

E-Scooters: Legislative Briefing

Office of Councilmember Chris Hinds

1

Agenda

- **Introduction**
- Scooter Benefits
- Scooter Challenges
- Discussion 1: Where people ride scooters
- Discussion 2: Where people place scooters
- Discussion 3: Fine System
- Conclusion

Purpose of presentation

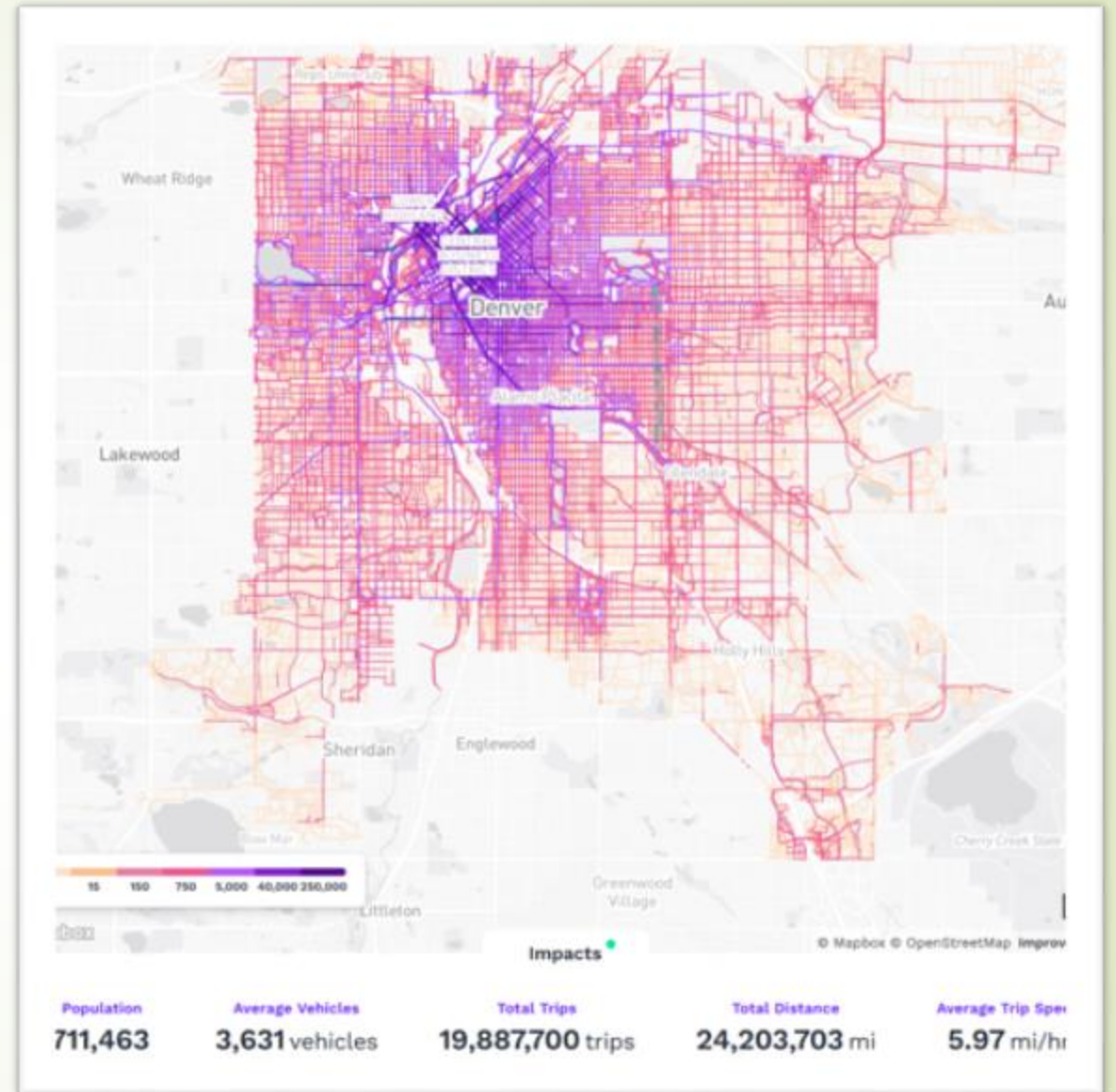
- ▶ This presentation is meant as an overview of scooter policies around the nation that we could potentially implement
- ▶ This presentation does not come with draft language
- ▶ This presentation does not make explicit recommendations
- ▶ Feedback is valuable and will inform what's next
- ▶ This presentation does include some stakeholder input and some input from DOTI, Lyft, and Lime, but more input is needed from each before we draft legislation

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Scooter Benefits

- According to Denver's [Micromobility Dashboard](#), riders have taken more than 20 million trips since electric scooters were introduced in 2018
- A DOTI survey shows 33% of scooter trips replaced car trips



Note: Q2 2024 saw nearly 20,000 scooter trips each day in Denver

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Scooter Challenges

- Pedestrians feel unsafe on sidewalks
 - “Reckless” scooter riders
 - Scooters going 15mph
 - Scooter “litter”
- Riders feel unsafe on streets
- 3 of every 5 crashes occur on the sidewalk (even when riding on the sidewalk is illegal)
- Denver Health: scooters create 3.9 ER visits every day
 - Total cost: \$65,997,883
 - Daily cost: \$62,145

Data between 1/1/21 – 11/30/23



Scooter Challenges

Users have limited awareness of rights and responsibilities

- City first said “No” to scooters
- Then, scooters were classified as “toys” to be used on sidewalks
- Shared Micromobility Pilot Program launched in 2018
- In 2021, City Council approved the City to move forward with licensing agreements for two vendors

Insufficient education: while there was discussion about a city marketing campaign regarding scooters, that did not happen.



