

E-Scooter Enforcement

Using GIS to Optimize Workflows



City of Atlanta Department of Public Works

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COA | DPW | SWEET | OFFICER J. WALKER

06/03/2019 01:41:39 PM

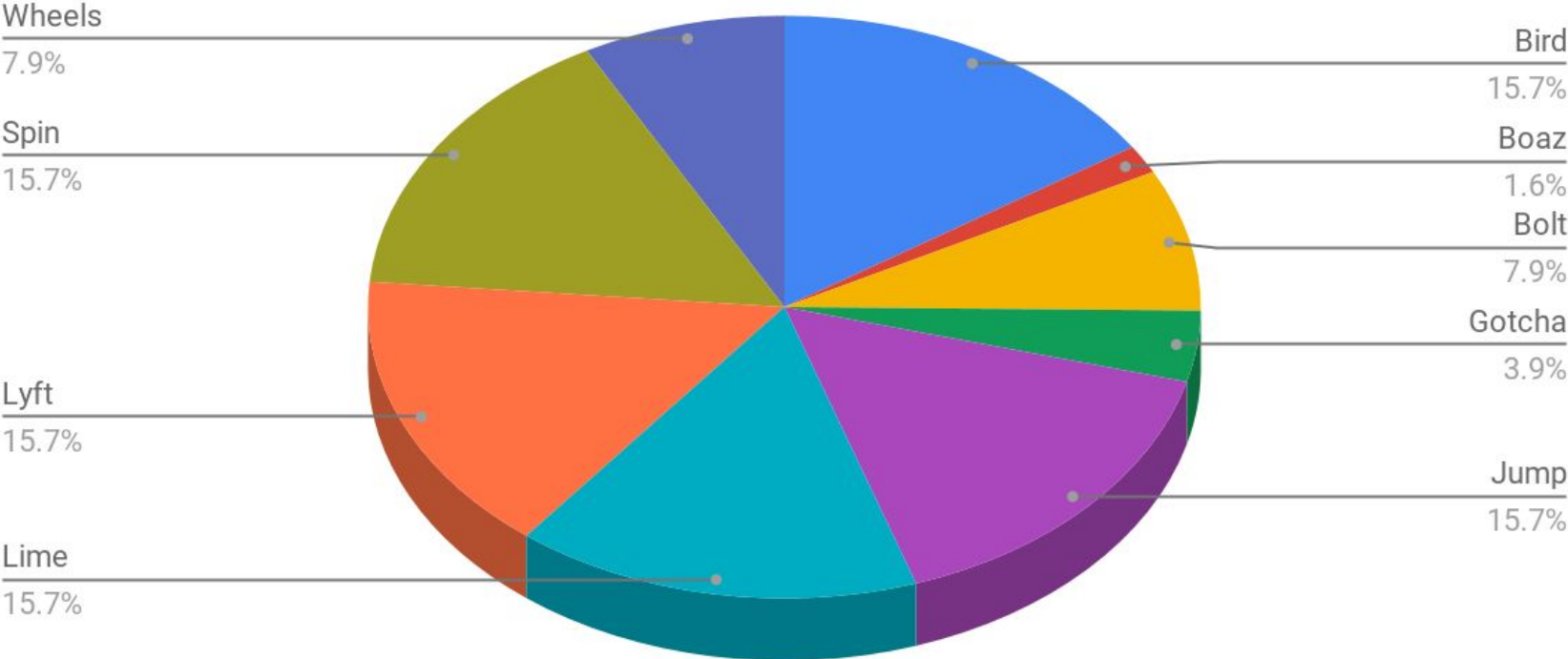
Legislation approved in mid-January dictating how shareable dockless devices are permitted and use enforced

Ordinances



- Regulate how companies operate on the public ROW to ensure public safety
- Create a fee structure to support permitting of these devices - max 2,000 devices
- Requires companies to provide a documented API to supply realtime/anonymized data for their entire fleet and make the API endpoint available for public consumption
- Requires companies to provide an Equity Plan to the Department of City Planning

Number of Permitted Devices



12,700 total devices currently permitted

Shareable Dockless Mobility Devices and Dockless Mobility Devices shall not be parked:

