CITY OF MIAMI
SHARED MOTORIZED SCOOTER PILOT PROGRAM
INTERIM REPORT
SEPTEMBER 1, 2019

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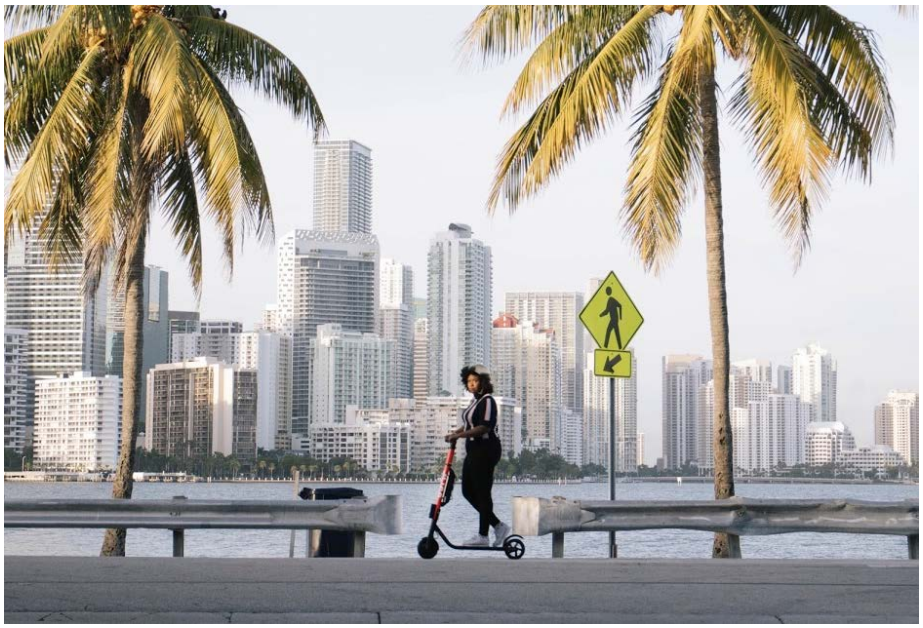
Miami Shared Dockless Scooter Pilot Program
Interim Report – September 2019

A. Introduction and Overview of Program to Date

In April 2018, a new form of shared micromobility, motorized scooters, appeared in Miami when two companies, Bird and Lime, began operations. Scooters have recently emerged in numerous other large cities as a cost saving, efficient form of transportation to meet resident needs. Both companies initiated services without any permits or authorization from the City, resulting in numerous complaints from residents due to lack of rules to provide for safe operation. This resulted in a June 2018 decision to issue a cease and desist order, stopping the service providers from continuing service until rules could be established.

On October 11, 2018 the Miami City Commission directed staff to develop and implement a six-month Dockless Scooter Pilot Program within the boundaries of District 2 to evaluate the feasibility of allowing for shared scooter services within Miami. The pilot provided residents and visitors access to this new transportation option in a controlled approach while allowing the city to evaluate the use of scooters as part of an overall transportation and mobility program. Plans for the pilot program were completed in December, 2018 with release of an application for companies wishing to provide shared scooter services in Miami (see enabling legislation, Attachment A). The pilot program provided a framework to regulate and manage where and how scooters are allowed to be operated, the number of scooters allowed within the pilot area, and insurance/safety requirements for service providers. It also required participating companies to agree to a set of comprehensive data sharing requirements with an established protocol for



violations (i.e., scooters operating outside pilot program boundaries). Six companies applied for permits to be part of the pilot program: Bird, Bolt, Jump, Lime, Lyft, and Spin.

The pilot program began on April 1st with all companies authorized to operate six scooters each to validate their ability to ensure data sharing connectivity. On April 4th the fleet size for each company was increased to 50 scooters and again to 100 scooters on April 18th. On the 18th of each successive month the companies were permitted to request a 25% increase in fleet size, based on meeting a daily average operating threshold of three rides per scooter per day. This resulted in a total of 1131 authorized scooters within the pilot program area as of August 1st, 2019. During the first four months of the pilot program, people using scooters took 606,452 trips covering 838,600 miles. The City received $300,000 in licensing fees, with another $110,383 generated in motorized scooter fees during the four-month period. This update provides an overview of the first four months of the scooter program (April – July 2019), and lessons learned in managing the program. It also provides recommendations, should the City Commission decide to continue the pilot program and permanently establish a scooter program within Miami.

B. Pilot Program Vision and Objectives

In developing the Shared Dockless Scooter Pilot, the City identified several concerns and priorities to guide development of the pilot. These elements are listed below with comments:

• Implement a program that reinforces public safety and proper use in public spaces
Numerous safety concerns were identified in development of the six-month pilot program. The City ultimately adopted ordinance language that allowed scooters to operate on both sidewalks and roadways in a manner similar to bicycles. Operating speeds for scooters are much lower than vehicles and faster than pedestrians, leading to an increased risk of accidents occurring if scooter

operators are not paying attention. Vigorous enforcement of parking requirements by the MPA has improved, but not eliminated, issues with riders blocking the Right of Way for pedestrians. Some behavior issues remain with users observed operating scooters outside of use guidelines or against the flow of traffic. Miami Police and Fire-Rescue have reported 28 accidents in the first four months of the pilot.

• Provide accurate communication and guidance to users

As a term of the permit, operators are required to provide education to users on proper operation of scooters in Miami. Many operators entered the market with guidance that was consistent with their other national markets but had to work with the City to ensure language was updated to reflect Miami's regulatory requirements.

• Provide a means to monitor scooter operations and ensure oversight/compliance

The City developed a GIS interface to monitor scooter operations in real time to ensure compliance within the geofence boundary. Scooters parked outside the boundary or improperly parked were impounded by the Miami Parking Authority (MPA). Systematic improvements in data reporting and quality of data has enhanced the ability to ensure compliance.

• Scale responsibly based on performance metrics

The City reviews usage data generated by the pilot on a monthly basis and adjusts permitted fleet sizes based on trip demand. Increases are only implemented if an operator is in compliance with all permit terms and has demonstrated utilization rates that show latent demand. This approach minimizes the storage of idle vehicles in the right of way.

• Test new innovations and their ability to meaningfully meet Citywide mobility goals

Staff is assessing both survey data and data reporting from vehicle usage to understand the pilot's potential impact on goals like single occupancy vehicle reduction and mode shift increases. To date, the pilot has demonstrated consistent utilization,but it is unclear if scooters are removing a substantial amount of vehicles from the road or simply replacing walking trips.

C. Current Usage Status and Trends

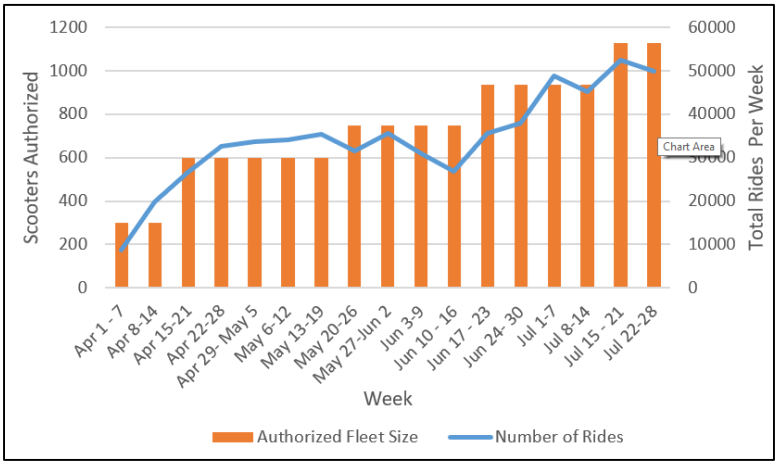
Service providers involved in the pilot provide data through the MDS (Mobility Data Standard) data feed in two different methods: active/current information and historical information. The Department of Innovation and Technology (DoIT) worked with operators and other municipalities that have scooter programs to refine the types of data collected and means for collection. The tables and charts below contain data from the time period of April 1, 2019, which was the rollout date that permits were first issued, to July 31, 2019, for deployed Scooters.