Scooter Challenges

Insufficient enforcement

- ROWE doesn't cite moving vehicles
- DOTI has issued 0 citations to scooter vendors
- DPD has issued <10 citations



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Option: Geofencing

Denver geofencing:

- ▶ 16th Street Mall
- ▶ McGregor Square

Limitation:

- ▶ Reliant on GPS which bounces off buildings

Option: Require vendors make their riders comply

- San Diego: require vendors to ensure riders comply

(17) utilize in-application enforcement measures to identify negative *shared mobility device* user behavior patterns and hold users accountable for such behavior through a system of fines and termination of user privileges; and

(d) Through *geofencing* or similar technology, a *provider* shall prevent any *motorized scooters* and *motorized bicycles* in the *provider's fleet* from being operated, locked, parked, or ending a ride on a City sidewalk, except for shared use bikes or e-bikes that can lock to existing City bike racks. *Providers* shall reduce the speed of any *motorized scooters* and *motorized bicycles* in its *fleet* to three miles per hour on all City sidewalks.

The San Francisco Standard

Politics & Policy Business Opinion Life Food & Drink Arts & I

And it points to San Diego as an example for how SF could respond. Earlier this summer, the SoCal city revoked permitting for scooter companies that failed to install geofencing, which de-activates the vehicles when they're on sidewalks.

Also: San Francisco, Seattle, Washington DC

Option: scooters must have sidewalk detection

City	Requirement
Chicago	Sidewalk detection technology required
San Diego	Requires "geofencing or similar technology" to limit scooters to 3 mph on city sidewalks "to effectuate the prohibition" of riding on sidewalks
San Francisco	Sidewalk detection technology required
San Jose	Sidewalk detection technology required; Operators must participate in evaluation process to demonstrate effectiveness of the technology

Note: sidewalk detection uses different technology than geofencing does

Note on sidewalk detection technology

Once sidewalk detection technology identifies that the rider is on the sidewalk, cities/vendors can address that behavior in many ways:

- Slow the scooter (San Diego: slow to 3mph)
- (Safely) stop the scooter entirely
- Issue a warning noise/beep
- Increase the cost of that segment of the ride
- Progressive discipline (Cincinnati: fines, then suspension, then account termination)
- Mandatory notification/suspension rules (Portland: must notify rider of non-compliant behavior, and vendor must terminate rider after 3 violations)

Note: a city could require regular reporting of areas of significant non-compliance so urban designers can analyze those locations

Other Options:

- Require scooter vendors to educate riders
- The government (city/state) educates riders
- Denver can enforce laws (no riding on the sidewalk, etc.)
- Do nothing

* - some vendors will only comply when a regulatory framework compels compliance

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Where do people place scooters?

- ▶ While there are contractual requirements for scooter vendors to encourage riders to place scooters in certain locations, it doesn't always happen
 - ▶ Vendors are contractually required to install scooter corrals

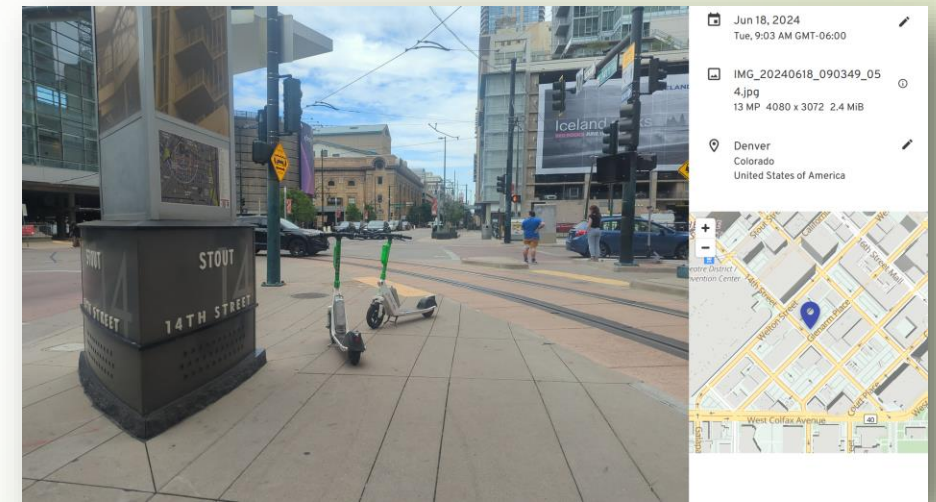
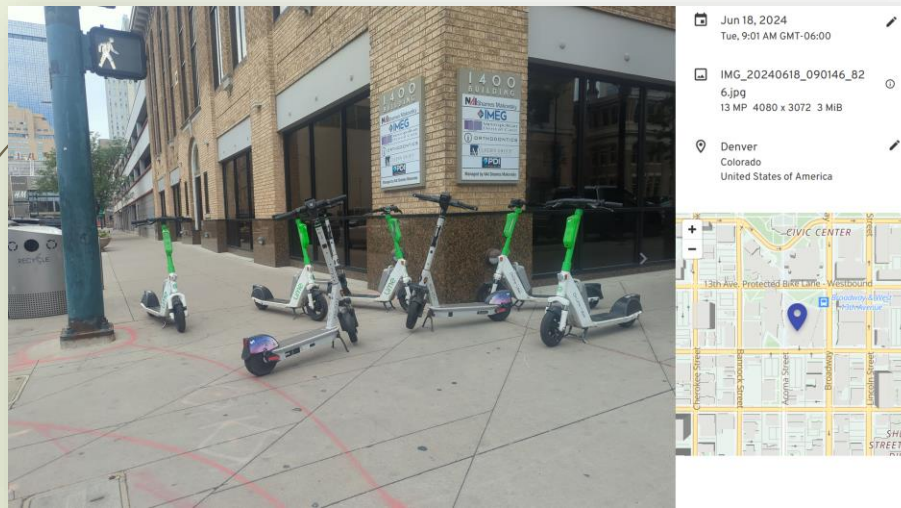
3. Lime shall use commercially reasonable efforts to install 100 Corrals within 6 months of Initial Deployment and may expand to 375 Corrals thereafter. Within 30 days of Initial Deployment, Lime will submit 200 proposed Corral locations to City staff. City staff will serve as an arbiter between Lime and the other selected operator and approve the location of Docking Stations and/or Corrals for each operator, as applicable. Lime may request to increase the number of Corrals, which expansion may be permitted by the Department as conditions warrant.

