Scooter Share

Transportation Commission
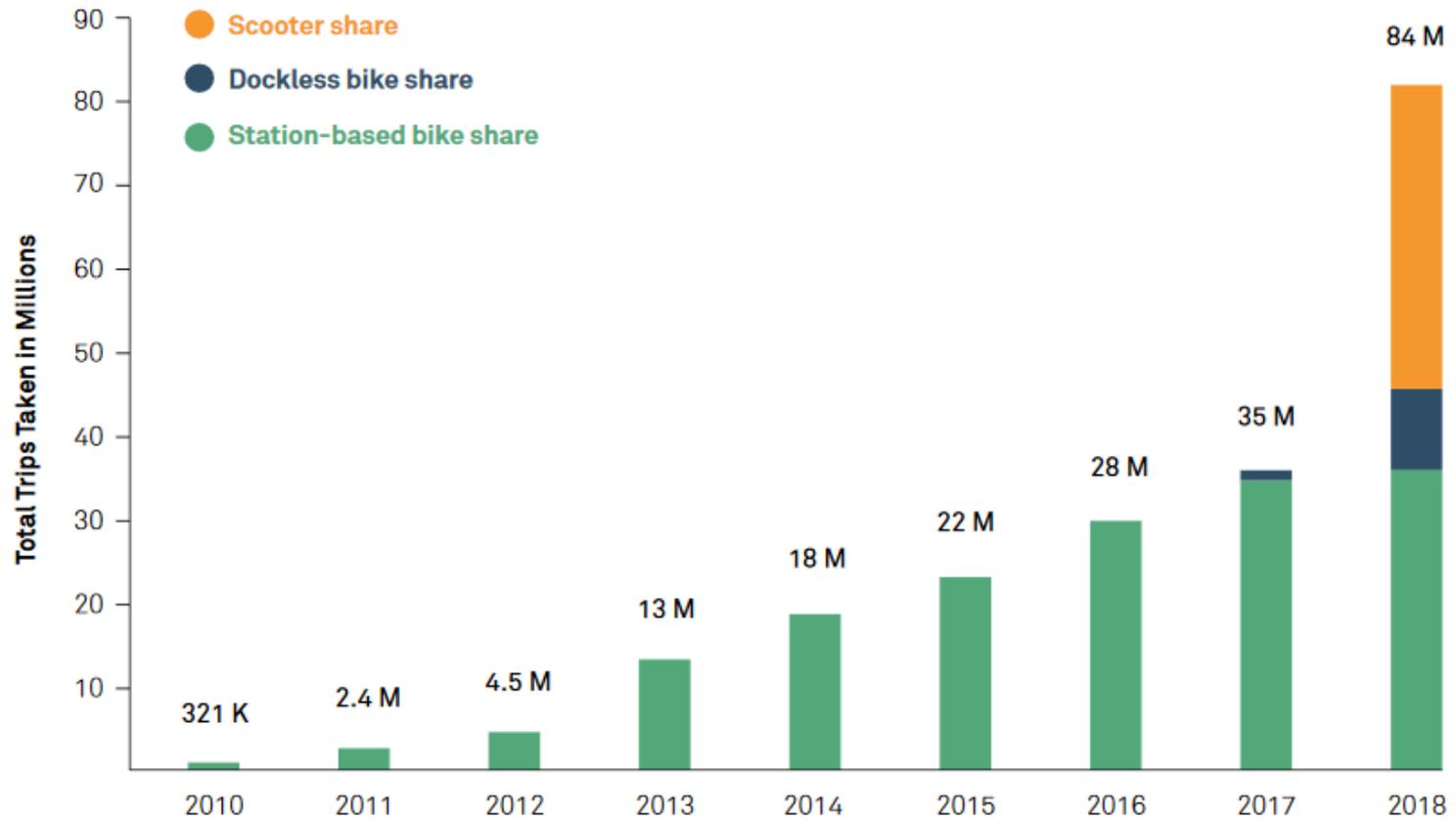
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Kimberly Scrivner, Transportation Planner

Overview

84 Million Trips on Shared Micromobility in 2018

Today's Discussion

- Definitions and Rules of Operation

- Lessons Learned from Other Cities

- Discussion

Scooters Defined by RCW

(RCW 46.04.336) "Motorized foot scooter" means a device with two or three wheels that has handlebars, a floorboard that can be stood upon by the operator while riding, and is powered by an internal combustion 10 engine or electric motor that has a maximum speed of no greater than twenty miles per hour on level ground.