Scooter Usage April 1, 2019 – July 31, 2019

Average Number of Rides Per Operating Day	4,862
Average Number of Rides Per Day Weekday	4,713
Average Number of Rides Per Day Weekend	5,689
Total Number of Rides	606,331
Total Miles Traveled	838,469
Average Length of Ride (Miles)	1.4
Average Minutes Used	14.5
Average MPH	5.3

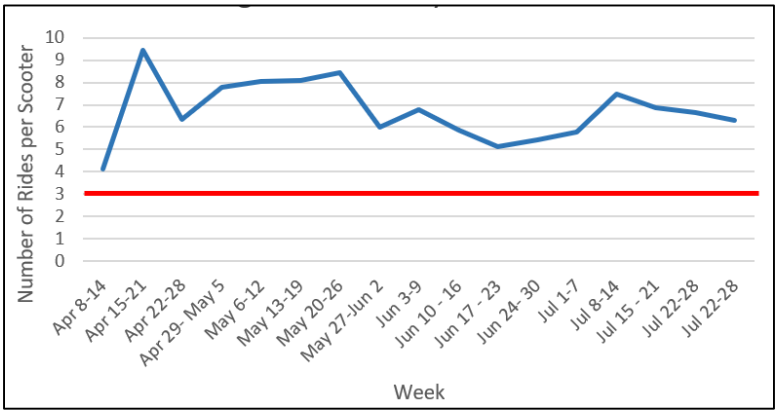
Scooter Usage by Week April 1, 2019 – July 31, 2019

The following chart indicates the number of scooters authorized by week for all vendors and the number of rides taken during that same period for the initial four months. Overall ridership has increased during this pilot program, although there appears to be a levelling of total rides per week as the program matures, possibly indicating saturation of the market. Continuation of the pilot program beyond the initial four months should further clarify the anticipated number of scooter rides per week within the pilot program area to establish an optimum operating fleet size.



Average Number of Scooter Rides Per Day

The decision to increase fleet size is based on vendors achieving a monthly average of at least three rides per scooter per day. A review of the number of rides per scooter per day, compared to authorized fleet size, indicates vendors are significantly surpassing this threshold, even after receiving authorization to increase fleet size each month.



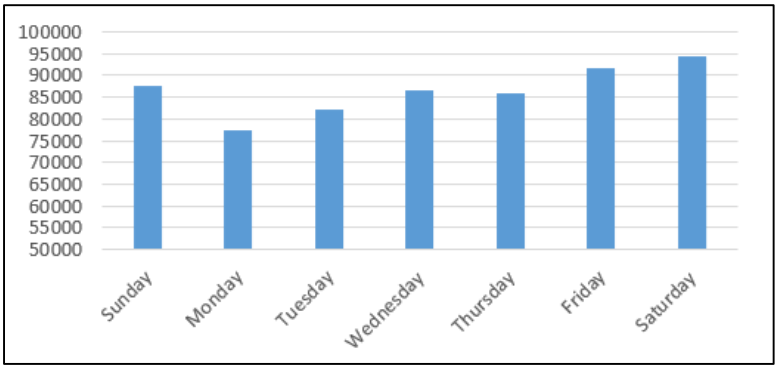
During the initial period of the pilot program, numbers were skewed, possibly due to the limited number of scooters available during the initial months of the pilot program and number of people trying to use scooters due to the novelty of being a new transportation option. A review of data from July 2019, the final month available to provide full data of usage, provides a view of current trends. During July 2019 vendors continue to average more than 5 rides per scooter per day, which exceeds the threshold to request an increase in fleet size during the following month.

Scooter Usage July 1, 2019 – July 31, 2019

Average Number of Rides Per Operating Day	6,985
Average Number of Rides Per Day Weekday	6,686
Average Number of Rides Per Day Weekend	7,847
Total Number of Rides	216,546
Average Riders per Scooter per day	5.34
Number of Scooters Authorized per day	1,131
Motorized Scooter Fees Invoiced for Month	$40,582

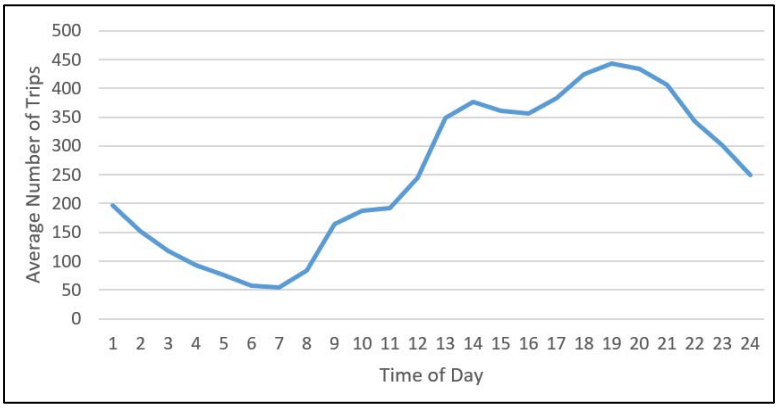
Total Scooter Rides By Day

The following chart illustrates the total number of scooter rides taken by day during the first four months of the pilot program. The data indicates the lowest overall scooter usage occurred on Mondays while the highest occurred on Saturdays. Scooters are ridden approximately 21% more on weekend days as compared to weekdays.



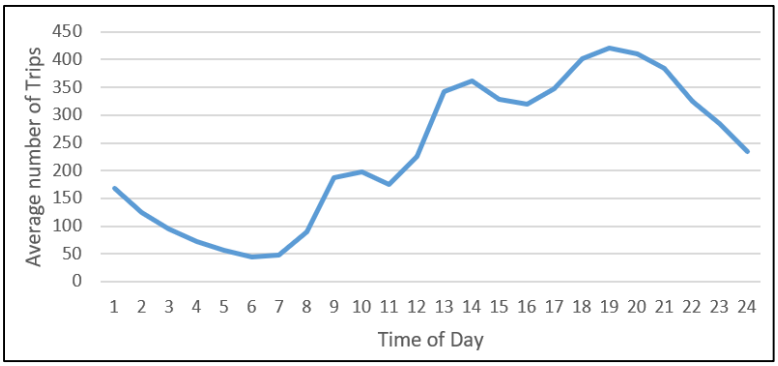
Average Scooter Trips By Hour

A review of overall trips indicates that ridership increases steadily during the day, peaking between 5:00 pm and 8:00 pm. During this peak period an average of more than 400 scooters were being used at any given time.



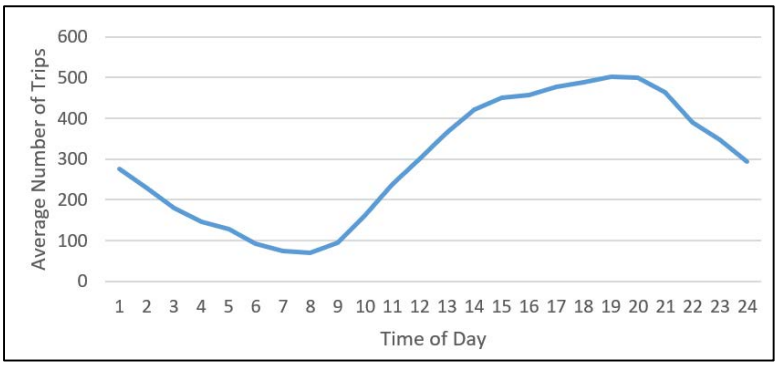
Average Scooter Trips By Hour for Weekdays

Additional trends can be observed when reviewing data for weekdays versus weekends. The following chart demonstrates a sharp increase in ridership during the morning commuting hours of 8: 00 am to 10:00 am. Ridership increases again between the hours of 12:00pm – 2:00pm during the lunch hour, with a third significant increase occurring between 4:00 pm and 7:00 pm, corresponding with the evening commuting hours.



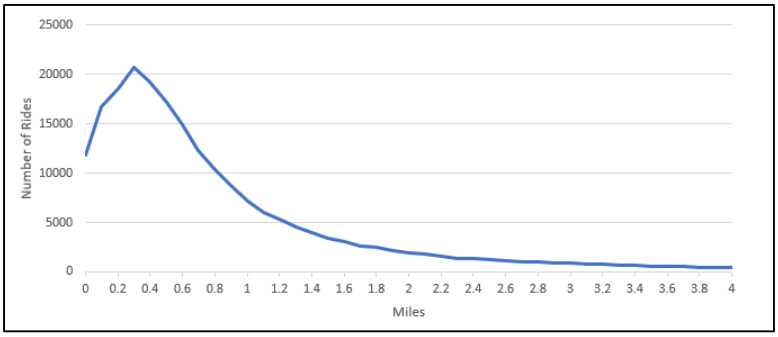
Average Scooter Trips By Hour for Weekends

Data indicated a steady increase in ridership throughout the day on the weekends, with ridership averaging more than 400 trips per hour by 2:00 pm and reaching 500 riders by 6:00 pm. Ridership begins to decline around 9:00 pm at night.