- ▶ Vendors are contractually required to keep the Right of Way free

5. Dockless Vehicles parked in the public right of way by Lime must adhere the following guidelines, including that they must:

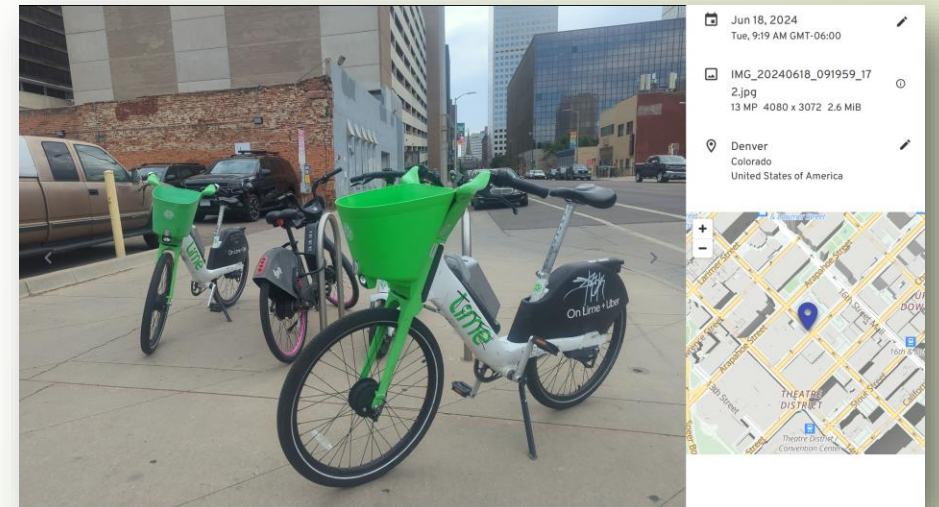
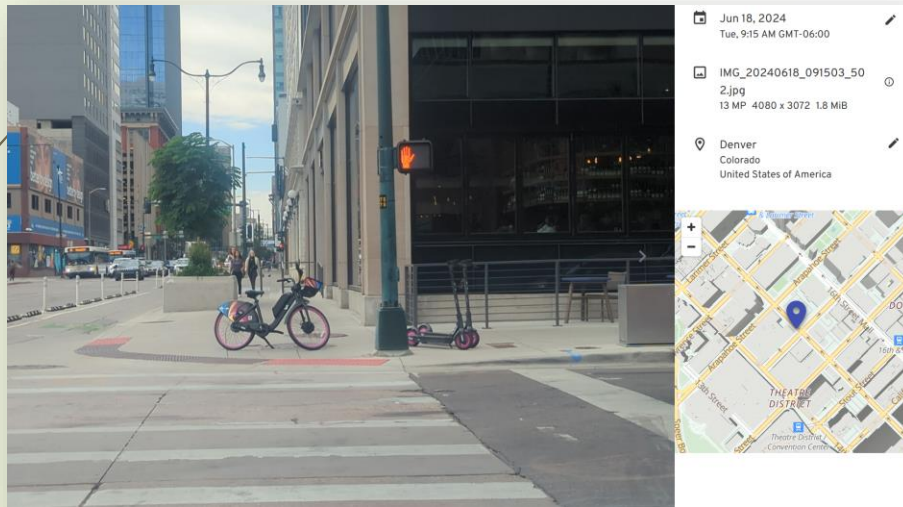
- a. not block the movements of pedestrians and always provide 5' clear width;
- b. be parked against buildings (not impeding pedestrian access) or at least 1.5' from the back of curb/flowline;
- c. Preserve pedestrian sight triangles at intersections, alleys, and driveways as well as access to bus/LRT operations at stops (ex. 96in x 60in clear at bus stops for ADA ramp deployment);
- d. be upright when parked;
- e. not impede access to utilities, or access from the street to the sidewalk;
- f. leave at least 8 feet of clear walkway on sidewalks when parked on arterial streets where possible;
- g. provide additional clear width in high pedestrian areas if required, as determined by DOTI; and
- h. follow all Tier 1 Encroachment guidelines for placement and access.

