

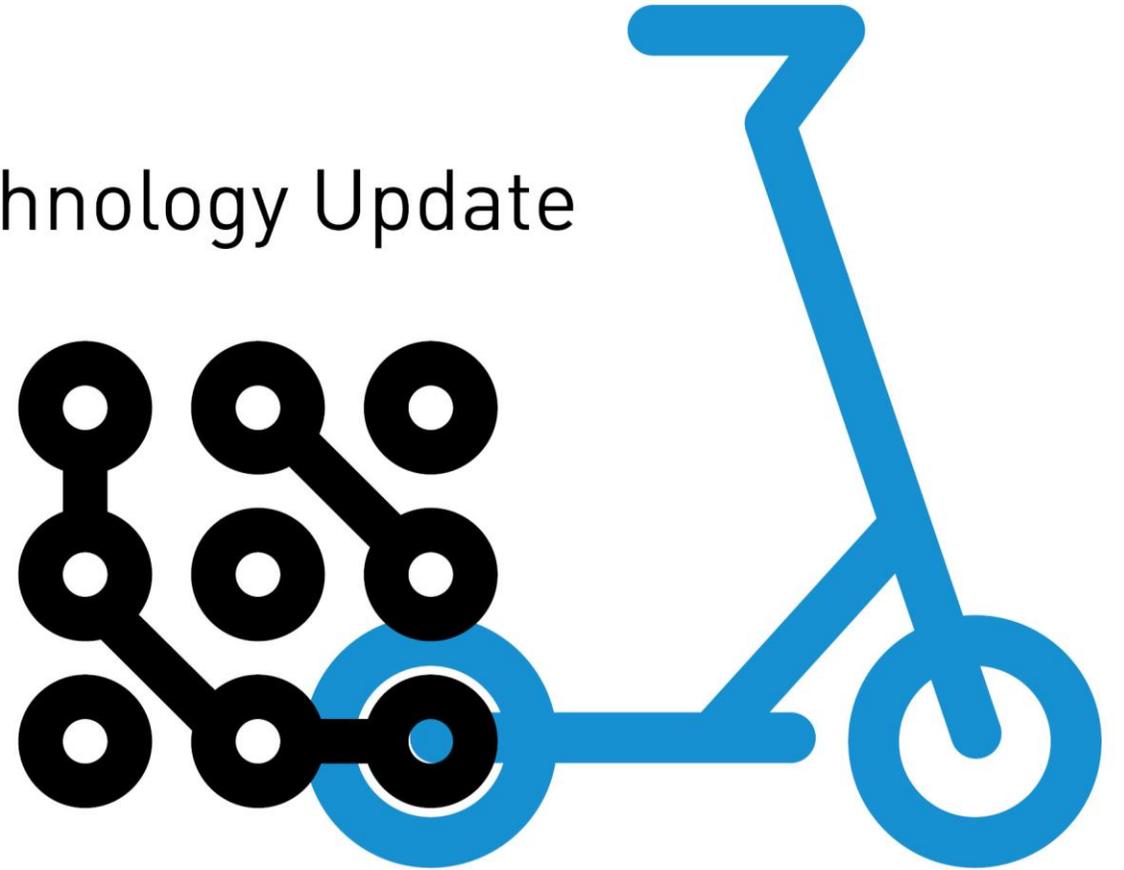
2021 New and Emerging Mobility Updates

Transportation and Utilities Committee



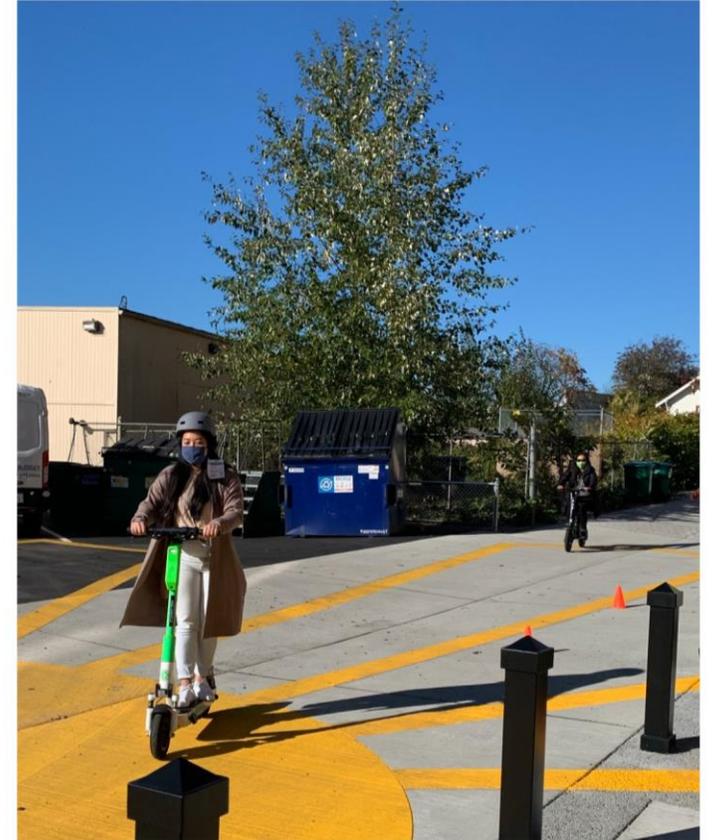
Agenda

- Scooter Share Pilot Evaluation
- New and Emerging Mobility Technology Update