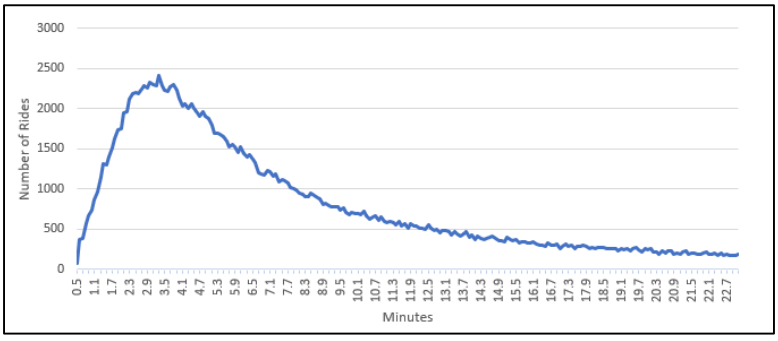
Length of Rides

Riders drove scooters an average of 1.4 miles per ride during the first four-month period, however analysis of data for the month of July indicates more than 90% were under two miles, with more than 50% under 0.6 miles. This may be indicative that majority of scooter rides are replacing walking trips versus motor vehicles, however greater analysis is needed to determine the proportions.



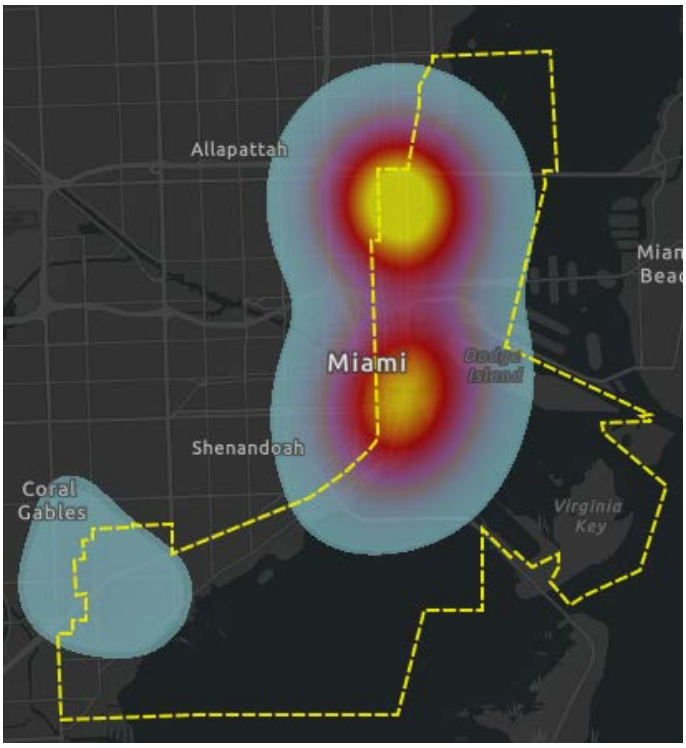
Duration of Rides

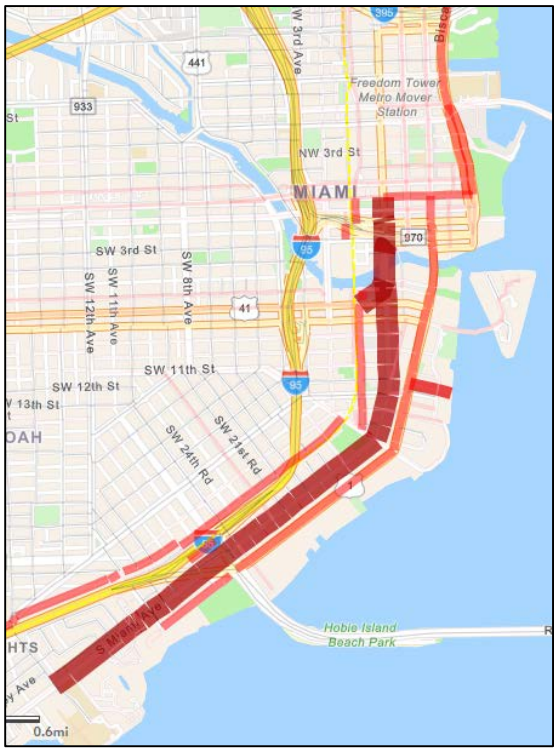
Riders drove scooters an average of 14.5 minutes per ride during the first four-month period, however analysis of data for the month of July indicates more than 50% were under seven minutes.



Scooter Usage Heatmaps

Although scooters are operating throughout the pilot program area, the greatest use has been observed in the Downtown and Brickell neighborhoods, particularly along South Miami Ave, Brickell Ave, and Biscayne Blvd.





D. <u>Lessons Learned / Observations - Initial Period of Operations (April 1 – July 31)</u>

FINDING: Scooters may fill a gap within Miami's multimodal transit system as an alternative to cars to provide short distance and "last mile" connections. Although the pilot has demonstrated consistent scooter utilization, it is unclear to what level scooters are removing vehicles from the road. Initial observations indicate scooters have the potential to reduce short-distance, single occupancy vehicle and shared vehicle (e.g. Uber, Lyft) trips, reducing urban congestion and emissions. Scooters may provide a low cost, eco-friendly, and flexible mobility option for short trips, particularly when used in conjunction with other transit means (e.g., metrorail, metromover). The average trip during the four month period was 1.5 miles with a duration just under 15 minutes. Given the distribution of scooter trips during the pilot program, it is reasonable to assume that reduced the number of vehicles driven in the Downtown and Brickell neighborhoods, areas which experience traffic congestion issues. In areas of the city where parking availability is limited, such as Coconut Grove and part of downtown, scooters provide an alternative to using personal motor vehicles. Although not directly measured, this reduction in vehicle miles would have contributed to a reduction in air pollution and greenhouse gasses.

FINDING: There are a number of privately owned scooters being operated throughout the city that may not be adhering to established rules and restrictions. Although the pilot program was established to regulate shared scooters, there are a number of residents who own and operate scooters within the City. These privately owned scooters are able to operate at much higher speeds than the 15 mph restriction placed on vendor scooters and are not restricted by geofencing. The City should increase education efforts to inform private scooter owners of the rules and regulations, similar to efforts being done through the vendors

FINDING: Geofencing has varying effectiveness to prevent usage outside of authorized boundaries. All vendors indicated an ability to geofence the authorized area of the pilot program to prevent operations outside its boundaries, the effectiveness of these efforts varied by vendor. When riders crossed the geofence limits, scooters are expected to reduce speeds to 3 mph, indicating to riders that they have travelled outside the authorized area. Some vendors have also provided an audible signal or other means to inform riders that they have deviated from the authorized area. Upon notification, vendors are required to recover scooters parked outside the boundaries within one hour or scooters will be impounded by the MPA. There were reported 3,497 incidents where scooters were parked or operating outside the program boundaries, however the lack of map consistency and accuracy between vendors makes it difficult to determine exact numbers. More than 600 of the incidents could not be found when MPA personnel went to impound the scooter. A total of 714 scooters were impounded for being operated or parked outside the authorized boundary.

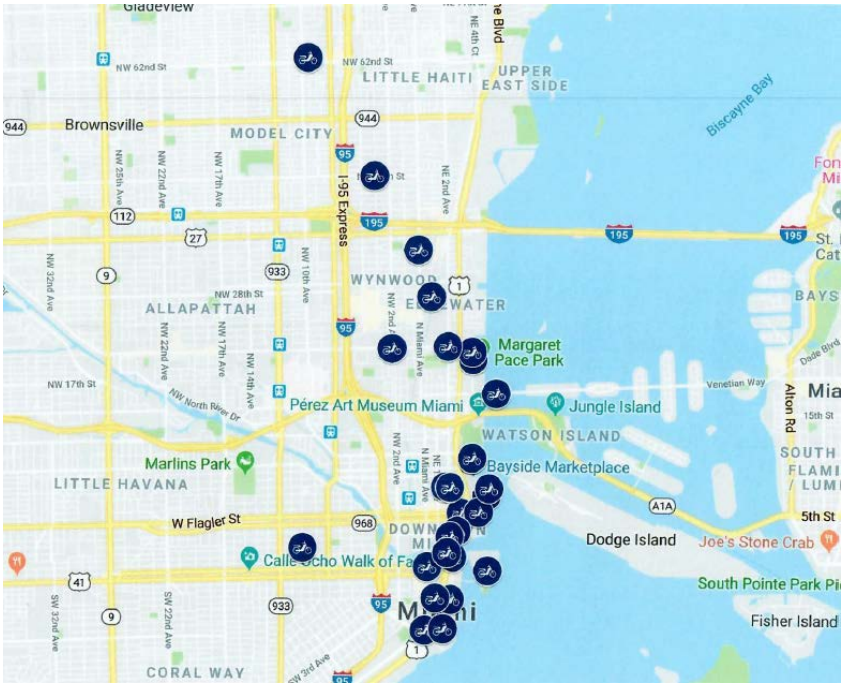
FINDING: Scooter operators using pathways and areas prohibited for use in parks, along the Baywalk, and on private property. The pilot program authorized scooters to operate on streets or sidewalks in a manner similar to bicycles, however the program did not allow for motorized scooters to operate in city parks, along the Riverwalk, or other private areas (such as Bayside, Brickell Key, or internal walkways in Mary Brickell Village). City ordinance 38-51 regulates bicycles, tricycles, scooters, and similar vehicle use in parks, states "Bicycles and tricycles are restricted to designated bicycle paths but may be ridden in other areas upon approval of the department of parks and recreation, whereas motorcycles, motorbikes, scooters or similar motorized vehicles are restricted to the paved roadways for cars, trucks and buses". This initially created confusion for scooter riders who did not understand the restrictions on where scooters could be operated. Furthermore, an amendment made this year to Florida Statute § 316.008 (9)(a) states "A county or municipality may regulate the operation of micromobility devices and for-hire motorized scooters; however, any such ordinance or regulation may not conflict with this chapter or federal law and **may not be more restrictive than the county's or municipality's regulation of bicycles**". This may require the City to re-evaluate the restriction of motorized scooter use in parks and on the Riverwalk, as well as implement standard signage and adjusting geofencing to inform riders when they are entering areas where scooter use is prohibited.

