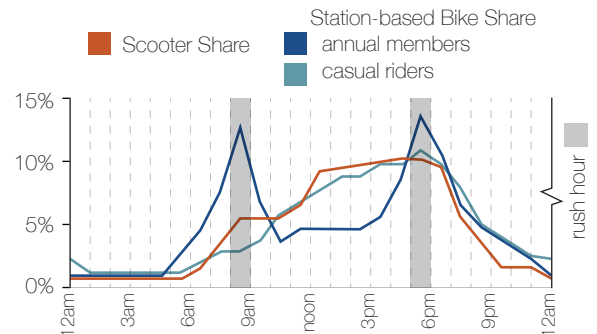


Source: Based on Shared Micromobility in the U.S. NACTO, 2019

TRIPS:

- Nationally, e-scooter use is highest from midday to early evening whereas station-based bike share peaks during rush hour.¹ (See Figure 2)
- In Santa Monica, the average e-scooter trip time is **14 minutes** and average trip length is **1.3 miles.**⁵
- The top 5 reasons in Santa Monica for using shared e-scooters/bikes were: **work-related (29%), recreation/fun (26%), eating out (14%), to/from home (11%), and shopping (8%).**⁵
- Half of Portland e-scooter riders have used an e-scooter to access bus, light-rail or street car.⁶

Fig. 2: US Micromobility Trips by Hour, 2018



Source: Based on Shared Micromobility in the U.S. NACTO, 2019

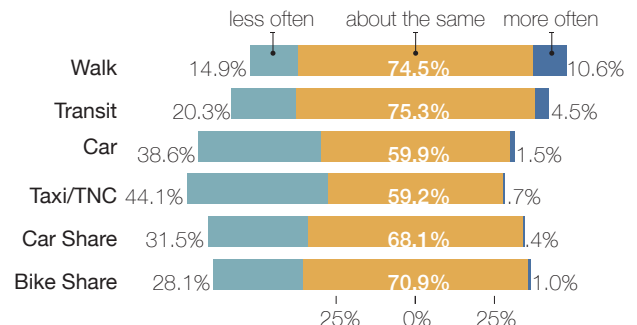
EMERGING TECHNOLOGIES

MICROMOBILITY (SHARED BICYCLES, E-BIKES, E-SCOOTERS)

MODE SHIFT:

- In Portland, e-scooters are used for **trips that otherwise would be completed by walking (37%), driving (19%), or taxi/TNC (15%).**⁶
- E-scooter riders report lower usage of taxi/TNC, driving cars, and car shares.⁶ (Figure 3)
- Nearly **6 in 10 Paris Lime riders report using e-scooters to reduce their reliance on personal motorized vehicles** (cars, taxis, rideshares, motorcycles, mopeds.)⁷

Fig. 3: Change in Modes after E-scooter Adoption (Portland 2018)

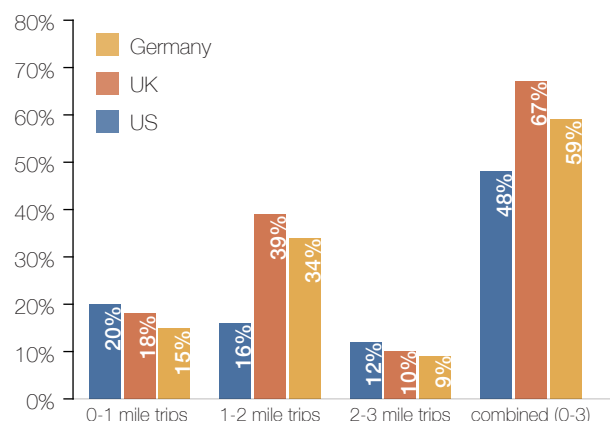


Data Source: 2018 E-SCOOTER PILOT User Survey Results. PBOT, 2019

TRAVEL POTENTIAL:

- E-scooters/E-bikes broaden the appeal of micromobility:
 - 45% of Portland e-scooter users never ride a personal bicycle, 78% never use BIKETOWN.⁶
 - Over 2/3 of Seattle residents would be more likely to use a bike share program with electric assist bicycles.⁸
- About half of all trips in the US are under 3 miles, which could be completed with micromobility if it were easily available and the infrastructure supported safe travel.⁹ (See Figure 4)

Fig. 4: Percentage of Short Trips, 2019



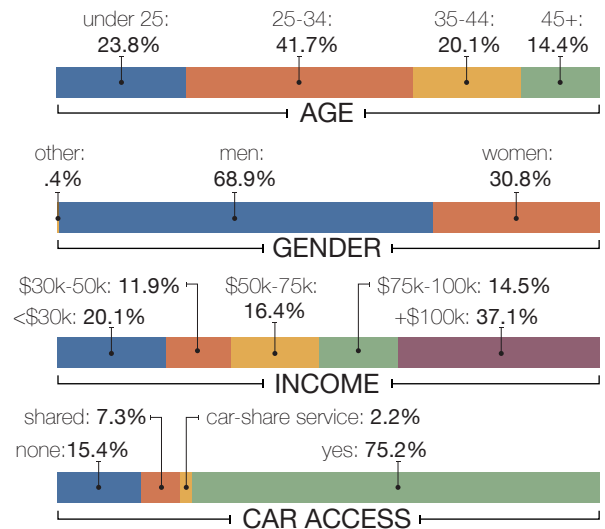
Source: Based on Micromobility Potential in the US, UK and Germany. Reed, 2019.