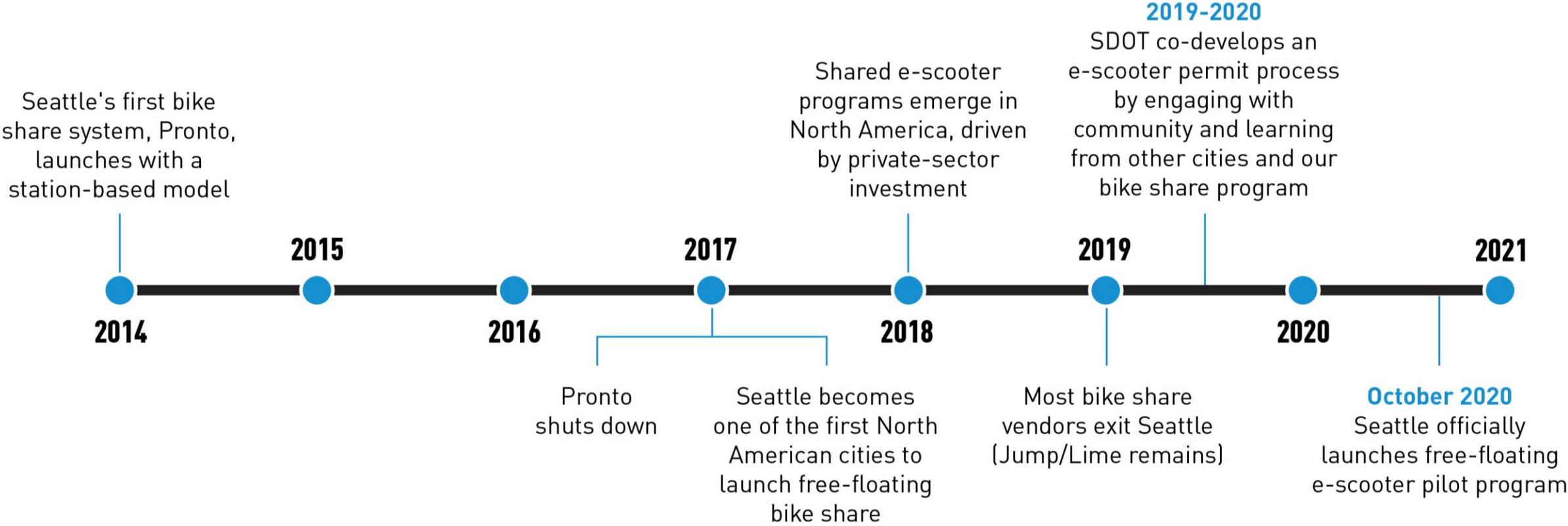


Scooter share pilot evaluation overview

- Background
- Overview of Pilot and Evaluation Criteria
- Scooter share by the numbers
- Equity, Safety, and Climate
- Key takeaways and next steps