With HB 1772 amendments
(passed by House and Senate April 2019)

Rules of Operation

- **Cannot exceed 20 mph** on level ground   (RCW 46.04.336)

- May not be operated from a half hour after sunset to a half hour before sunrise without **reflectors**   (RCW 46.20.500)

- **Cannot be ridden on sidewalks** unless there is no alternative or if **authorized by local** ordinance   (RCW 46.61.710)

- Scooters may be operated most **places bicycles are allowed**   (RCW 46.61.710)

- No Drivers License needed   (RCW 46.20.500)

Amendments to RCW 46.61

- Riders must be 16 years of age (RCW 46.20.500)

- Scooters are allowed to park where bikes can park

- A local authority may **regulate scooters** by:
  - allowing operation on sidewalks IF authorized locally AND if a max speed is specified
  - adopting penalties for moving or parking violations (not to exceed those of cyclists)
  - authorize use on trails

- A local authority may **regulate scooter share operations** by:
  - requiring reasonable fees and taxes
  - determining if and where they may be operated within jurisdictions
  - requiring staging of operations consistent with ADA

- Scooter share **operators must**:
  - carry commercial general liability insurance, automobile insurance coverage

Proposed Amendments NOT in passed HB

Scooter share operators must

- share data of anonymized fleet and ride activity data in compliance with national data format specification such as the mobility data specification (MDS) feed with acknowledgement that:

  - the data is trade secret and proprietary and shall not be shared without operator consent (data is not owned by local authority)

  - any data provided is considered personally identifiable and shall not be disclosed pursuant to public records requests without prior aggregation or obfuscation

- must compensate employees commensurate with state law

- have a **locking mechanism** that allows the scooter to be locked to a stationary object

Kirkland Municipal Code

12.12.055 Motorized foot scooters

- may **not be used on sidewalks* or within city parks**

- may **not be used** on public rights-of-way with speed limits **greater than 25 miles per hour**

- Requires a front **lamp** and rear **reflector**

- must be at least **fifteen years** old

- must wear a **helmet**

- no person shall transport another person **on or in tow** of a motorized scooter.