- on vegetation, any grate, manhole cover, or access lid;
- any loading zone, driveway, vehicle travel lane, bike lane, or shared-use path;
- where they obstruct vehicle parking;
- where they obstruct pedestrian or wheelchair access to bus stop clear zones;
- at or within 5 feet of a bikeshare station;
- where it obscures any fixed, regulatory, or informational signs or traffic control devices;

- City reserves the right to cite, impound, and-store, and dispose of improperly parked devices at the operators' expense
 - \$75 per device pickup and the first night of impound
 - \$25 per each additional night

Users/Stakeholders



Field Staff

- Collect device from field
- Survey123 on mobile phones
- 1 full-time code enforcement officer
- ~16 code enforcement/SWEET officers

Office Staff

- Return device vendor
- iPad and Desktop application
- 2 office support staff

Supervisors

- Operations Dashboard to view and download data
- 3 managers

Challenges

Short Timeline

- Quick turnaround needed to meet billing and reporting requirements

No \$\$\$

- No funds or resources available for custom development

Many Needs

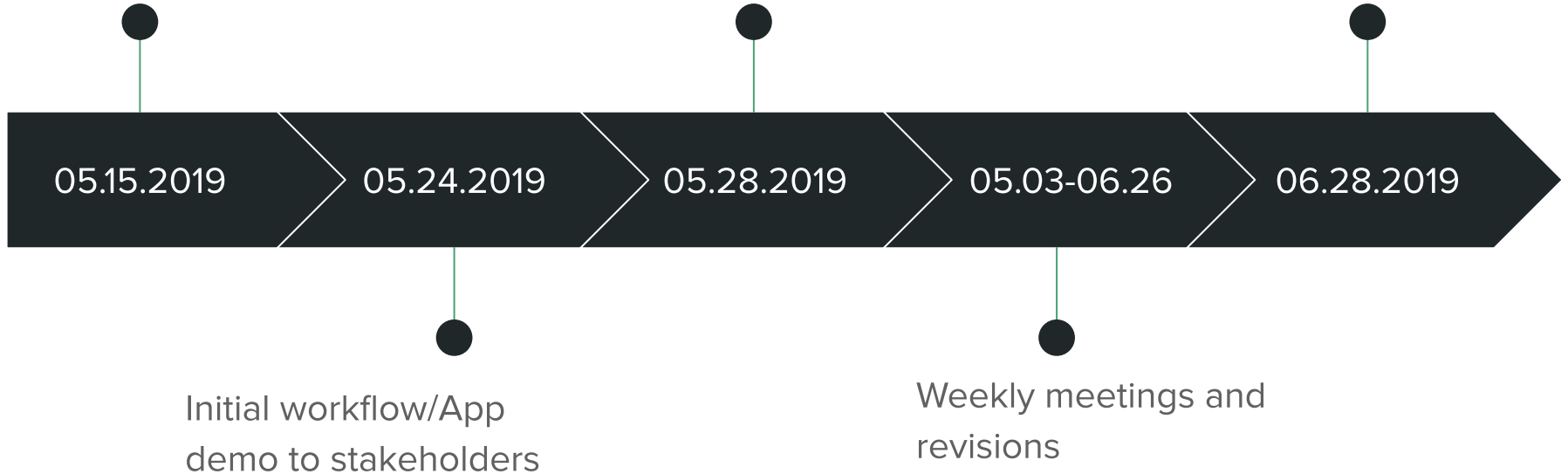
- Track each device by ID number
- Export functions for vendor reporting
- Track financials, duration, cost