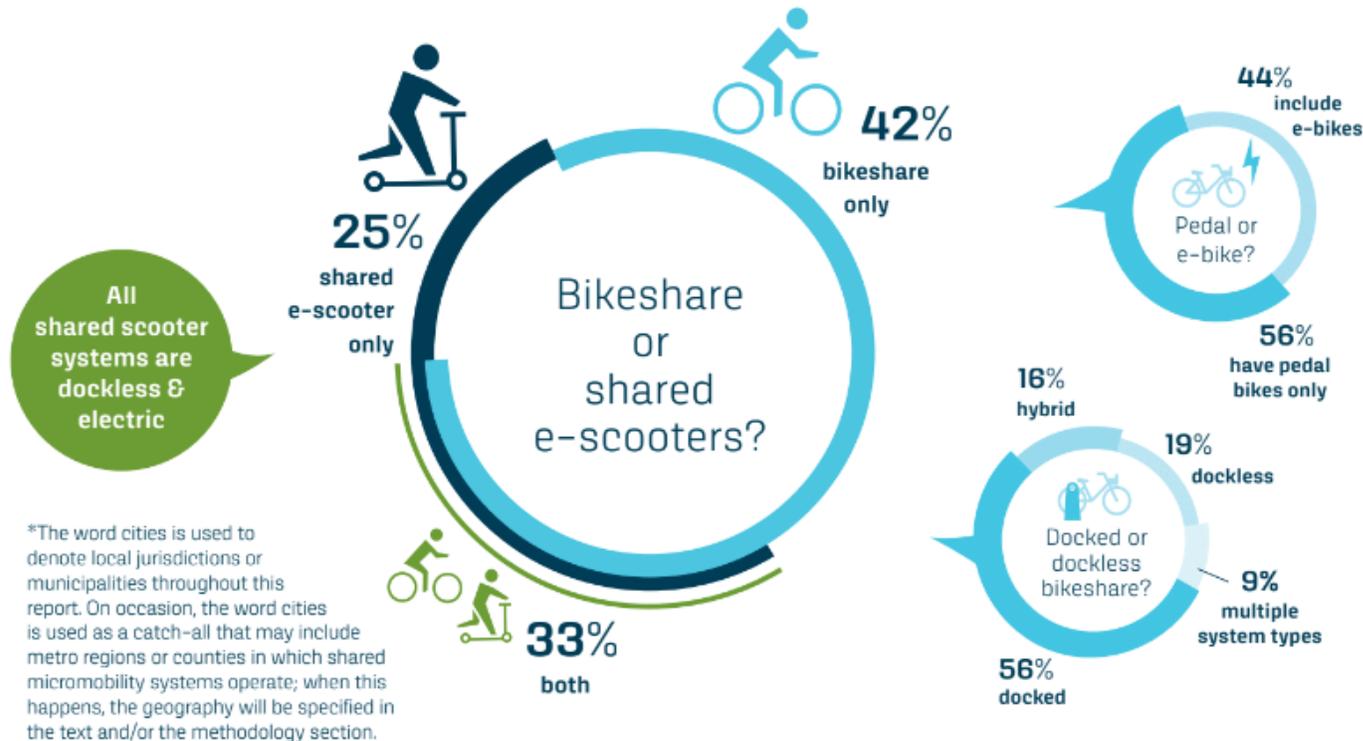


Micromobility in Seattle through the years



Micromobility in North America

At least 224 cities in North America have a **shared scooter or bikeshare** system



NABSA | 2020 STATE OF THE INDUSTRY REPORT

Scooter share pilot design

- We spent 1.5 years developing the scooter pilot, co-designing objectives with community and advocacy organizations, especially the disability community
- Took lessons learned from bike share, other cities, and vendors
- Grappled with key decisions such as sidewalk riding (not allowed)
- Legislation approved in September 2020 by Council and Mayor

Pilot design - Four scooter vendors



- Also operates bike share
- Launched September 15, 2020
- Up to 2,000 scooters



- Standing style
- October 30, 2020
- Up to 2,000 scooters



- Sitting style
- November 6, 2020
- Up to 2,000 scooters



- Innovative Drover AI technology
- July 15, 2021
- Up to 1,000 scooters



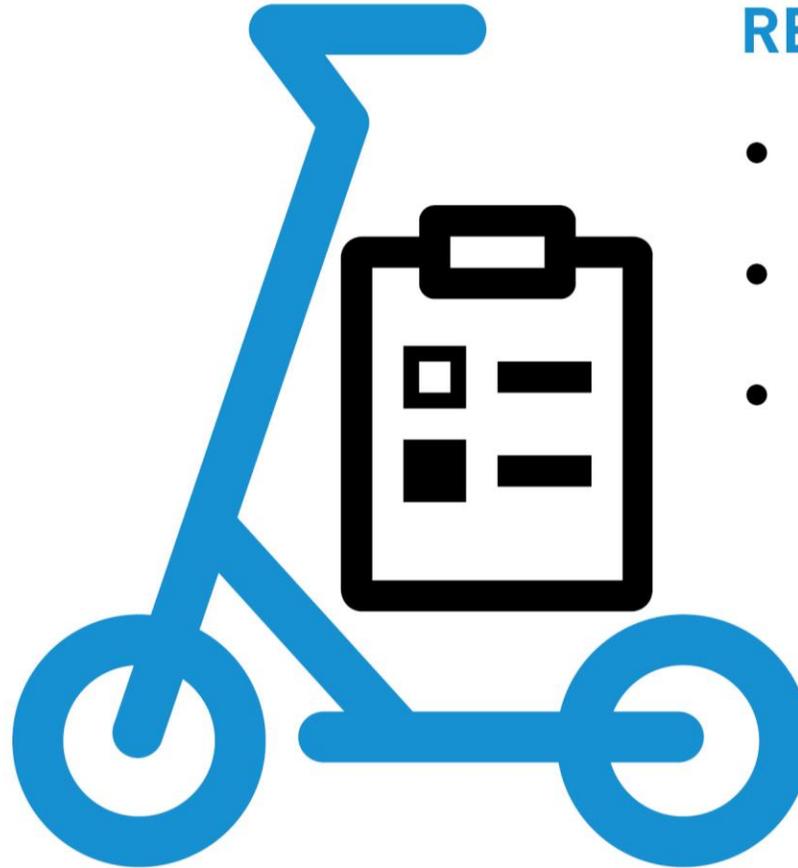
Scooter pilot objectives

- 1 Reduce Seattle's carbon emissions by providing active, low-carbon, and congestion-reducing mobility options
- 2 Ensure accessibility for and expand use by Black and Indigenous people, non-Black people of color, low-income people, immigrants and refugees, and people with limited English proficiency
- 3 Be safe and advance our Vision Zero objectives
- 4 Ensure sidewalks are safe and accessible for people of all ages and abilities
- 5 Provide accessible and adaptive mobility options and expand use by people with disabilities