Where people place scooters



Photos taken on 6/18/24 between 9:01 and 9:19

Where people place scooters



Photos taken on 6/18/24 between 9:01 and 9:19

Current contracts

Vendor contracts require installation of docking stations

- 200 proposed locations by 6/16/21
- 100 installed locations by 11/16/21

Per contract, app must encourage riders to end trip in preferred parking locations

3. Lime shall use commercially reasonable efforts to install 100 Corrals within 6 months of Initial Deployment and may expand to 375 Corrals thereafter. Within 30 days of Initial Deployment, Lime will submit 200 proposed Corral locations to City staff. City staff will serve as an arbiter between Lime and the other selected operator and approve the location of Docking Stations and/or Corrals for each operator, as applicable. Lime may request to increase the number of Corrals, which expansion may be permitted by the Department as conditions warrant.
4. Lime will install 4 Juice Bar charging stations in the heavily trafficked locations to decrease traffic and pollution (See Exhibit C for specifications).
5. All Corrals shall be physically marked to show riders an actual physical location out-of-app when Lime's mobile app encourages riders to end their trips in preferred parking locations. Lime will use commercially reasonable efforts to work with its Juice Bar vendor to ensure that Juice Bars have dynamic signage with instructions on how to use the system, information about how to enroll in Lime Access, customer service contact information, and Denver community events.
6. Juice Bars shall include a visible logo of the City and County of Denver of a size no smaller than 6 inches by 6 inches. The Department will provide Lime with the approved logo.
7. In addition to physical signage, the Corrals shall also be marked with a "P" in the rider app.

Option: Undocked parking? charge riders extra

Chicago:

Require docking technology for all vendors, financially encourage using docks. Small surcharge to riders for not using docks, \$25 surcharge to rider for blocking pathway, sidewalk, or ramp.

How to park

Park for free at Divvy stations

Insert the front of the scooter into the dock. Wait for the green light.

At Divvy e-stations, lock your scooter to the rack with the cable.

Park outside Divvy stations

Lock your scooter to a public bike rack, light pole, or signpost. Parking outside Divvy stations is an extra \$1.20 for members and \$2.40 for non-members.

Don't lock scooters to private property or trees. Avoid blocking pathways, sidewalks, or ramps. Parking violations result in a \$25 fee.

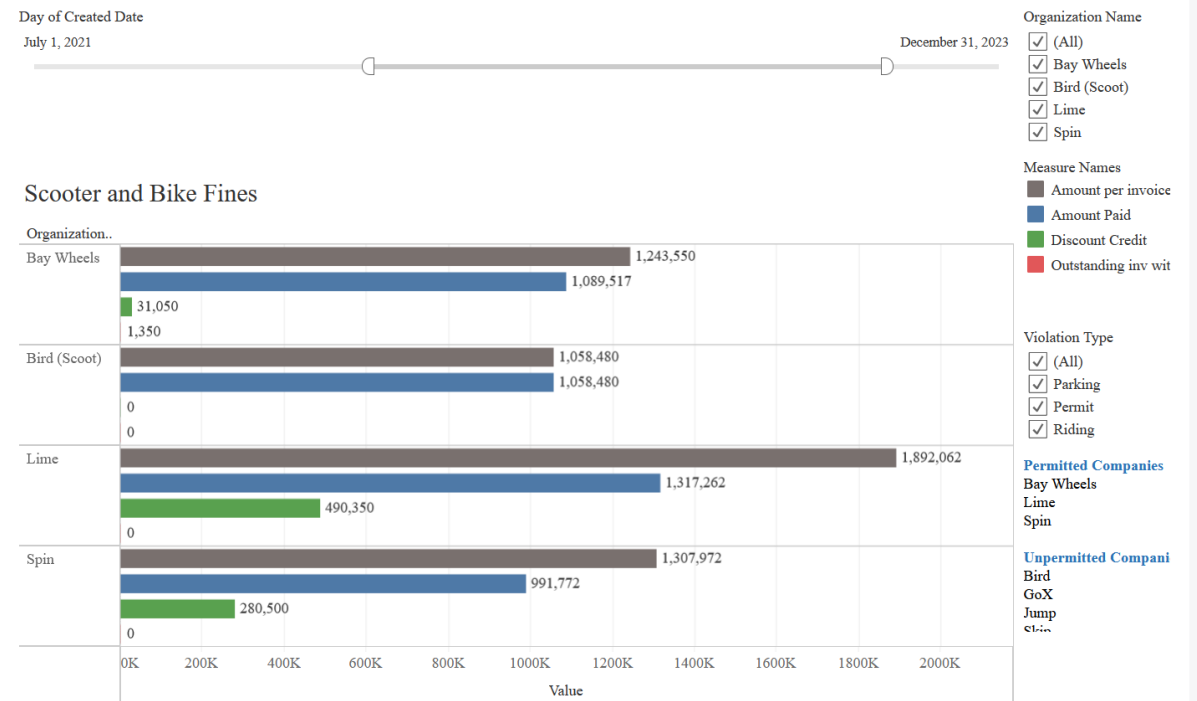
Source: <https://divvybikes.com/how-it-works>

Option: Undocked parking? charge vendors

San Francisco:

SFMTA Investigators issue a \$150 citation for each improperly parked scooter.

In order to ensure that scooters are not cluttering the sidewalk and causing an impediment to older adults, people with disabilities and other pedestrians, SFMTA, in collaboration with the Mayor's Office on Disability, has established clear [parking requirements](#). SFMTA Investigators issue a \$150 citation for each improperly parked scooter. Like all entities that are issued citations, Scooter Share permittees are afforded due process and can appeal the citations before a neutral hearing officer.



Source: <https://www.sfmta.com/shared-mobility-fines-and-fees>

Option: require docked parking

Washington DC:

“Shared dockless bicycles and scooters are required to be locked to a bike rack or other fixed object when not in use....

[d]ockless bike and scooter riders who park vehicles incorrectly may be subject to fines and penalties from the dockless vehicle provider.”