Need identified -
Better system needed
for tracking and
reporting

Initial roll-out and
training

Roll-out to all staff



Solution

Leverage existing subscription to
Esri tools

- Survey123
 - Crowdsorce Manager
 - Operations Dashboard
-

Implementation

Report

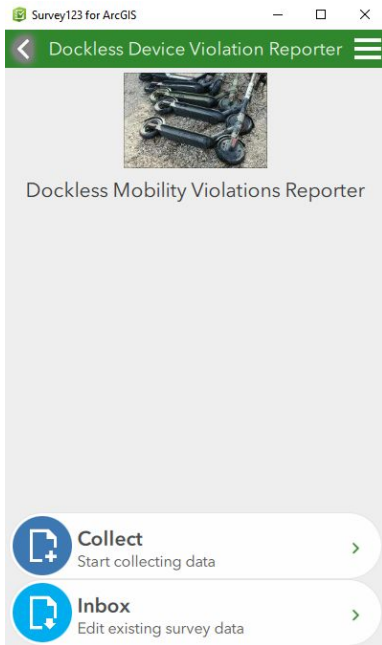
Survey123

- Capture Location
 - Date/Time
 - Vendor
 - Device ID
-

Survey123 Connect



	A	B	C	L	M	N	O
1	type	name	label	relevant	calculation	choice_filter	repeat_count
2							
3	image	Dockless_Mobility_Vio	Photo				
4	image	Dockless_Mobility_Vio	Photo 2	string-length({Dockless_Mobility_Violations_image})>0			
5	hidden	Latitude	Latitude		pulldata("@exif", \${Dockless_Mobility_Violations_image}, "gpslatitude")		
6	hidden	Longitude	Longitude		pulldata("@exif", \${Dockless_Mobility_Violations_image}, "gpslongitude")		
7	text	Coordinates	Coordinates		substr(\${Latitude}, 0, 20) + " " + substr(\${Longitude}, -20)		
8	select_one Dockless_M	Vendor	Vendor				
9	text	Device_Number	Device Number				
10	barcode	Barcode	Barcode				
11	dateTime	Violation_Date	Violation Date		pulldata("@exif", \${Dockless_Mobility_Violations_image}, "ImageDateTime")		
12	hidden	Address	Address				
13	username	USERID	User ID				
14	hidden	Vendor_Collection_Dat	Vendor Collection Date				
15	hidden	VendorRepName	Vendor Representative Name				
16	hidden	Standard_Fee	Standard Fee				
17	hidden	Service_Area	Service Area				
18	hidden	Council_District	Council District				
19	hidden	NPU	NPU				
20	geopoint	Dockless_Mobility_Vio	Location		\${Coordinates}		



Dockless Mobility Violation Reporter

Photo *

Coordinates
If coordinates do not populate from photo, please specify location using map below.

Vendor *

Device Number *

Barcode

Violation Date *
Defaults to photo date/time.

Date Time

Location *
33°45'N 84°23'W ± 2775 m

Esri contributors

- Coordinates/location and date populate from photo
- Vendor list
- Device Number
- Barcode (optional/beta)

Barcode

<https://x.uber.com/JB00033174>

<https://lime.bike/bc/v1/I2PEKVI=>

<https://lyft.com/sb/776097>



Manage

Configuration of Crowdsourcing
Manager

- Search by Device ID
 - Edit Vendor Pick-Up Date
 - Vendor Representative Name
-

Dockless Mobility Violations - Devices in Storage

1 selected / 1 records

Vendor	Device Number	Violation Date	Vendor Pick-Up Date	Vendor Representative Name	Duration	Collected By
Lime	440-472	08/05/2019 10:48 am				plwilliams_a