Scooter pilot management

PROGRAM MANAGEMENT

- Digital tools
- Vendor relationships
- Infrastructure
- Evaluation and continuous improvement
- Outreach and engagement
- Access and affordability



REGULATORY OVERSIGHT

- Permit conditions
- Compliance
- Code changes

Evaluation process

Evaluated scooter pilot from October 1, 2020, through September 30, 2021, using many data sources:

- Trip level data feeds from vendors
- Aggregated membership reports from vendors
- Citywide device parking audits collected by SDOT staff
- User survey with 4,141 respondents, about safety and rider behavior, November 2021
- Police reports
- Constituent feedback

Scooter share by the numbers

1,489,985



Total scooter trips in Seattle from 10/20-9/21

2,646



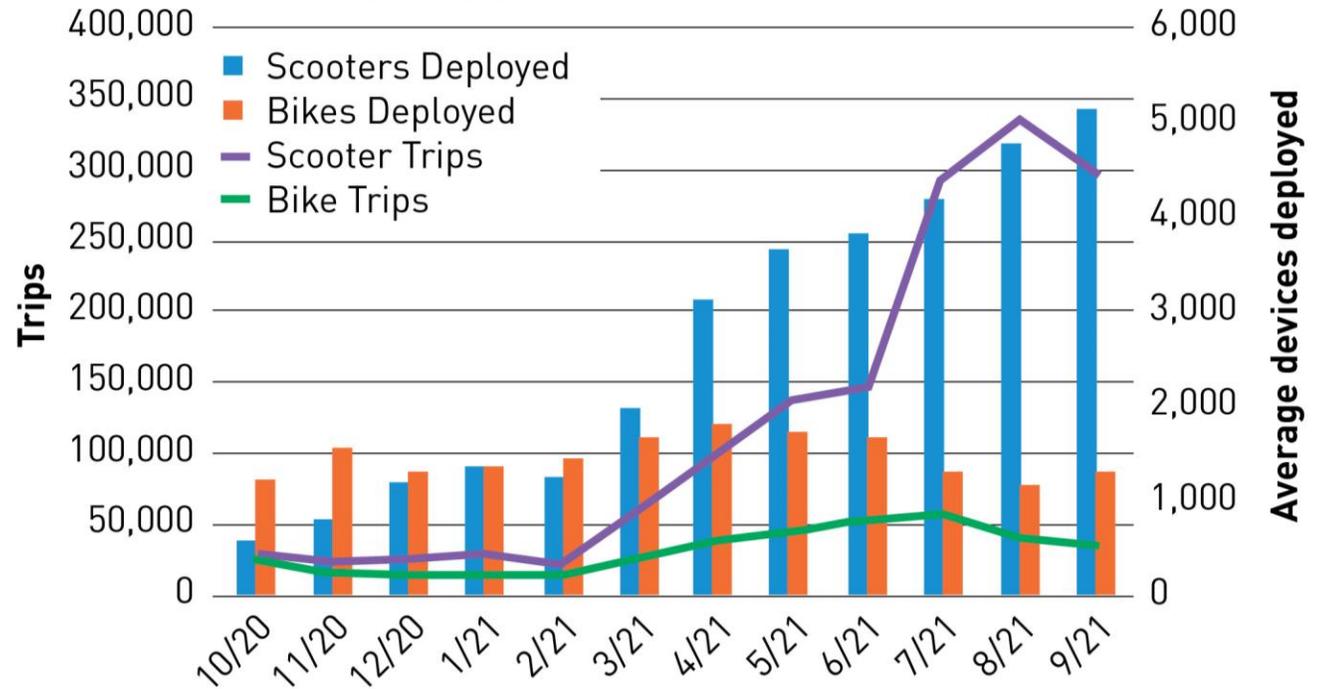
Average scooters deployed per day

5,134



Peak daily scooter deployment in 9/21