Better Bike and Scooter Parking Behavior

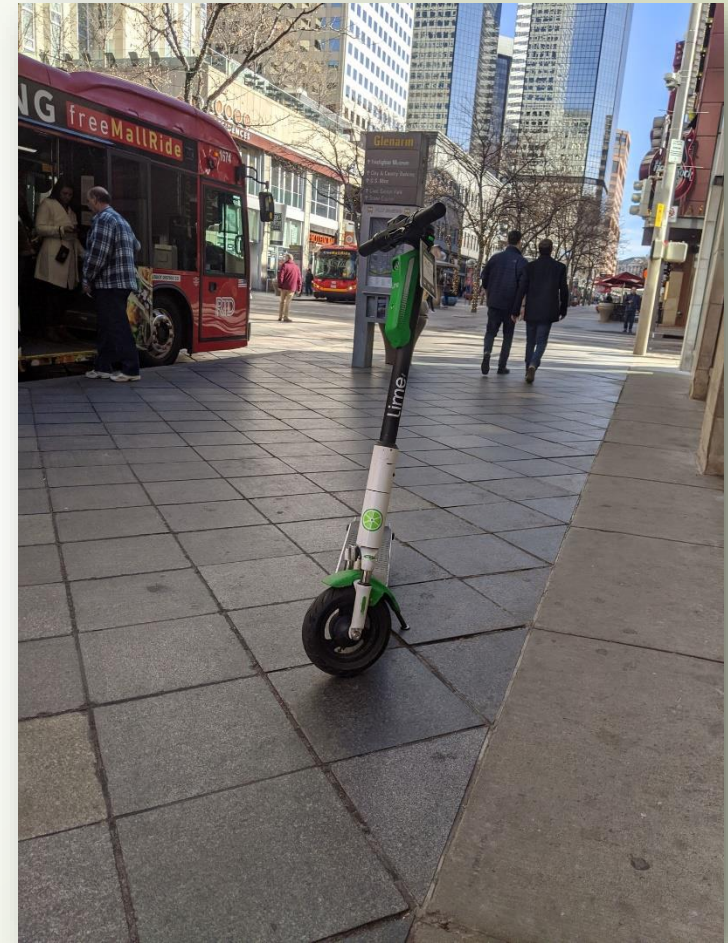
Shared dockless bicycles and scooters are required to be locked to a bike rack or other fixed object when not in use. Dockless bikes and scooters that are parked on private property or block sidewalks should be reported to 311 under “Dockless Vehicle Complaint.” Dockless bike and scooter riders who park vehicles incorrectly may be subject to fines and penalties from the dockless vehicle provider. Dockless vehicle providers are required by District regulation to educate riders on the correct way to park dockless vehicles.

Compromise: New York City has “mandatory corral zones” and “free floating parking” areas

Option: audit of end ride photos

Riders are required to take a photo of the micromobility device when the ride is complete.

An entity should conduct an audit of those photos to determine if end of ride photos correlate with the report of people improperly parking micromobility devices. That entity could be DOTI, the Auditor's office, an external firm, or something else.



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Denver currently has no fine system

Risk:

A large risk is that there's no way – short of reducing a scooter vendor's fleet – to ensure a vendor remains compliant with the agreement it signed. Even then, the city's authority to reduce a vendor's fleet is only after certain criteria is met.

2. The Department will impose targeted, in-person outreach activities and/or maximum Electric Scooter fleet size reductions under the following conditions:
 - a. Demonstrating wanton disregard for the Maximum Electric Scooter Fleet Size, such as materially over-Deploying Electric Scooters intentionally during periods of peak demand
 - i. First occurrence - 10% reduction for 30 days
 - ii. Second occurrence within 180-day period – 25% reduction for 30 days
 - iii. Third occurrence within 365-day period – suspension of this License for 30 days
 - b. Violations of Operator deployment requirements set forth in Section B. “Dockless Unit Deployment and

n Envelope ID: 28D15D88-C3D3-4A85-8592-2E5EDC48107D

Parking Requirements” of this Scope of Work (as determined and documented by Department staff during an in-person inspection)

- i. Three (3) Department-documented occurrences within 30-day period – Operator shall conduct ten (10) hours of targeted, in-person outreach in the area(s) where the violation(s) occurred. The subject of the outreach shall be proper riding and parking behavior for End Users and must take place within 30-days of receiving notification of violation from the Department.
 - ii. 10 Department-documented occurrences within a 90-day period – 10% reduction for 30 days
 - iii. 25 Department-documented occurrences within a 180-day period – suspension of this License for 30 days
- c. Violations of requirements set forth in Section H (3). “Vehicle Service Requirements” of this Scope of Work that result in a materially unsafe rentable vehicle, including non-functioning braking/steering mechanism, or structural damage (as determined and documented by Department staff during an in-person inspection)
 - i. Three (3) Department-documented occurrences within 30-day period – Operator shall conduct ten (10) hours of targeted, in-person outreach in the areas where the violations occurred. The subject of the outreach shall be proper riding and parking behavior for End Users and must take place within 30-days of receiving notification of violation from the Department.
 - ii. 10 Department-documented occurrences within a 90-day period – 10% reduction for 30 days
 - iii. 25 Department-documented occurrences within a 180-day period – suspension of this License for 30 days
 - d. Willful non-compliance with the requirements set forth in Section L. “Privacy, Data Reporting and Sharing.”
 - i. First occurrence - 10% reduction for 30 days
 - ii. Second occurrence – 25% reduction for 30 days
 - iii. Third occurrence – suspension of this License for 30 days

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- **Conclusion: Questions?**

E-Scooters: Appendix

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Current contracts

Signed 5/16/21 for 5 years

Insufficient enforcement

- ROWE doesn't cite moving vehicles
- DOTI has issued 0 citations to scooter vendors
- DPD has issued <10 citations
- Residents regularly report insufficient enforcement by scooter vendors, including scooter agents using sidewalks to transport scooters