19.40.020 CKC trail use

- No motorized vehicles… including motorized foot scooters

*must set max speed if amended

Lessons Learned from other Cities

Portland E-Scooter Pilot Program – 120 days
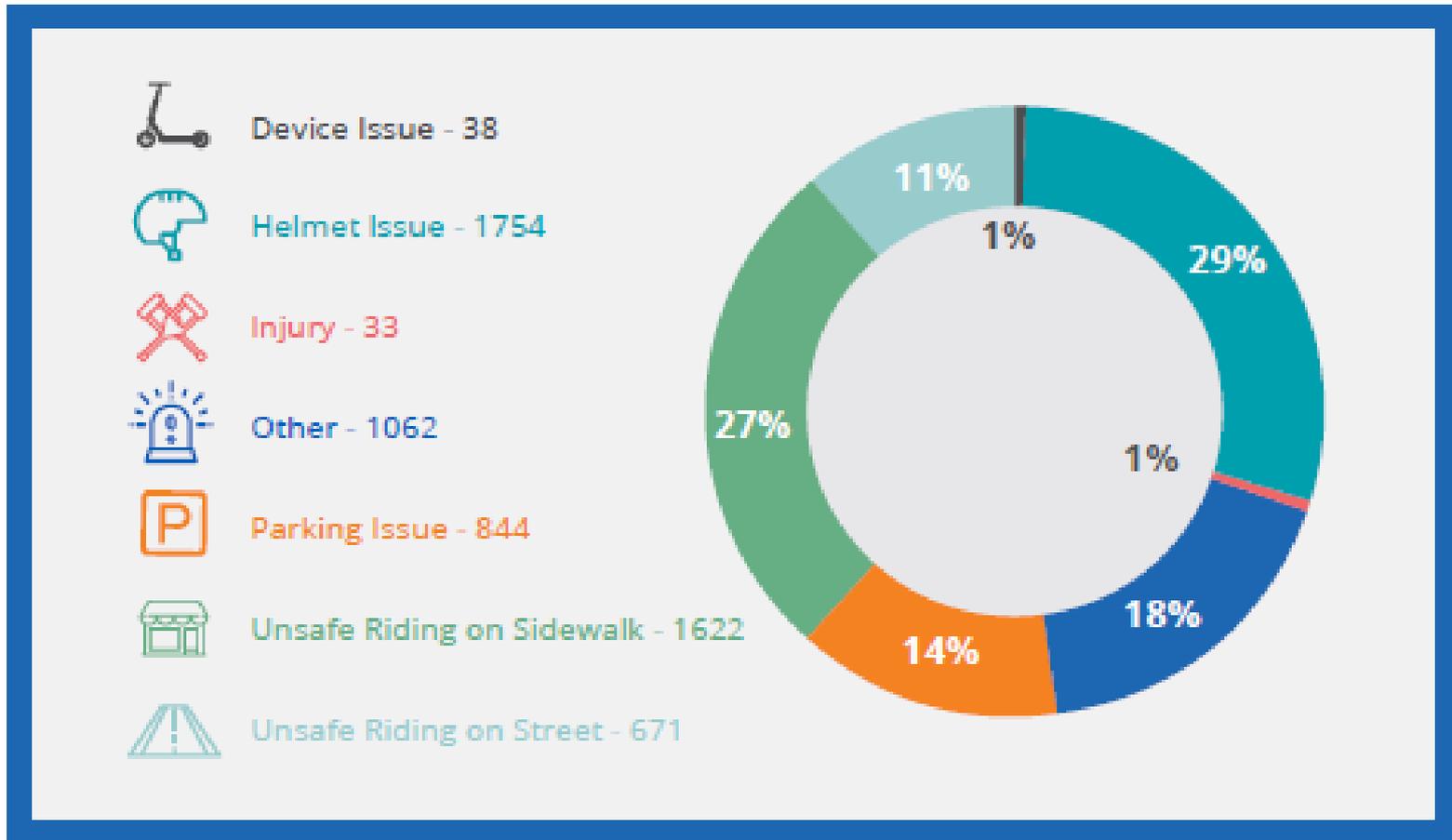
July 23rd – November 20 2018 pilot

Bird, Lime and Skip

Started with 100 scooters each, grew to 683 per company

- 700,369 trips covering 801,887 miles on **2,043 e-scooters**

- 62% of survey responders viewed scooters **positively** (higher with lower-incomes, people of color and people under 35)

- 71% of trips were for transportation purposes

- 34% of residents and 48% of visitors **substituted an auto trip** with a scooter

- 74% of users reported **never trying bike share**

- People preferred bike network and local streets over sidewalks

- Created a management **challenge for Parks and Rec** staff

Lessons Learned from other Cities

Portland – Complaints by Category

Device Issue - 38

Helmet Issue - 1754

Injury - 33

Other - 1062

Parking Issue - 844

Unsafe Riding on Sidewalk - 1622

Unsafe Riding on Street - 671

11%
1%
29%
1%
18%
14%
27%

Lessons Learned from other Cities

Spokane (74-day pilot Sept – Nov 2018):

- The "**fun factor**" - nearly 75% of e-scooter users cited "for fun" or "to ride with friends or family"

- 21% of e-scooter users reported wearing a **helmet**

- 72% of e-scooter users used the **sidewalk** for at least part of their trip

- 77% of **non-users reported interest** in trying e-scooters (60% for e-bikes)

- Lime deployed **four generations** of e-scooters during the pilot

Lessons Learned from other Cities

Spokane (cont.):

- There were 135,872 trips taken during the pilot period

	Total trips during pilot	Available # of vehicles	Total average trips per vehicle	Trips per vehicle per day
e-scooters	108,360	425	225	3.9
e-assist bikes	18,831	72	262	2.9
regular bikes	8,681	53	164	2.4

- Over 90% of survey respondents stated that there were not enough vehicles.