TRIPS AND DEVICES BY MONTH



Scooter share by the numbers

The average scooter trip was



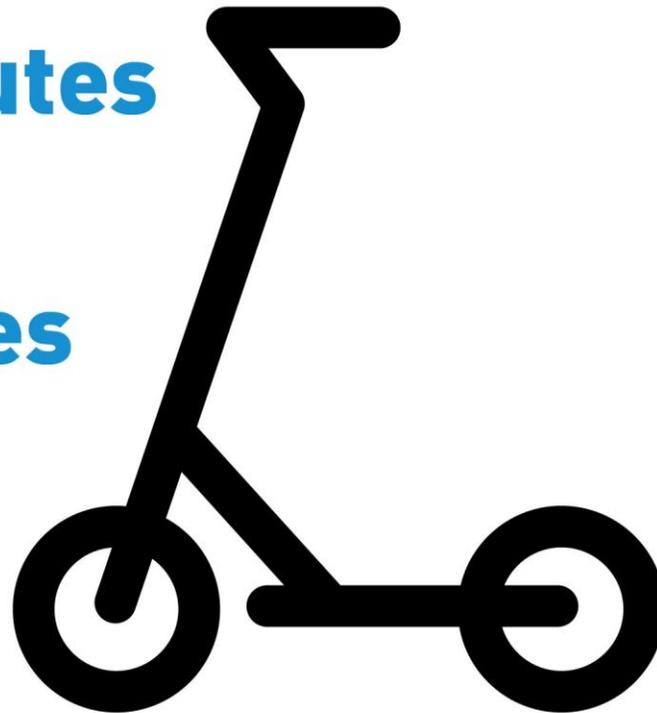
15 minutes



1.4 miles



\$6.63



How many people ride?

	Total Unique Riders
 Lime	262,825
LINK by Superpedestrian	121,317
 WHEELS	78,326
SPIN	22,965

Average of around 3 trips per user over the pilot period

User survey

- We conducted a survey in November 2021 targeted to people who had used scooter share or bike share
- Survey was promoted through vendor emails and apps and was voluntary
- 4,141 respondents reported having used scooters
- This informs us about who uses scooters, as well as their experiences and behaviors



Who is using scooter share?

15%

of scooter users identified as having a disability

65%

of users identified as men

33%

as women

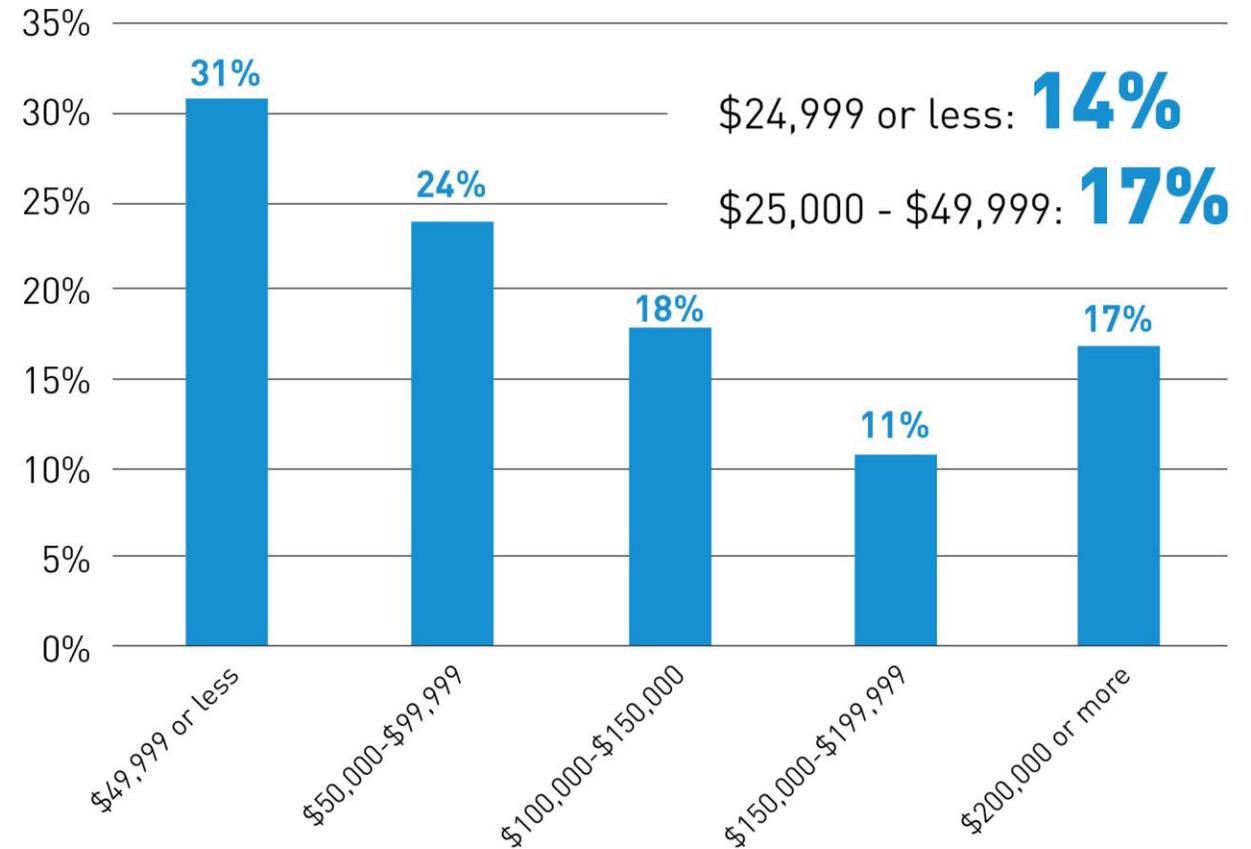
4%

as another gender (could select more than one)