- I. **Lime's Personal Property:** Lime shall take reasonable measures to secure its Personal Property (defined below) located on the right-of-way from public access or tampering and for the protection of public health and environment during the Work. The City assumes no liability for public misconduct, theft or vandalism. Upon the completion of any Work, Lime shall promptly remove from the right-of-way all equipment, vehicles (except Dockless Vehicles, as that term is defined in the Scope of Work), temporary structures, road base, excess soil and rocks, chemicals, signs, barriers, materials, supplies, construction debris, and waste brought on site or generated by Lime on site ("Personal Property") and shall do so in compliance with federal, state and local regulatory requirements, standards, and guidelines. Alternatively, if Lime fails to remove any item of Personal Property as provided herein, the City may perform such removal and Lime shall promptly reimburse the City for all reasonable costs incurred.

Lime shall make reasonable efforts to ensure that Dockless Vehicles do not materially impede the safety of and accessibility for pedestrians and those who use mobility devices such as wheelchairs.

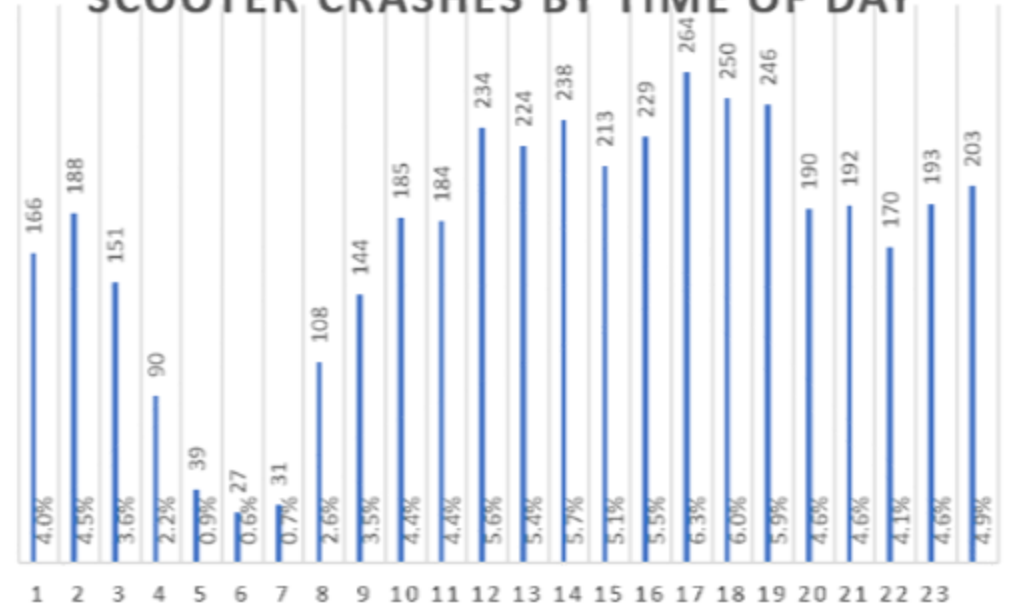
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Scooter Challenges

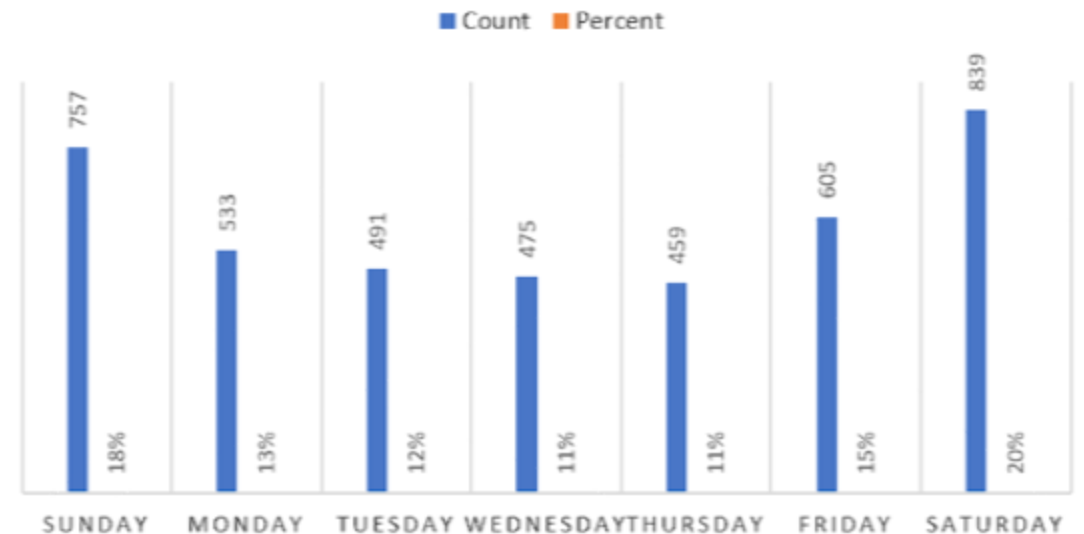
- Denver Health reports an average of 3.9 visits a day to their Emergency Department due to scooters

4159 visits total between January 1, 2021 and November 30, 2023. That's 4159 visits over 1062 days.