Details Photos

Vendor Pick-Up Date

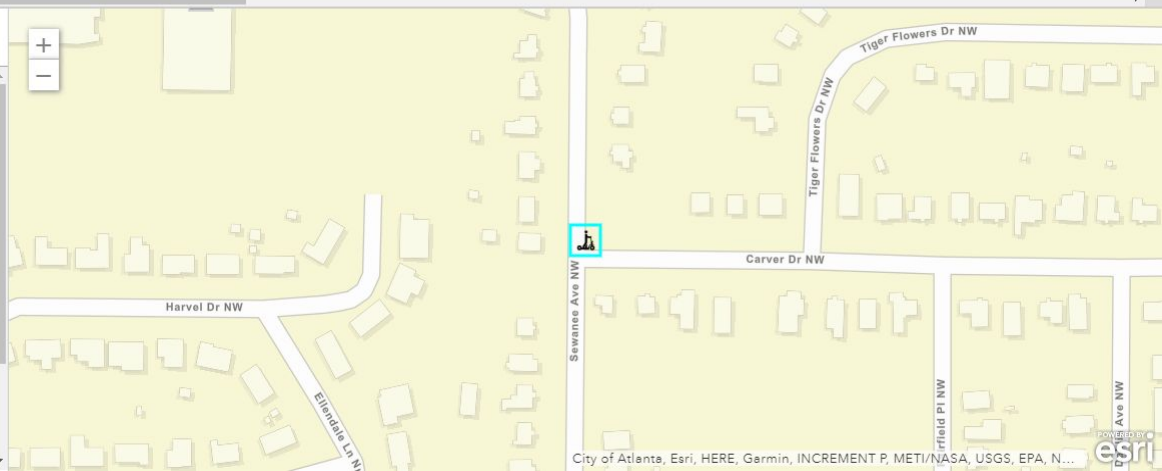
Vendor Representative Name

Attachments

[Browse](#) 2 attachment(s) selected

Dockless_Mobility_Violations_image-1e4f8c3ea60f4ce2b230d1980d4b8df1.jpg X

Dockless_Mobility_Violations_image2-229454ad032c4129857cb7d8b2290e71.jpg X



Supervise

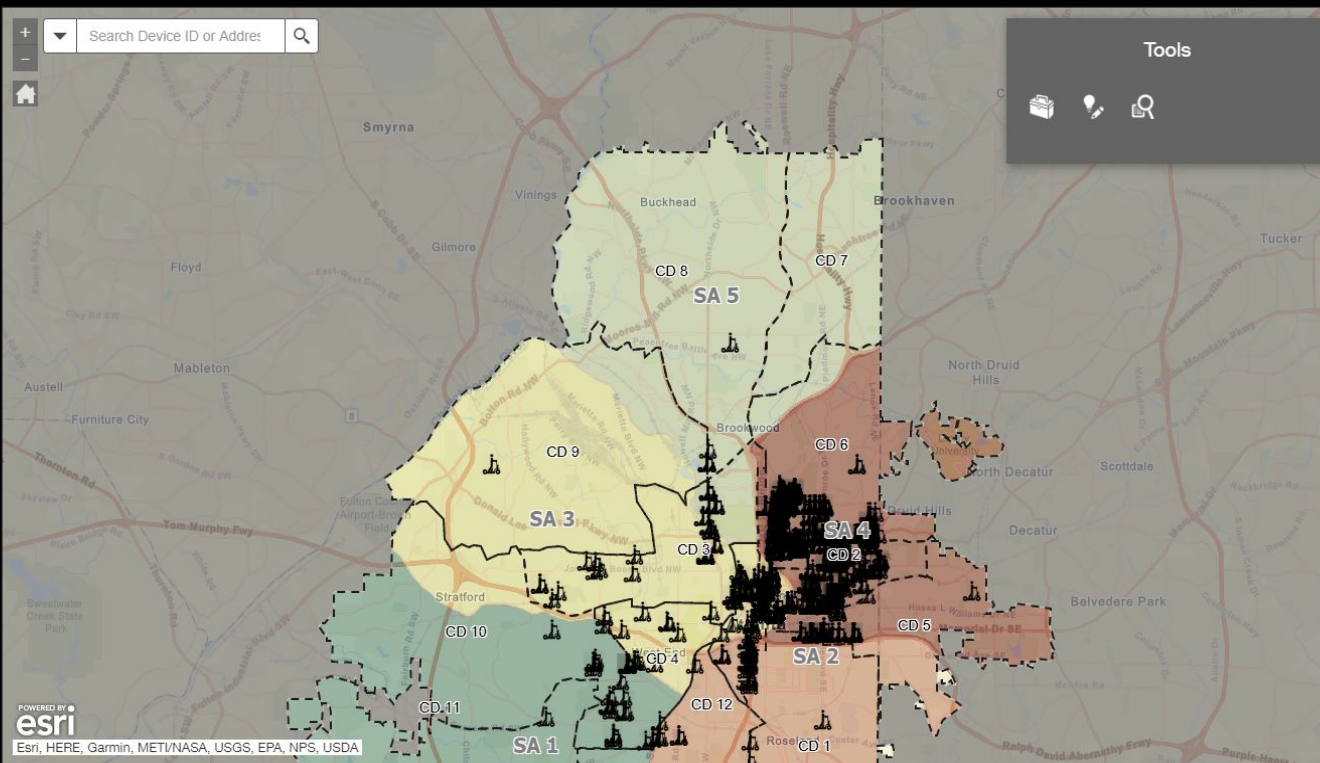
Operations Dashboard and
Survey123

- Monitor Daily Impound and Release
 - Number of Devices in Storage
 - Counts by Vendor, SA, CD, NPU
 - Export Data
 - Edit/Delete Data
 - Update Duration and Fees (Geoprocessing Service)
-