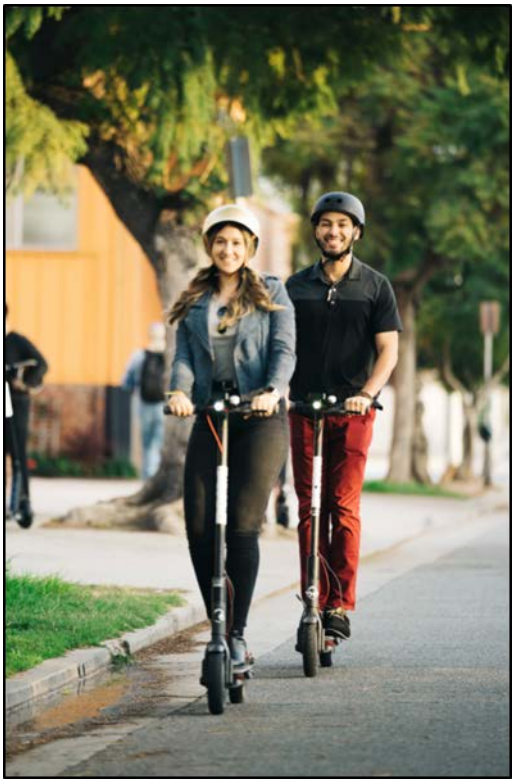
FINDING: Scooter operators do not always understand/follow rules for safe operation. Scooter vendors need to continue efforts to educate riders and reinforce rules for safe operation. Although most scooter riders operate in a responsible manner, there continue to be issues with some rider behavior. Observed issues include operating scooters too fast, particularly on sidewalks, weaving between cars and/or pedestrians, allowing children under the age of 18 to ride, double riders on a single scooter, weaving in between traffic. To improve safety concerns, some vendors have instituted mandatory tutorials for new users. All new users are required to complete a tutorial on how to use the app and basic riding rules, safety tips, and local rules and regulations such as parking and sidewalk riding. They also have established "First Ride" safety events, a 60-minute training course for first-time scooter riders to learn how to use scooters safely and best practices for proper riding and parking etiquette.

FINDING. There were a limited number of compliance issues during the pilot period. There were a total of 63 reported safety violations. These were primarily due to blocking sidewalks, ADA ramps at crosswalks, next to fire hydrants, etc. Upon reporting, scooters were moved or impounded in order to clear the violation.

FINDING: There were a limited number of injuries involving scooters that required medical care during the pilot period. During the four-month period, Miami Fire-Rescue responded to 28 alarms involving scooters. Of these, 19 required transportation to local hospitals, although none of the reported injuries resulted in trauma center criteria inclusion. Six of the incidents involved vehicles with five riders being transported to hospitals while one refused further treatment and transport.

911 Alarms Involving Scooters – Entire City





FINDING: Due to sidewalk and street conditions Indemnity/Insurance requirements must be maintained and enforced. The City received a total of four (4) open claims involving scooters. Of these, two involved rented scooters. The first occurred when a scooter made contact with a cracked and uneven section of concrete, resulting the rider falling from the scooter and sustaining multiple injuries to include facial contusion, contusion on nose, soft tissue injury to both shoulders, and a chipped tooth. The second occurred when Claimant was driving his rental scooter on the sidewalk and drove into a circular opening left after the removal of a tree, causing the rider to be ejected from the scooter and resulting in a fractured left elbow with surgical repair and dislocated left shoulder. Both claims have been reported to the appropriate carrier for the scooter vendors.

The current program requires vendors to maintain commercial general liability on a primary and non-contributory basis with limits of $2,000,000 per occurrence, $5,000,000 policy aggregate affording coverage for claims resulting from bodily injury (including death) and property damage, along with coverage for personal injury. It also requires vendors to maintain automobile liability affording coverage on all owned autos, including hired and non-owned auto exposures, with a combined single limit for bodily injury (including death) and property damage of $2,000,000.00 per accident. The program also requires vendors to furnish evidence of statutory workers' compensation coverage, and list the City and MPA as an additional insured with respect to the general liability and auto policies. Vendors are further required to indemnify, defend, and hold harmless the city and MPA from any and all liability, losses or damages that may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature. This indemnification includes, but is not limited to, personal injury or wrongful death, property loss or damage, the conditions and features on all sidewalks and sidewalk areas, or other areas within the city on which a motorized scooter is operated, to the extent arising out of or in any way connected with the operation of the motorized scooter service or use of a motorized scooter.

FINDING: Sidewalk riding creates some pedestrian discomfort. Although scooters may be operated on sidewalks, there were some concerns expressed from pedestrians expressing feeling being unsafe or uncomfortable with sharing walkways due to the speed of scooters and the inability to hear scooters approaching from behind. With speeds restricted to 15 mph, scooters are appropriate for bike lanes or low-volume streets but may be too fast for use on sidewalks. The City ordinance clearly states riders shall "yield to pedestrians and give an audible signal before overtaking and passing such pedestrian." Although the amount of sidewalk riding is reduced along streets with lower speeds or designated bikeways, scooter operators must remain considerate of slower moving pedestrians when sharing sidewalk space. This clearly

demonstrates how important it is to have protected facilities that minimize conflicts between pedestrians, scooters, and cars when possible. The City may consider reducing the speed of scooters operating on sidewalks to 7 miles per hour to allow better co-use with pedestrians, however this would be difficult to enforce. The City should continue to expand the number of bikelanes whenever possible, particularly in areas with high scooter usage, to encourage use within this portion of the roadway.

FINDING: Improperly parked scooters impact access and safety for people with visual impairments and people who use mobility devices. The ad-hoc manner in which scooters are parked can be problematic for individuals with disabilities that have concerns about safety on the sidewalks. Parked scooters can make it a challenge to walk as blind individuals bump into scooters often. An additional concern is when scooters blocked ADA access at transit stops, street crossings, or along sidewalks. Aggressive enforcement by scooter vendors and the MPA is needed to reinforce better behavior by scooter operators.

FINDING: Financial reimbursements to the City. Current legislation requires vendors to remit a non-refundable fee of $50,000 with their application, which provides for issuance of a six-month license to operate in the city. In addition, vendors must pay a motorized scooter fee in the amount equivalent to one dollar ($1.00) per motorized scooter per day. Funds collected are to be used to offset costs related to enforcement and management of the program, with any excess funds being designated for sidewalk and/or street improvements within the pilot program area. In the first four months of the program, the pilot program has generated $410,383, with total

revenue for the six month program anticipated to exceed $500,000. These funds could be focused for use on the following routes to improve multimodal use, to include creating bike/scooter lanes:

- Bird Ave from US-1 to SW 27th Ave
- S. Miami Ave in both directions between S 25th Rd to S 15th Rd
- S. Miami Ave north of Mary Brickell Village from S 8th St to over the Miami Ave Bridge.
- A protected bike lane project for S. Miami Ave between Mercy Way and US-1.
- NE 15th St from N. Bayshore Drive to the existing green paint to the east.
- Protected bike lanes under study by the Omni CRA for NE 1st Ave & N. Miami Ave

FINDING: Monitoring the number of scooters operating each day requires careful screening of data to avoid miscounting. During the pilot program, the motorized scooter fee is based on the number of scooters in use each day. This has proven challenging to calculate, due to vendors swapping out scooters throughout the day to conduct recharging and maintenance (rebalancing), which initially delayed invoicing. Because vendors swap out scooters during the day, they sometimes fail to de-activate the signal from scooters no longer in the operating fleet, resulting in the appearance they may be operating more scooters than authorized. Vendors need to be more vigilant in maintaining their operating fleet size, and the City should define a penalty when it is determined they are operating more scooters than authorized. Changing to a billing method based on the number of scooters authorized each month would be much easier to reconcile each month and provide a more predictable revenue stream for the City.