SCOOTER CRASHES BY TIME OF DAY



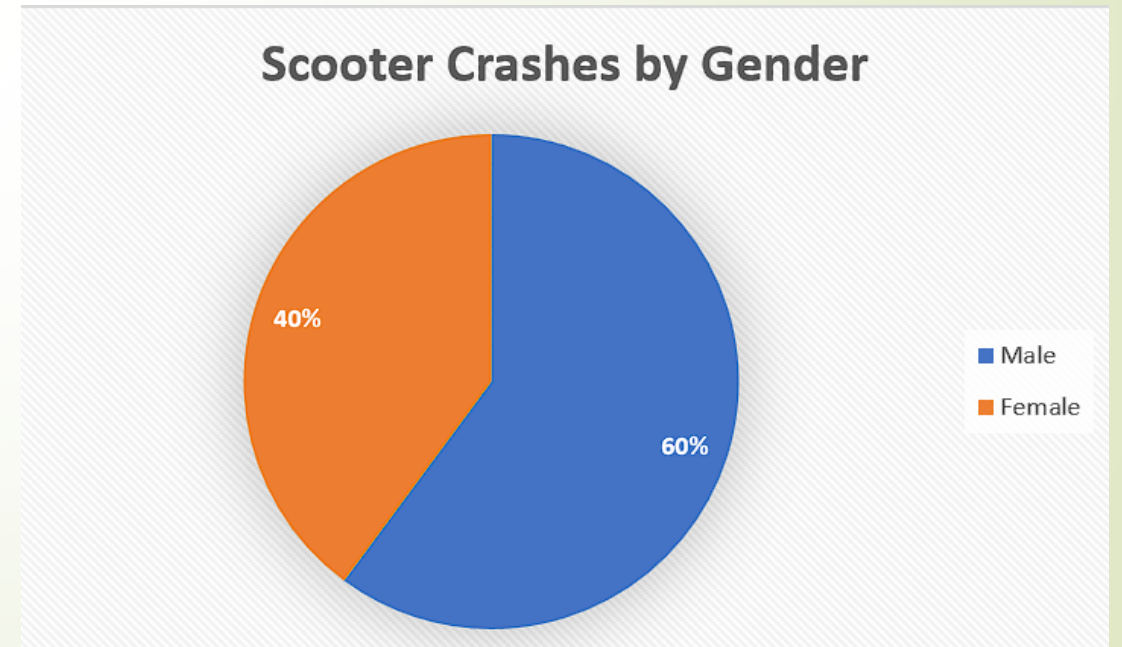
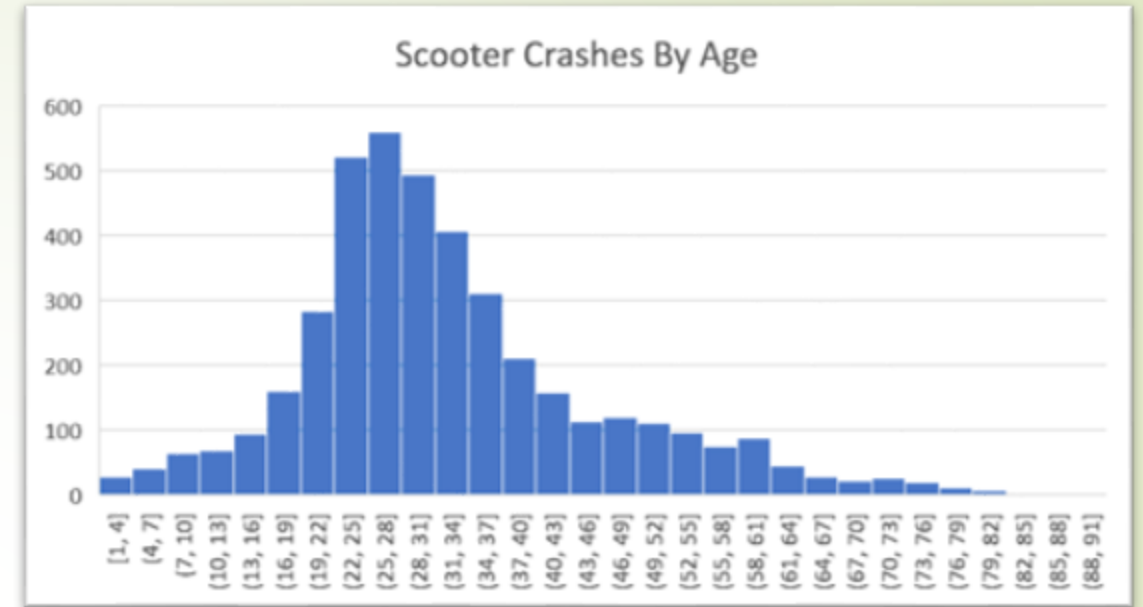
SCOOTER CRASHES BY DAY OF WEEK



Scooter Challenges

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Can we pass new scooter laws?

Vendors must comply with all laws, including Denver's

- B. Compliance with Laws:** Lime shall provide or obtain and maintain all notices, permits, licenses, consents, permissions, and approvals required by any governmental or quasi-governmental entity prior to commencing the Work or any activities in the right-of-way. Lime hereby acknowledges that any and all activity on or about the right-of-way shall require Lime to obtain in advance and comply with any and all permitting requirements for use of City right-of-way. Any required manifest, approval, license or permit shall be issued in Lime's name. Lime hereby acknowledges and agrees that it is bound by and shall comply with all applicable federal, state, and local laws, rules, regulations, ordinances, and policies, and the terms and conditions set forth in the Plans and all other applicable plans, specifications, permits, permissions, consents, and approvals, including, without limitation, the Rules and Regulations for Encroachment Permits, in connection with the Work and any activity undertaken by or on behalf of Lime in the right-of-way or on any other City-owned property.

Do these contracts apply to everyone?

While some people might be independent contractors, they are all covered under this agreement.