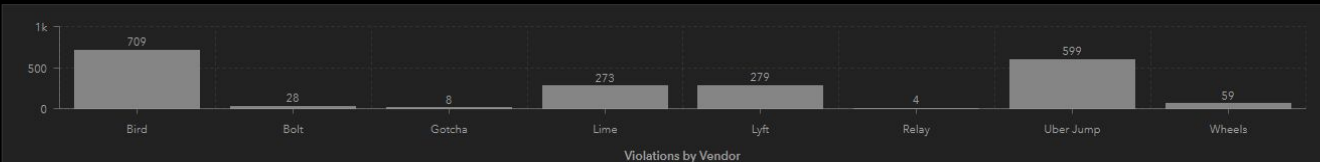


Max Violation
24.963
Days

Total Violations
1,959



Map Export Data



By Vendor By Service Area By Council District By NPU Dashboard Data

Daily Impound
59

Today Yesterday

Daily Release
0

Today Yesterday

Devices in Storage
141

Violations This Week
59

Violations Last Week
250

Dockless Device Violation Reporter

Overview

Design

Collaborate

Analyze

Data

Settings



5/28/19 - 8/8/19

Filter

Feature Report

Export

Open in Map Viewer

Show individual response



2,148/2,148

Dockless Device Violation R...

CreationDate	Vendor	Device Number	Violation Date	Address	User ID
Aug 7, 2019, 8:23 AM	Uber Jump	ZGI943	Aug 7, 2019, 7:39 AM		jawwalker_atl
Aug 7, 2019, 8:20 AM	Uber Jump	5074	Aug 7, 2019, 7:39 AM		jawwalker_atl
Aug 7, 2019, 8:18 AM	Uber Jump	CSC542	Aug 7, 2019, 7:39 AM		jawwalker_atl
Aug 7, 2019, 8:16 AM	Uber Jump	UYS778	Aug 7, 2019, 7:39 AM		jawwalker_atl
Aug 7, 2019, 8:12 AM	Uber Jump	CJH371	Aug 7, 2019, 7:39 AM		jawwalker_atl
Aug 7, 2019, 8:11 AM	Uber Jump	EMN011	Aug 7, 2019, 7:39 AM		jawwalker_atl
Aug 7, 2019, 8:09 AM	Uber Jump	CCA323	Aug 7, 2019, 7:39 AM		jawwalker_atl
Aug 7, 2019, 8:08 AM	Uber Jump	EZB937	Aug 7, 2019, 7:39 AM		jawwalker_atl

1 of 2148 selected

Map

Export Data



Dockless Device Violation Reporter

Submitted by: jawwalker_atl

Submitted time: Aug 7, 2019, 8:16:42 AM

Edited by: dpwdata_atl

Edited time: Aug 8, 2019, 8:00:55 AM

Photo

Dockless_Mobility_Violations_
image-25e7545ffc1d455eb74
960ff8ddad26f.jpg

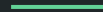
Future Enhancements

A nighttime photograph of a city skyline, likely New York City, with several skyscrapers illuminated against a dark blue sky. In the foreground, a multi-lane highway is visible, with light trails from cars creating streaks of white and red. Streetlights and signs are also visible, including an 'EXIT' sign with a right-turn arrow.

- One Location, Many Devices
- One Vendor Pick-Up, Many Devices
- Vendor Receipt
- Barcode/QR Code to Populate Vendor and Device ID
- Update Boundary Attributes with Geoprocessing Service
- Equity Plan Enforcement

Special Thanks

To our dedicated code enforcement staff willing to take a chance with GIS, test the applications and strive to create a more efficient process



Questions?