- Next Steps: More permanent shared mobility program – but restrict scooters from sidewalks downtown

Lessons Learned from other Cities

Tacoma – 60-day Pilot:

- Lime began by deploying 250 scooters and 100 bikes
- Pilot extension allowed up to 500 scooters, 250 bikes
- Lime only deployed **500 scooters** (through Sept 2019)
- Bird began deploying 250 scooters and did not renew

Lessons Learned from other Cities

Austin

Both Bird and Lime deployed scooters without being allowed to (forced city's hand to decide). Now:

- Bird - 1,000 scooters and 4,000 supplemental scooters
- JUMP - 500 bicycles and 1,500 supplemental bicycles
        - 500 scooters and 1,500 supplemental scooters
- Lime - 500 scooters and 4,000 supplemental scooters
- Lyft - 500 scooters and 1,000 supplemental scooters
- OjO - 100 scooters
- Razor - 500 scooters
- Skip - 500 scooters
- Spin - 500 scooters
- VeoRide - 300 scooters and 50 bicycles
- Wind Mobility - 200 scooters

Issues with Durability

- Bird scooters began operating in Louisville, Kentucky in August 2018
- Media company evaluated lifespan of a Bird Scooter

  Average lifespan - 28.8 days
  Median lifespan - 26 days
  The average vehicle took 92 trips during its lifetime (163.2 miles)
  Five of the 129 didn't make it past the first day
  The longest lifespan made it 112 days
  Only seven of 129 scooters lasted more than 60 days

- Lime is on 6th generation of scooters (first 5 were 'off the shelf')

Injuries very difficult to track

- Records from Bird and Lime **tallied 470 injuries** across US July 2018

- Consumer Reports **confirmed 1,545 patients** were treated for scooter-involved injuries over the past year BUT scope was limited to:
    - 23 of 60 medical facilities / other entities responded to inquiry

By Comparison
- **motorcycle** injuries rates - .05 per 10,000 vehicle miles traveled

- **vehicle** injury rates - 0.1 per 10,000 vehicle miles traveled
    (National Highway Traffic Safety Administration)

- **bike share** injury rates were .04 per 10,000 trips taken
    (D.C. Bike Share - Mineta Transportation Institute report)

- no established way to calculate injury rates for e-scooters

Injuries very difficult to track

A study from the Journal of American Medical Association evaluated data from two UCLA affiliated emergency rooms from Sept 1, 2017 to Aug 31, 2018:

249 patients presented to the ER with injuries associated with standing electric scooter use during the study period

- ages ranged from 8 to 89
- 61% of were between the ages of 18 and 40
- 10.8% were younger than 18 years
- 91.6% were riders and 8.4% were nonrider pedestrians hit by a scooter
- 2% tripped over a parked scooter
- 2% were attempting to carry a scooter not in use

- 80.2% of injuries resulted from a fall
- 11% resulted from colliding with an object
- 8.8% reported being hit by a vehicle or object

Most Common Injuries:
- Fractures – 31%
- Head injuries – 40.2%
- Soft tissue – 27.7%

4.8% had physician-documented intoxication or a blood alcohol level greater than 0.05%.

Injuries very difficult to track

In Portland, e-scooter injuries accounted for ~5% of total traffic crash injury during pilot

PBOT received 43 reports of crashes

E-Scooter Related Emergency Room and Urgent Care Visits in Multnomah County July 25 – November 20, 2018

Colliding Mode	Total Visits	Percent of Total (Rounded to nearest tenth)
None/fall	146	83%
Car	22	12.5%
Truck	2	1.1%
Pedestrian (Scooter user injured after colliding with a pedestrian)	3	1.7%
Scooter (Pedestrian injured after being hit by a scooter user)	2	1.1%
Scooter (Scooter user injured after colliding with another scooter)	1	0.6%
Total	**176**	**100%**

Source: Multnomah County Health Department

Seattle's bike share stands out as companies shift to scooters elsewhere

Source: NACTO

Station-based bike share only (>150 bikes)

Both station-based bike share & scooter share

Scooter share only (>150 scooters)

Dockless bike share only

Feedback from Operators

Lime
- Scooters must be part of the fleet + shorter pilot duration
- Prefer 80/20 mix (scooters to bikes) if bikes are required
- Scooters were used 3.4x more than e-bikes in Tacoma
- Kirkland has lots to offer for a small market (tech companies, waterfront/ downtown)

Uber/ Jump
- Interested in coming to Kirkland, Redmond, Bellevue + warehouse and ops base (timing likely in the fall)
- Scooters may or may not need to be part of fleet (could partner with Lime to see fleet in Uber app – Tacoma example)

Lyft/ Motivate – wants to start in Seattle market first

Gotcha
- Timing was an issue with Kirkland's RFP
- Still interested – have a conference call with them on Friday
- Local experience, 10-years working in smaller markets

Discussion

Thank you!

Kimberly Scrivner, Transportation Planner

kscrivner@kirklandwa.gov