Racial demographics generally align with Seattle's demographics

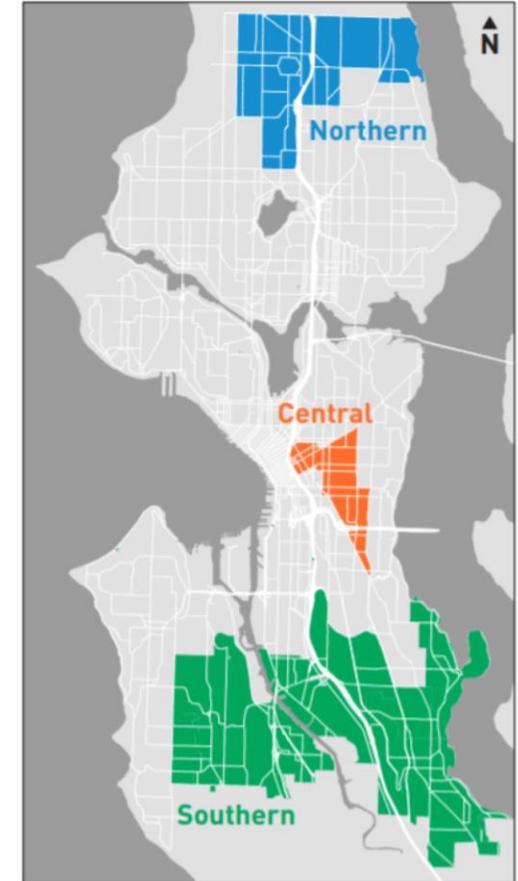


USERS BY TOTAL HOUSEHOLD INCOME



Equity: Geographic deployment

- Vendors are required to deploy 10% of their fleet to the equity focus areas on the map
- Overall, 15.5% of devices were deployed in equity areas during the pilot



Equity: Required reduced-fare plan usage

Vendors are required to offer reduced fare plans. The structure of the fee varies by vendor with a required cap of \$1.50 per hour.

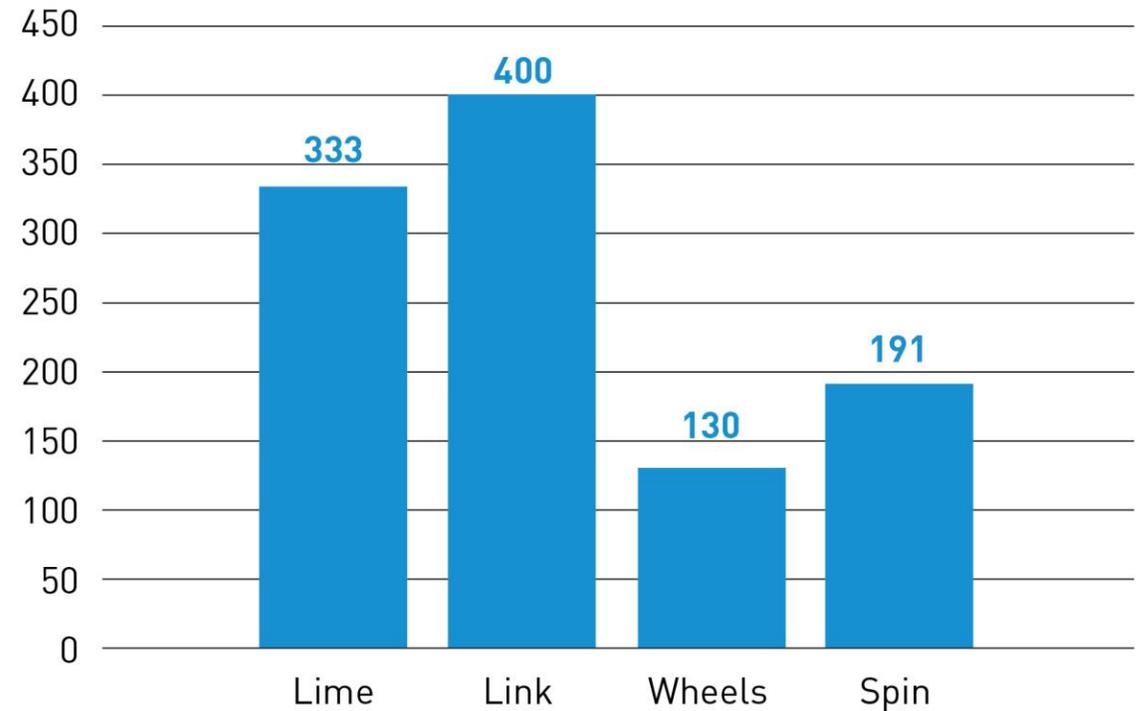
Reduced-fare riders took **67,706** trips