FINDING: GIS monitoring of scooters has challenges, but updated processes have improved the quality of processed data. The Department of Innovation and Technology developed guidelines and processes to require scooter vendors involved in the pilot to provide well developed data through the MDS (Mobility Data Standard) data feed in two different deliveries: 1. active/current information and 2. historical information. Use of the Open Mobility Foundation (OMF) platform called "Mobility Data Specification" (MDS), developed by the Los Angeles Department of Transportation to standardize and manage dockless micromobility programs and improve collection of data. MDS is comprised of a set of Application Programming Interfaces (APIs) that create standard communications between cities and private companies to improve their operations. This data is used to monitor the number of scooters operating each day, the number of trips that occur, as well as geolocation of scooters to ensure they do not operate beyond the

authorized boundaries. As the pilot program evolved, through trial and error working with vendors, it became clear they were initially unwilling to comply with the MDS for active/current information and monitoring processes due to concerns of data confidentiality. Processes were changed to utilize GBFS feed for some data, which is what vendors use in their own applications to improve accuracy. After adopting MDS, and working with vendors to resolve several other issues, feeds began to work better and the collection of data has improved.

Although the use of dedicated City staff has assisted with managing incoming vendor data and ensuring data feeds are working correctly, there continues to be some inconsistencies with the data received. There have been discrepancies with vendors transmitting scooter ID's in the same format as the ID's displayed on the scooters themselves, and the geolocation of scooters is more accurate with some vendors than others. The frequency of data updates differs with each vendor and should be standardized. Trip data must continue to be screened daily to ensure that all days are accounted for and to resolve discrepancies as they occur. Challenges have occurred calculating the number of scooters operating each day and average number of trips per scooter. Because vendors swap out scooters during the day for repair or maintenance, they sometimes do not de-activate signals from scooters no longer in the operating fleet resulting in appearance of higher than authorized numbers. This caused additional data clean-up effort to find "outliers" of trips that behave abnormally. This includes extreme speed, high travel distance, and frequent out-of-bound travels. Scooter trips counts must be calculated based on vendor trips data because most vendors' data do not have the same IDs in their GBFS and trip feeds. This may leave out scooters that have not had any trips, which may result in some undercounting of operational scooters. For additional information, please see attachment C.

FINDING: State Ordinance may require changes to program.

The State recently enacted legislation amending Florida Statutes to recognize the emergence of micromobility devices, which may require some modifications to the current program (See attachment B). The new law does the following:

(1) Introduces e-Scooters as a new vehicle classification

(2) Gives e-Scooters the same operating rights as bicycles under the State of Florida Law

(3) Defines MicroMobility devices as a device made available for private use by reservation through an online application, website, or software for point-to-point), to operate on public streets, highways, sidewalks, and sidewalk areas.

(4) Allows local government to regulate MicroMobility devices.

E. Recommendations

Continuation of pilot program. The pilot program will expire October 1, 2019, unless the City Commission reinstates or extends the program. Scooters have the potential to move people safely and efficiently while helping to reduce traffic and congestion, however it should only be through a well-developed program with adequate control measures in place to safeguard pedestrians, riders, and the City. Although the City has learned much in the initial four months, continuation of the pilot program for another six-month period would provide time for staff to further review and develop recommendations to be included in a Request for Proposal for a permanent program. Should the City Commission decide to reinstate the program, vendors would be required to renew pilot program licenses in accordance with Section 8-11 of the city code, which includes payment of the $50,000 licensing fee. Other companies have shown interest in joining the pilot, and it is recommended that the program is opened for additional applications. This would require an amendment to the existing ordinance, subject to 2-33 City Code limits on such programs.

Consider whether expansion to other portions of city is appropriate. The pilot program is currently limited to District 2. Should the pilot program be extended, or a permanent program be established, the commission should consider whether to allow scooter use in other portions of the city.

Revise City Ordinances regarding scooter use. The following amendments to city ordinances should be considered to improve the current program:

- Revise ordinance to reflect amendment made this year to Florida Statute §§ 316.008 and 316.2128.
- Consider inclusion of dockless electric bikes within the ordinance and establish a pilot program for the use of rental bicycles in a similar manner to scooters
- Change Section 8-10 (b) to reflect authorization of a second six-month pilot program from October 1, 2019 through April 1, 2020. This requires current vendors to apply for a new six-month pilot program license, along with payment of an additional $50,000 application fee. New applicants should also be allowed to apply for the second six-month pilot period.
- Change Section 8-12 to require the motorized scooter fee of $1.00 per scooter per day to be calculated based on number of scooters authorized by the Department of Resilience and Public Works, versus the current method of determining number of scooters based on data feeds. This will eliminate the process to calculate monthly usage data. Add a

requirement that payment shall be made within 30 days of end of month based on authorized fleet size.

- Change Section 8-13 to authorize scooter usage on the Baywalk and on bike paths within City parks, similar to bicycles.
- Change Section 8-14(l) to add a requirement that all scooters will have a clearly identifiable 4-digit identifier using 2" letters on each scooter to aide in reporting compliance issues.
- Change Section 8-14(m) to reduce operating speed on sidewalks to 7 mph.
- Change Section 8-14 to establish a fine for improper/unsafe operation (weaving in traffic, etc.) or ADA violations.
- Change Section 8-19 to establish a new termination date for the second 6-month pilot period, however provide a means for authorization of an extension as needed to allow transition to permanent program through an RFP process.
- Add a requirement for operators to provide a picture of parked scooters at end of their use by the riders to ensure the scooters are parked properly and not blocking sidewalks.

Establish Scooter Parking Hubs in high volume pedestrian areas to manage scooter parking. The current ordinance allows scooters to be parked on sidewalks where they do not block pedestrian walkways or create safety concerns. This has resulting in scooters being parked in a very ad hoc manner, particularly in the denser parts of the pilot program area. One method successfully used in other cities to encourage better rider behavior is to establish scooter parking hubs to park in certain areas of the sidewalk. Parking hubs are painted on sidewalks to indicate a preferred space for parking. While not mandatory, it has shown riders will use these parking areas when designated.

Initiate an RFP process to establish a Permanent Scooter Program. The Procurement Department should begin immediately to develop a Request for Proposals (RFP) to establish a permanent program. This process is expected to take six months to be completed. Based on lessons learned in the pilot program, the city should establish a set fleet size, and incorporate other changes as noted above. Based on issues observed during the pilot, the RFP should establish specific performance measures to evaluate and compare the ability to ensure compliance within proposals. The city should also consider whether to limit the permanent program to a set number of vendors.

Attachment A
City Ordinance

ARTICLE II. - MOTORIZED SCOOTERS

Sec. 8-8. - Applicability, policy statement and purpose.

This article is supplemental to the general laws of the State of Florida, including F.S. ch. 316, entitled "State Uniform Traffic Control." All definitions from F.S. §§ 316.003 and 316.2128, are incorporated herein by reference, including the definition of "motorized scooter." This article shall apply to any and all motorized scooters and motorized scooter services operating within the corporate limits of the City of Miami ("city"), as permitted. This article is intended to govern the operation of motorized scooters and motorized scooter services within the city to ensure that they are consistent with the safety and well-being of all bicyclists, pedestrians, and other users of the public rights-of-way. This article shall not apply to any sidewalk/sidewalk area funded by the Federal Government except as expressly allowed by United States Department of Transportation Secretary or as expressly allowed by 23 United States Code Section 217(h). The pilot program under this article shall apply to the area of the city within city commission district 2. Motorized scooters are not authorized by the pilot program under this article in any area of the city other than city commission district 2.

Sec. 8-9. - Definitions.

As used in this article the following definitions apply:

Application Programming Interface Key" ("API Key") shall mean a code passed in by computer programs calling an application programming interface ("API") to identify the calling program, its developer, or its user to the web site.

Bike lane shall mean a part of the road which is intended to be used in part by people riding bicycles.

Bike path shall mean a bikeway separated from motorized traffic and dedicated to cycling or shared with pedestrians or other users.

License shall mean the document by which a privilege is granted by the city to authorize a person to operate a motorized scooter service within its corporate limits. Any license issued in accordance with this article shall be nonexclusive.

Motorized scooter(s) shall have the meaning ascribed to it in F.S. § 316.003, as amended. "Motorized scooter(s)" are further defined as a device, with an electric motor, designed to transport only one person, exclusively or in combination with the application of human power, which cannot attain a speed of more than 15 miles per hour without the application of human power on a level surface.

Motorized scooter service shall mean a system in which motorized scooters are made available for shared use to individuals on a short-term basis for a price or fee.