MICROMOBILITY (SHARED BICYCLES, E-BIKES, E-SCOOTERS)

RIDER DEMOGRAPHICS:

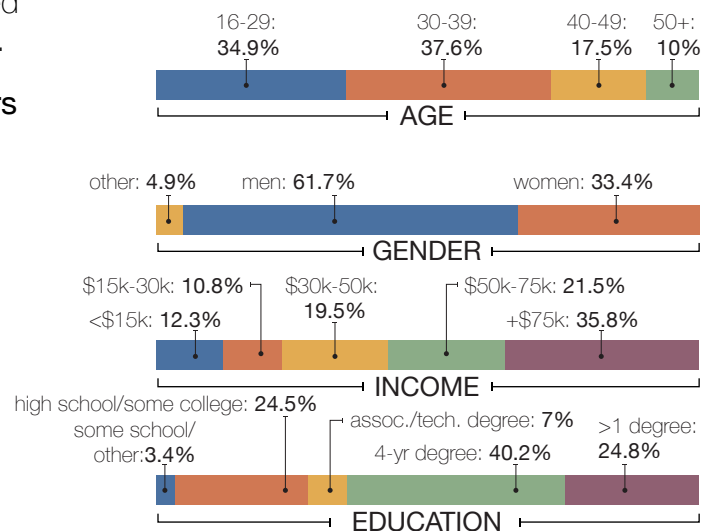
- **E-Scooter riders in Santa Monica**, the first US e-scooter market, **skew young, male and affluent** compared with users of Breeze, Santa Monica's bike share.³ (See Figure 5)
- E-Scooter riders in Portland:⁶ (See Figure 6)
 - The majority (37%) are ages 30-39.
 - More than 60% are male.
 - Over a third (35%) make more than \$75,000.
 - 40% have a college degree.
- Shared micromobility gender gap:⁴
 - 75% of station-based bike share trips are made by men.
 - 12% of women vs. 21% of men have used station-based bike share services in the US.
 - 3.2% of US women have used e-scooters compared with 4.4% of men.

Fig. 5: Santa Monica Ridership Demographics, 2018



Data Source: Shared Mobility Device Pilot Program User Survey Results. Santa Monica, 2019

Fig. 6: Portland Ridership Demographics, 2018



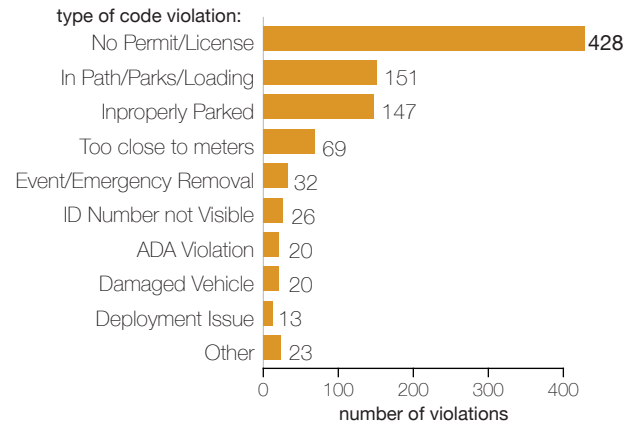
Data Source: 2018 E-SCOOTER PILOT User Survey Results. PBOT, 2019

MICROMOBILITY (SHARED BICYCLES, E-BIKES, E-SCOOTERS)

E-SCOOTER ENFORCEMENT ISSUES:

- The **majority of citations** issued to e-scooter companies were for **no permit/license to operate and parking/loading issues**.⁵ (See Figure 7)
- The **most common e-scooter parking issues** were not providing sufficient clearance in public right of way (25%) and not being parked upright (17%).⁵
- The **majority of citations** issued to e-scooter riders were for **riding without a helmet (61%), followed by riding on sidewalks (13%)**.⁵

Fig. 7: Santa Monica Scooter Code Violations

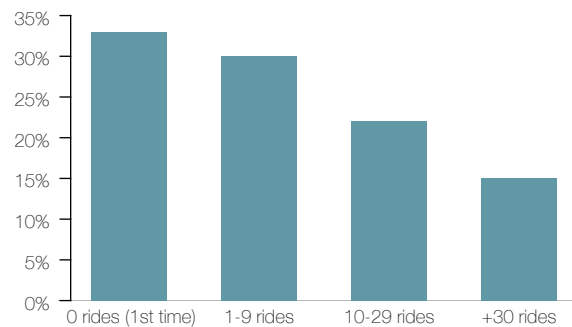


Source: Based on Shared Mobility Pilot Program Summary Report. Santa Monica, 2019

E-SCOOTER INJURIES:

- Austin Public Health & The CDC find that e-scooter use results in **20 injuries per 100,000 trips**.¹⁰
- **1/3 of injuries** were sustained by riders on their **first e-scooter ride**.¹⁰
- **48% of injuries** were to the head.¹⁰
- **50% believed surface conditions** (pot holes, crack in street) **contributed to their injuries**.¹⁰
- **More than 1/3 reported that excessive speed** contributed to their injury.¹⁰

Fig. 8: Number of Rides Before Injury (2018)



Source: Based on Dockless Electric Scooter-Related Injuries Study. Austin Public Health, 2018

SOURCES:

Graphic design by Urbanism Next, data sourced from:

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