64 trips per rider for the year, compared to just 3 trips per rider overall

4.5% of total trips were taken using a reduced-fare plan



REDUCED FARE PROGRAM UNIQUE RIDERS



Equity: Outreach with community partners

- We resourced BIPOC community organizations to conduct focus groups
- Some barriers identified:
 - Lack of knowledge about how to use
 - Access to helmets, safe places to ride
 - Affordability and knowledge about reduced fares
 - Language access needs
- Held targeted outreach events, staffed by SDOT and vendors
 - Included helmet giveaways, hands-on instruction for first-time riders, and sign-ups for reduced-fare plans



APALA outreach and demonstration event on 10/30/2021

Equity: Adaptive cycling and accessibility

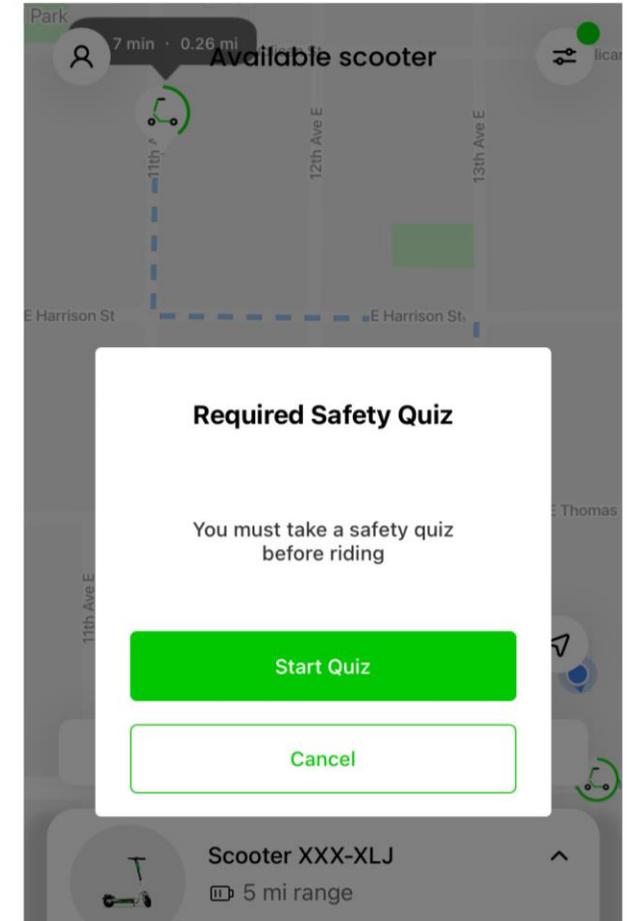
- Outdoors for All
 - Permit fees were used to expand existing adaptive cycle program to increase options for people with disabilities
 - Council budget added additional funding to expand this program further in 2022
- Seated scooter option
 - Pilot prioritized a seated scooter offering (Wheels) to offer an option that may be more accessible for certain users



Emily gets ready to try an adaptive bike (right). Image courtesy Outdoors for All.

Safety: Rider experience

- Vendors implemented numerous safety requirements:
 - Reduced speeds for first ride; riding and parking behavior quizzes
- City implemented helmet requirements
 - However, in survey, 70% of riders reported never or almost never wearing a helmet
- City disallowed sidewalk riding in most circumstances
 - 73% of surveyed users rode most of their last trip in bike lanes, in the street, or on bike trails and paths
 - 22% rode on the sidewalk for most of their trip
 - 69% of users said they chose to ride where they felt safest



Safety: Injuries and fatalities

POLICE REPORTS

- 17 scooter-related collisions filed as police reports (0.2% of over 8,000 police reports filed during the pilot period)
- All injuries reported to the police involved a collision with a motor vehicle

USER SURVEY

- 2.6% of scooter users surveyed reported experiencing an injury for which they sought medical attention