Operator shall mean an individual or company that has been issued a license pursuant to this article and/or pursuant to any appropriate procurement process, if approved by the city commission, as may be later determined by the city commission to be applicable, as outlined in chapter 18 of this Code.

Rebalance shall mean moving motorized scooters from an area of low demand to an area of high demand.

Sidewalk means that portion of the public right-of-way between the back of curb lines or the lateral lines of a non-driving lane separated by curb and the adjacent property lines, where a three-foot minimum clearance is available to pedestrians and intended for public use. There may also be a median strip or road verge (a strip of vegetation, grass or bushes or trees or a combination of these) either between the sidewalk and the roadway or between the sidewalk and the adjacent property line (also described as "right-of-way line" or "building baseline").

Sidewalk area includes bike lanes and bike path, as well as the sidewalk width perpendicular to the road times the sidewalk length along and parallel to the road.

Transit facility means a facility providing accommodations by public, private, or nonprofit entities for the conveyance of persons from one place to another by means of a transportation system, including but not limited to: bus terminal, railroad station, freight terminal, airport, helistop or seaport.

Sec. 8-10. - Rules and regulations.

(a) The city manager, or his or her designee, may administratively issue, promulgate and establish additional rules and regulations, consistent with this article and applicable state and federal laws, as determined to affect the policy of this article. All additional rules and regulations shall be made available on the city's website.

(b) Pilot program. The city hereby establishes a six-month pilot program (the "pilot term") for the operation of temporary pilot program licenses within the boundaries of commission district 2.

(1) Operators shall have a maximum initial fleet of 100 motorized scooters. Each operator will deploy no more than 50 motorized scooters during the first two weeks of the pilot program.

(2) The city shall allow operators to increase their fleet size on a monthly basis by a maximum of 25 percent if operator's usage data demonstrates that their fleet provides on average more than three rides per motorized scooter per day. The increase in vehicles on the street or sidewalk/sidewalk area shall not exceed the amount required to keep usage rates at or above three rides per motorized scooter per day. The city may also require operators to reduce their fleet size on a monthly basis by 25 percent if operator's usage data demonstrates that their fleet provides on average less than two rides per motorized scooter per day.

(3) Notwithstanding subsection (2), the city retains the right to require operators to reduce their fleet size or cease operations in the event that operators repeatedly fail to timely rebalance or remove vehicles blocking the right-of-way or provide timely responses to complaints received by the city.

(4) During the duration of the pilot program, operators shall designate two local operational staff who will be responsible for fielding complaints, addressing technical difficulties, coordinating the rebalancing and removal of scooters parked illegally, and providing public education.

(5) On or before the expiration of this pilot program, the city manager or his designee shall report to the city commission on the status of the pilot program. Following the city manager's report, the city commission will consider the city's options relative to the pilot program including: discontinuing, reinstating, or expanding the pilot program, authorizing the city manager to issue a competitive solicitation for a more permanent motorized scooter license program, or such other measures as determined to be in the city's best interests.

Sec. 8-11. - Application for pilot program license.

(a) A person may not operate, or cause or permit the operation of, a motorized scooter service for the duration of the pilot program without first having obtained a valid pilot program license issued under this article.

(b) A person desiring to obtain a license shall make a written application in a form prescribed by the city manager, or his or her designee, with the applicant being the person who will own, control, or operate the proposed motorized scooter service.

(c) An applicant shall file with the city a verified application statement that, at a minimum, contains the following:

(1) The address of the applicant's operations center within the city, and the address of the applicant's corporate headquarters, if different from the address of the operations center;

(2) A witnessed signature of the applicant;

(3) Documentary evidence from an insurance company indicating that such insurance company has bound itself to provide the applicant with the insurance required by the article;

(4) Documentary evidence from a bonding or insurance company or a bank indicating that the bonding or insurance company or bank has bound itself to provide the applicant with the payment and performance bond or irrevocable letter of credit required by this article;

(5) Documentary evidence indicating that the applicant has applied for and received a current certificate of use, business tax receipt, occupational license, and similar permits and approvals, as applicable;

(6) An agreement to indemnify the city, in a form acceptable to the city;

(7) The name of the person designated to receive any and all notices sent by the city to the operator, including their mailing address, telephone number, and e-mail address; and

(8) The name of the person designated to rebalance, remove, and/or relocate motorized scooter(s), including their mailing address, telephone number, and e-mail address.

(d) The application shall be accompanied by a non-refundable licensing fee of $50,000.00, which shall be used to offset any costs to the city and/or the department of off-street parking, also referred to as the Miami Parking Authority ("MPA") related to enforcement of this section. Any excess licensing fees shall be designated for sidewalk/sidewalk area and/or street improvements within the pilot program area.

(e) A pilot program license shall expire six months from the date it is issued.

(f) In the event that the pilot program is reinstated by vote of the city commission, pilot program license(s) may be renewed following the same process set forth in this section.

(g) The city manager, or his or her designee, reserves the right to cancel any license, if there is a violation of the article, violations involving public health, safety or general welfare, failure to maintain the required insurance or bonding or otherwise comply with this article, or for other good and sufficient cause as determined by the city manager in his or her sole discretion.

Sec. 8-12. - Motorized scooter fee.

In addition to the non-refundable licensing fee set forth in section 8-11, operators shall remit to the city a motorized scooter fee in an amount equivalent to $1.00 per motorized scooter per day. The motorized scooter fee shall be calculated monthly based on usage data. During the duration of the pilot program, this motorized scooter fee shall be designated for sidewalk/sidewalk area, and/or street improvements within pilot program area.

Sec. 8-13. - Motorized scooter parking.

(a) Motorized scooters must be parked on a sidewalk or other hard surface, beside a bicycle rack, or at a city-owned location. Motorized scooters may only be parked on private property with the permission of the property owner.

(b) Motorized scooters may not be parked at bicycle docking stations located on city and/or MPA property with an existing agreement.

(c) Motorized scooters must be upright while parked.

(d) Motorized scooters may not be parked in a manner that would impede normal and reasonable pedestrian access on a sidewalk or in any manner that would reduce the minimum clear width of a sidewalk to less than three feet.

(e) Motorized scooters may not be parked in a manner that would impede vehicular traffic.

(f) Motorized scooters may not be parked in a manner that would impose a threat to public safety or security.

(g) Motorized scooters may not be parked on a block where the sidewalk is at any point less than six feet in width, or on a block that does not have sidewalks.

(h) Motorized scooters may not be parked in a visibility triangle as defined in section 54-1 of this Code, measured in accordance with Section 3.8.4 of Miami 21 Code, the zoning ordinance of the City of Miami, Florida, as amended.

(i) Motorized scooters must be parked in a manner that is compliant with the applicable provisions of the Americans with Disabilities Act of 1990.

(j) Motorized scooters may not be parked in a way that blocks:

(1) Fire hydrants call boxes or other emergency facilities;

(2) Transit facilities;

(3) Loading spaces or zones;

(4) Passenger loading spaces or zones, or valet parking service areas;

(5) Railroad tracks or crossings;

(6) Disabled or prohibited parking zones;

(7) Street furniture that requires pedestrian access (for example, benches, parking pay stations, or bicycle/news racks);

(8) Window displays;

(9) Building entryways; or

(10) Vehicular driveways.

(k) Motorized scooters that are parked in an incorrect manner must be re-parked, removed and/or relocated by an operator within two hours of receiving notification from the city.

(l) The city or the MPA may identify designated motorized scooter parking zones in order to guide riders to preferred parking zones and assist with the orderly parking of motorized vehicles throughout the city.

Sec. 8-14. - Operations.

(a) No one under the age of 18 shall operate a motorized scooter.

(b) Operators shall comply with all applicable rules, regulations, and laws, including any additional rules and regulations promulgated by the city manager, or his or her designee.

Persons operating motorized scooters shall be subject to all rules, regulations, and laws, including any additional rules and regulations promulgated by the city manager, or his or her designee, applicable to an operator, except those which, by their very nature, can have no application. The city manager may consider the following factors in promulgating the rules: The National Association of City Transportation Officials recommendations, inclusive of, cities should require licensees to come to agreement with the city on procedures and protocols for:

- Extreme weather (e.g. blizzards, hurricanes, floods)
- Emergencies (e.g. earthquakes, fires, etc.)
- Special events (e.g. marathons, events, parades, film shoots, etc.)
- Maintenance (e.g. debris and trash removal) for small vehicle parking zones. Operators shall at all times maintain a staffed operations center within the city;

(c) Operators shall maintain a 24-hour customer service phone number prominently posted on each motorized scooter for customers and citizens to report safety concerns, make complaints, ask questions, or request that a motorized scooter(s) be relocated.