- F. **Lime and its Contractors:** All contractors, subcontractors, consultants, suppliers, laborers and agents retained to perform some portion of the Work or to undertake any activities on or about the right-of-way shall be regarded as being the “Lime” under this License, shall be subject to the terms and conditions of this License, and shall be identified (by name, address, telephone number, and email address) promptly upon a written request from the City Representative, and this contact list shall be updated as needed. At no time shall Lime, its officials, employees, contractors, subcontractors, consultants, suppliers, laborers or agents be regarded as working for the City in any capacity nor shall they be regarded in any manner as being employees or contractors of the City.

Some cities prohibit scooters at night, and some require a sobriety test

Many scooter crashes happen at night (nearly 50% nationally), so some cities prohibit night riding, and others require a sobriety test



Nearly 50% of electric scooter accidents happen between 10pm and 6am. Are you prepared to beat the odds?

MULTIMODALITY & MICROMOBILITY

In-app drink-riding test launched for e-scooter riders



By ROISIN REIDY — August 19, 2022 2 Mins Read

Speed limits for other cities

Most cities agree that 15mph is a good citywide limit. There are exceptions, including in Denver (max speed on sidewalks is limited to 6mph by law)

Speed Limit	City
10 mph	DC
15 mph	Atlanta, Chicago, LA, San Francisco, Phoenix, Nashville, Miami, Salt Lake, Minneapolis, Charlotte, Seattle, Philadelphia, New Orleans
20 mph	Dallas, Houston

- **Austin:** 20mph on bike lanes, 8mph on sidewalks
- **San Diego:** 8mph in high-pedestrian traffic areas, 15mph elsewhere
- **Denver:** 15mph, 6mph on sidewalks*

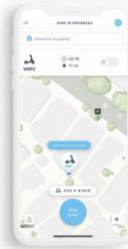
* - It is difficult to legally qualify to use a scooter on the sidewalk in Denver

SPIN's approach to scooter parking

II. Precision Parking (Virtual Parking Solution powered by Google)

To more precisely enforce proper parking, we created our new Visual Parking System (VPS) verification tool developed in partnership with Google. This parking verification method uses the phone camera to capture the surrounding environment, similar to taking a panoramic photo. Based on real-world testing, we find that **VPS-based parking is 80 times more accurate than traditional GPS or geofencing alone**. Specifically, it **validates parking compliance within 10 centimeters or less** to verify correct parking within approved corrals or designated parking areas.

How It Works | Similar to the functionality used by the Pokemon Go game, our new VPS technology uses 3D city mapping and sophisticated AI to direct riders to proper parking locations and confirm in real-time whether or not a device is parked correctly within a designated parking spot before allowing riders to end their trips. For a simple 4-step overview, please see the visuals below.



1. In-App Map:

We feature approved parking locations on our in-app map and mark them with a "P" icon for riders to locate.



2. Scan Surroundings:

Riders are then instructed to take a photo scan of their device and nearby buildings. If the phone is not tilted high enough, an on-screen indicator alerts the rider to adjust their position.



3. Location Guidance:

If the rider is not in a designated parking space, a message appears asking them to relocate to an approved parking location.

AR Parking Marker: Riders see a blue bubble in augmented reality that hovers on top of the virtual parking area to help them locate it and park correctly.



4. Approved Location:

Once the system determines the device is parked in an approved location, the rider can end their ride.

Credit: Raija Gershberg, General Manager, SPIN

Scooters, sidewalks, and Denver

Sec. 54-619. - Speed.



- (a) It is unlawful for any person to operate an electric scooter on a sidewalk at a speed greater than six (6) miles per hour.

Sec. 54-621. - Riding on sidewalks.



- (a) Riding an electric scooter upon or along sidewalks, whether on public property or private property opened for use by the general public, is unlawful except:
 - (1) When the operator or rider thereof is a uniformed city employee or uniformed state employee or uniformed federal employee working as part of his or her official duties and riding a marked or unmarked official police electric scooter or while engaged in the discharge of his or her official duties; or
 - (2) Where the sidewalk is part of a designated bicycle route; or
 - (3) When the operator or rider thereof is preparing to dismount and park the electric scooter at a location on the block on which the electric scooter is being operated, or the operator has just mounted and has not yet crossed a street or alley.
- (b) An electric scooter operator must yield the right-of-way to pedestrians on the sidewalk.

(Ord. No. 784-19, § 4, 8-26-19)

DOTI can implement recommendations at any time

1. Lime's Electric Scooters shall not exceed a speed of 15 mph on a paved level surface when powered solely by the electric motor. Limitations on top speed will be re-evaluated on a quarterly basis by the Department. The Department reserves the right to revise the top speed based on collision and injury data, but will work in good faith with Lime to understand the impacts that changing the top speed would have upon the program.
2. Lime shall be required to establish additional geofenced restricted areas upon seven (7) days' written notice from the Department.
3. Lime will be required to include an in-app explanation of geofencing to users agreed upon by the City and Lime that includes both area designations and implications of entering a restricted area.
5. The City will provide Lime with GIS layers indicating where the Vehicles can and cannot be operated and parked, as well as where reduced speeds will be required.
3. Vehicles shall have visible language notifying the End User that:
 - a. Users must ride vehicles legally in the same manner as a personal bike.
 - b. End Users must park vehicles so that they do not materially obstruct the footpath for pedestrians (including those in wheelchairs or with strollers).
 - c. It is unlawful for electric vehicles to be operated within the 16th Street Mall right of way, between Broadway and Wynkoop.
 - d. It is unlawful for electric vehicles to be operated within the Union Station Plaza .
 - e. There is additional information and training available in the Lime app and on Lime's website