POLICE REPORT DATA

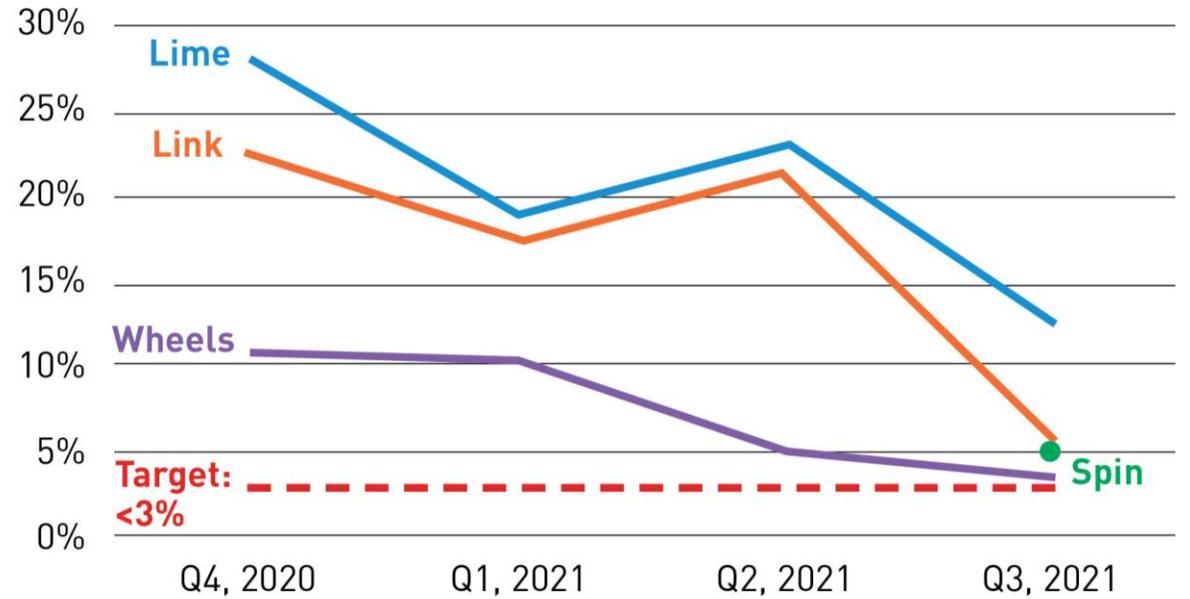
Injury Reported	Number of Collisions
No injury	1
Minor injury	10
Serious injury	5
Fatality	1

Safety: Keeping sidewalks clear

- Team conducted in-person parking compliance audits on 68 days during pilot period, touching over 4,000 devices
- Designated parking areas (e.g. Alki) can be successful but not always scalable across the city
- Users appear to be learning and improving over time



OBSTRUCTION HAZARDS BY VENDOR BY QUARTER



Climate: Zero emission options

- 100% of shared micromobility devices are zero emission
- There were over 2.2 million miles traveled on scooters in the pilot year
- Over 50% of trips start and/or end near a frequent transit stop
- 24% of scooter users surveyed said they would have driven a personal vehicle for their last trip, and 30% said they would have used ridehail or taxi, if they hadn't used a scooter



Scooters at Roosevelt Light Rail Station

Key takeaways - how the pilot met our goals

- People are riding scooters for many different trip types, connecting to transit, and replacing car trips, even in a pandemic
- We need to continue to work to expand who has access to, feels comfortable with, and can afford scooter trips
- While there have been some injuries and collisions, we will continue to improve education about safety for users and non-users, including drivers
- Device parking improved over time, but we can still do more to ensure scooters aren't obstructing sidewalks, as well as reducing how much people ride on sidewalks
- Scooters provided a complementary climate-friendly option to the existing bikeshare program

Next Steps for 2022

- Extend permits through Q1 2022, then continue the scooter share program in 2022 by way of a competitive application and permitting process
- Continue robust audit program for parking obstructions and add sidewalk riding data collection
- Expand public awareness campaigns to improve sidewalk riding, parking behavior, and helmet use
- Continue to improve education and outreach to increase use in equity focus communities
- Evaluate ways to improve affordability for users and ensure financial sustainability of program
- Expand our partnership with Outdoors for All – thanks to new funds in the 2022 budget



Questions about scooter share?

Becky Edmonds

Micromobility Program Manager
Seattle Department of Transportation

becky.edmonds@seattle.gov

206.684.5104

New and Emerging Mobility Technology Update

Autonomous Vehicles - AVs (Active effort)

- Engaging in statewide, regional, and local conversations about AV testing and rules
- Coordinating with City of Bellevue on regional considerations for AV readiness as vehicles will operate cross-jurisdictionally
- Collaborating with other U.S. cities on best practices for AV management and regulation
- Amazon-owned Zoox completed initial phase of small-scale AV testing in Seattle in November 2021



New and Emerging Mobility Technology Update

Cargo Bikes (Active effort)

- Partnered with the University of Washington's Urban Freight Lab to launch first US-based microhub featuring electric cargo bike storage for deliveries
- Plans to advance efforts around commercial cargo bike loading and riding in 2022



Personal Delivery Devices - PDDs (Monitoring)

- State legislation passed in 2019 allowing these devices to travel on sidewalks in Washington State
- Minimal commercial testing or deployments in Washington but growing rapidly in California and other states



Drones and Urban Air Mobility -UAM (Monitoring)

- Minimal commercial testing or deployments nationwide but growing interest from other cities and regionally in Washington



Questions about new mobility?

Kelly Rula

New Mobility Manager

Seattle Department of Transportation

kelly.rula@seattle.gov

206.549.7579