(d) Operators shall provide the city with the contact information for someone who can rebalance, remove, and/or relocate motorized scooter(s). The operator shall rebalance, remove, and/or relocate a motorized scooter(s) within two hours of receiving notification from the city. An operator shall notify the city within 24 hours of a change in contact information.

(e) Any motorized scooter that is removed due to maintenance or safety issues shall be repaired before being returned to service.

(f) The city and/or MPA may, without prior notice to the operator, remove any motorized scooter(s) that is/are visibly damaged or non-functional, or blocking the public right-of-way, or located outside the pilot program area, and take it to a MPA or other city facility for storage, at the sole expense of an operator. The city and/or MPA shall charge a fee of not to exceed $25.00 per scooter for removal and storage. The city and/or the MPA shall invoice the operator for the cost of removal and storage. Any motorized scooter that remains unclaimed with the city and/or MPA for five days is subject to sale pursuant to the procedures for abandoned or lost property set forth in F.S. § 705.103, or by any other method allowed by the laws of the State of Florida or the city.

(g) Motorized scooters must be well maintained and in good operating condition.

(h) Motorized scooters must be of a high quality and sturdily built to withstand the effects of weather and constant use for a period of no less than five years.

(i) Motorized scooters must be rebalanced on a daily basis.

(j) Motorized scooters shall not display any third-party advertising.

(k) Each motorized scooter shall be equipped with active global positioning system (GPS) technology.

(l) Each motorized scooter shall display the name of the operator, (and if it can be accommodated the local business address) along with a unique identification number.

(m) Operators shall educate persons operating motorized scooters regarding the rules, regulations and laws applicable to riding, operating, and parking a motorized scooter. An operator's mobile application must provide information notifying a user that:

(1) Motorized scooters may be operated on streets or sidewalks/sidewalk areas in a manner similar to bicycles;

(2) Motorized scooters are to be operated at a person's own risk, and that no representation is being made by the city as to the condition of any sidewalk or sidewalk area;

(3) Motorized scooters shall at all times yield to pedestrians and shall give an audible signal before overtaking and passing such pedestrian;

(4) The use of helmets while operating a motor scooter is strongly encouraged; and

(n) Operators will implement marketing and targeted community outreach plans, at their own expense, and to the satisfaction of the city, to promote the use of motorized scooters, particularly in low-income communities, and provide education regarding the rules, regulations and laws applicable to riding, operating, and parking a motorized scooter, as well as safe, prudent, defensive, and courteous operation.

(o) Operators shall work with local businesses or other organizations to promote the use of helmets by persons operating motorized scooters through partnerships, promotional credits, and other incentives.

(p) Operators shall not place or attach any fixtures, structures, or personal property, other than a motorized scooter, in the public right-of-way without the written permission of the city manager or his or her designee. Permission to place any items in the public right-of-way must be incorporated into the license.

(q) If the city incurs a cost in addressing or abating any violation of this article, or incurs any cost of repair or maintenance of any public property resulting from the use of motorized scooters, the operator shall reimburse the city for the full cost within 30 days of receiving written notification from the city.

Sec. 8-15. - Data sharing.

(a) Operators shall cooperate with the city in the collection and analysis of aggregated data concerning its operations. All data furnished under section 8-15 will be in a form reasonably acceptable to the chief information officer of the city. Operators shall provide the city with real-time information on all motorized scooters operating within its boundaries through a documented API. Operators shall provide the city manager, and his or her designee under section 8-15, the chief information officer, with the procedure and credentials to authenticate to the API.

(b) Operators shall publish to the API (1) the point location, and (2) identification number for each motorized scooter. The city shall be permitted to display real-time data provided via the API and may publish real-time motorized scooter availability data to the public.

(c) Operators shall publish to the API (1) the point location, and (2) identification number for each motorized scooter. The city shall be permitted to display real-time data provided via the API and may publish real-time motorized scooter availability data to the public.

(d) Operators shall also provide the following anonymized data for each trip record through the API:

Field Name	Format	Description
Company Name	[Company Name]	N/A
Trip Record Number	XXX0001, XXX0002, XXX0003, …	3-Letter Company Acronym + Consecutive Trip Number
Trip Duration	MM:SS	N/A
Trip Distance	Feet	N/A
Start Date	MM/DD/YYYY	N/A
Start Time	HH:MM:SS (00:00:00 -	N/A
End Date	MM/DD/YYYY	N/A
End Time	HH:MM:SS (00:00:00 -	N/A
Start Location	XY or Lat/Lon Coordinates XY or Lat/Lon Coordinates	N/A
End Location	XY or Lat/Lon Coordinates	N/A
Identification Number	xxxx1, xxxx2, …	Unique Identification for Every Motorized Scooter

Route: Licensee will create a GeoJSON Feature Collection where every observed point in the route, plus a time stamp, should be included. The route must include at least two points, a start point and end point. Additionally, it must include all possible GPS samples collected by a provider.

Standard Cost: The cost, in cents that it would cost to perform that trip in the standard operation of the system.

Actual Cost: The actual cost in cents paid by the user for the trip.

Sec. 8-16. - Insurance requirements.

(a) An operator shall procure and keep in full force and effect no less than the insurance coverage required by this section through a policy or policies written by an insurance company or companies authorized to do business in Florida, who are rated A- (V) or better per A.M. Best's Key Rating Guide.

(b) The insured provisions of the policy or policies must list the city, the MPA, their officers and employees as additional insureds, and the coverage provisions must provide coverage for any loss or damage that may arise to any person or property by reason of the operation of a motorized scooter.

(c) An operator shall maintain the following insurance coverages:

(1) Commercial general liability with limits of $2,000,000.00 per occurrence, $5,000,000.00 policy aggregate affording coverage for claims resulting from bodily injury (including death) and property damage. The policy shall be written on a primary and noncontributory basis, and should insure against premises and operations, personal injury, and contingent and contractual exposures.

(2) Automobile/motorcycle liability affording coverage on all motor vehicles/scooters used in connection with the operations or activities contemplated under this article. The operator should furnish the city with a policy affording coverage on all owned autos and scooters, including coverage for hired and non-owned auto exposures, with a combined single limit for bodily injury (including death) and property damage of $2,000,000.00 per accident.

(3) Workers compensation subject to the statutory limits of the State of Florida.

(4) The city retains the right to require additional insurance coverage in connection with the activities performed by the operator under this article as may be determined by the city risk management director, considering the size of the fleet and other liability insurance related factors.

(5) Failure to maintain required insurance coverage is cause for immediate cancellation of the license by the city manager or his or her designee.

(d) Any insurance policy required by this section must be on file with the risk management department, in a form acceptable to the city manager, or his or her designee, prior to the issuance of a License under this article.

(e) Insurance required under this section must include a cancelation provision in which the insurance company is required to notify both the operator and city manager, or his or her designee, in writing not fewer than 30 days before cancelling any insurance policy or before making a reduction in coverage. An operator, upon receiving said notice, shall file with the risk management department, in a form acceptable to the city manager, or his or her designee, any and all replacement insurance policies prior to the cancelation or reduction of the same.

(f) An operator may not be self-insured.

Sec. 8-17. - Performance bond or irrevocable letter of credit.

(a) An operator shall submit to the risk management department a payment and performance bond, in a format as prescribed in F.S. § 255.05, and in a form acceptable to the city manager, or his or her designee, prior to the issuance of a license under this article.

(b) Alternatively, an operator may post an irrevocable letter of credit issued by a bank authorized to transact business in Florida.

(c) The payment and performance bond or irrevocable letter of credit shall be in the sum of $50,000.00, and must list the operator as principal and be payable to the city.

(d) The payment and performance bond or irrevocable letter of credit must remain in effect for the duration of the license.

(e) Cancellation of the payment and performance bond or irrevocable letter of credit does not release the operator from the obligation to meet all requirements of this article and license. If the payment and performance bond or irrevocable letter of credit is cancelled, the license shall be suspended on the date of cancelation and the operator shall immediately cease operations until the operator provides the city manager, or his or her designee, with a payment and performance bond or irrevocable letter of credit that meets the requirements of this section.

Sec. 8-18. - Indemnification.

Operators shall indemnify, defend, and hold harmless the city, the MPA, jointly and severally, and their respective officers, employees, agents and instrumentalities from any and all liability, losses or damages, including any and all attorneys' fees and costs of defense, which the city and its officers, employees, agents and instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature including, but not limited to, personal injury or wrongful death, property loss or damage, the conditions and features on all sidewalks and sidewalk areas, or other areas within the city on which a motorized scooter is operated, to the extent arising out of or in any way connected with the operation of the motorized scooter service or use of a motorized scooter. Operators shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the city, where applicable, including administrative, trial, and appellate proceedings, and shall pay all costs, judgments, and attorneys' fees which may issue thereon. Operators shall expressly understand and agree that any insurance protection required by this article, or otherwise provided or secured by an operator, shall in no way limit the responsibility to indemnify, defend and hold harmless the city, the MPA, or their officers, employees, agents and instrumentalities as required by this section. The obligation to indemnify, defend, and hold harmless will survive the revocation, cancellation, or expiration of a license. The operators will acknowledge on the license application form, which will include this indemnification in substantially the language provided by this section, that the granting of the license is, in part, conditioned on the granting of this indemnification which is knowingly and voluntarily given by the operators.

Sec. 8-19. - Expiration.

The motorized scooter pilot program will automatically terminate on April 30, 2019 or six months from the effective date of the ordinance from which this article derives, whichever occurs last

CHAPTER 2019-109

Committee Substitute for Committee Substitute for House Bill No. 453

An act relating to mobility devices and motorized scooters; amending s. 316.003, F.S.; defining the term "micromobility device"; revising the definition of the term "motorized scooter"; conforming a cross-reference; amending s. 316.1995, F.S.; conforming a provision to changes made by the act; amending s. 316.2128, F.S.; providing that the operator of a motorized scooter or micromobility device has all of the rights and duties applicable to the rider of a bicycle, except the duties imposed by specified provisions that by their nature do not apply; providing for construction; exempting a motorized scooter or micromobility device from certain registration, insurance, and licensing requirements; providing that a person is not required to have a driver license to operate a motorized scooter or micromobility device; requiring a person who offers motorized scooters or micromobility devices for hire to be responsible for securing all such devices located in any area of the state where a certain warning has been issued by the National Weather Service; deleting specified requirements for the sale of motorized scooters; amending s. 316.2225, F.S.; exempting electric personal assistive mobility devices and motorized scooters from certain emblem requirements; amending s. 320.01, F.S.; revising the definition of the term "motor vehicle"; amending s. 655.960, F.S.; conforming a cross-reference; providing an effective date.

Be It Enacted by the Legislature of the State of Florida:

Section 1. Present subsections (38) through (101) of section 316.003, Florida Statutes, are redesignated as subsections (39) through (102), respectively, a new subsection (38) is added to that section, and present subsections (44) and (59) of that section are amended, to read:

316.003 Definitions.—The following words and phrases, when used in this chapter, shall have the meanings respectively ascribed to them in this section, except where the context otherwise requires:

(38) MICROMOBILITY DEVICE.—Any motorized transportation device made available for private use by reservation through an online application, website, or software for point-to-point trips and which is not capable of traveling at a speed greater than 20 miles per hour on level ground. This term includes motorized scooters and bicycles as defined in this chapter.

(45)(44) MOTORIZED SCOOTER.—Any vehicle or micromobility device that is powered by a motor with or without ~~not having~~ a seat or saddle for the use of the rider, which is designed to travel on not more than three wheels, and which is not capable of propelling the vehicle at a speed greater than 20 30 miles per hour on level ground.

(60)~~(59)~~ PRIVATE ROAD OR DRIVEWAY.—Except as otherwise provided in paragraph (82)(b) ~~(81)~~(b), any privately owned way or place used for vehicular travel by the owner and those having express or implied permission from the owner, but not by other persons.

Section 2. Section 316.1995, Florida Statutes, is amended to read:

316.1995 Driving upon sidewalk or bicycle path.—

(1) Except as provided in s. 316.008, ~~or~~ s. 316.212(8), or s. 316.2128, a person may not drive any vehicle other than by human power upon a bicycle path, sidewalk, or sidewalk area, except upon a permanent or duly authorized temporary driveway.

(2) A violation of this section is a noncriminal traffic infraction, punishable as a moving violation as provided in chapter 318.

(3) This section does not apply to motorized wheelchairs.

Section 3. Section 316.2128, Florida Statutes, is amended to read:

316.2128 Micromobility devices, ~~Operation of~~ motorized scooters, and miniature motorcycles; requirements ~~for sales~~.—

(1) The operator of a motorized scooter or micromobility device has all of the rights and duties applicable to the rider of a bicycle under s. 316.2065, except the duties imposed by s. 316.2065(2), (3)(b), and (3)(c), which by their nature do not apply. However, this section may not be construed to prevent a local government, through the exercise of its powers under s. 316.008, from adopting an ordinance governing the operation of micromobility devices and motorized scooters on streets, highways, sidewalks, and sidewalk areas under the local government's jurisdiction.

(2) A motorized scooter or micromobility device is not required to satisfy the registration and insurance requirements of s. 320.02 or the licensing requirements of s. 316.605.

(3) A person is not required to have a driver license to operate a motorized scooter or micromobility device.

(4) A person who offers motorized scooters or micromobility devices for hire is responsible for securing all such devices located in any area of the state where an active tropical storm or hurricane warning has been issued by the National Weather Service.

(5)~~(1)~~ A person who engages in the business of, serves in the capacity of, or acts as a commercial seller of ~~motorized scooters or~~ miniature motorcycles in this state must prominently display at his or her place of business a notice that such vehicles are not legal to operate on public roads, may not be registered as motor vehicles, and may not be operated on sidewalks unless authorized by an ordinance enacted pursuant to s. 316.008(7)(a) or s.

316.212(8). The required notice must also appear in all forms of advertising offering ~~motorized scooters or~~ miniature motorcycles for sale. The notice and a copy of this section must also be provided to a consumer prior to the consumer's purchasing or becoming obligated to purchase ~~a motorized scooter or~~ a miniature motorcycle.

~~(6)~~(2) Any person selling or offering ~~a motorized scooter or~~ a miniature motorcycle for sale in violation of this section commits an unfair and deceptive trade practice as defined in part II of chapter 501.

Section 4. Subsection (7) of section 316.2225, Florida Statutes, is amended to read:

316.2225 Additional equipment required on certain vehicles.—In addition to other equipment required in this chapter, the following vehicles shall be equipped as herein stated under the conditions stated in s. 316.217.

(7) On every slow-moving vehicle or equipment, animal-drawn vehicle, or other machinery designed for use and speeds less than 25 miles per hour, excluding electric personal assistive mobility devices and motorized scooters, but including all road construction and maintenance machinery except when engaged in actual construction or maintenance work either guarded by a flagger or a clearly visible warning sign, which normally travels or is normally used at a speed of less than 25 miles per hour and which is operated on a public highway, there must be:

~~(a)~~ a triangular slow-moving vehicle emblem SMV as described in, and displayed as provided in, this subsection ~~paragraph (b)~~.

(a) The requirement of the emblem shall be in addition to any other equipment required by law. The emblem shall not be displayed on objects which are customarily stationary in use except while being transported on the roadway of any public highway of this state.

(b) The Department of Highway Safety and Motor Vehicles shall adopt such rules and regulations as are required to carry out the purpose of this section. The requirements of such rules and regulations shall incorporate the current specifications for SMV emblems of the American Society of Agricultural Engineers.

Section 5. Paragraph (a) of subsection (1) of section 320.01, Florida Statutes, is amended to read:

320.01 Definitions, general.—As used in the Florida Statutes, except as otherwise provided, the term:

(1) "Motor vehicle" means:

(a) An automobile, motorcycle, truck, trailer, semitrailer, truck tractor and semitrailer combination, or any other vehicle operated on the roads of this state, used to transport persons or property, and propelled by power

other than muscular power, but the term does not include traction engines, road rollers, motorized scooters, micromobility devices, personal delivery devices and mobile carriers as defined in s. 316.003, special mobile equipment as defined in s. 316.003, vehicles that run only upon a track, bicycles, swamp buggies, or mopeds.

Section 6. Subsection (1) of section 655.960, Florida Statutes, is amended to read:

655.960 Definitions; ss. 655.960-655.965.—As used in this section and ss. 655.961-655.965, unless the context otherwise requires:

(1) "Access area" means any paved walkway or sidewalk which is within 50 feet of any automated teller machine. The term does not include any street or highway open to the use of the public, as defined in s. 316.003(82)(a) or (b) ~~s. 316.003(81)(a) or (b)~~, including any adjacent sidewalk, as defined in s. 316.003.

Section 7. This act shall take effect upon becoming a law.

Approved by the Governor June 18, 2019.

Filed in Office Secretary of State June 18, 2019.

Attachment C

Subject: Pilot eScooter Program (April 1, 2019 – Oct 1, 2019)

Content: Outline of Findings from the perspective of the Department of Innovation and Technology through July 31, 2019

Lessons Learned

a. Usage Trends
b. Compliance Issues/Concerns
    a. The expectations (and thereby the department-generated guidelines document) were such that the each of the 6 providers involved in the pilot would be providing well developed data through the MDS (Mobility Data Standard) data feed in two different deliveries: 1. Active/current information, 2. Historical information. Well into the pilot, through some trial and error communicating back and forth with the vendors, it became unanimous that the vendors did not comply with the MDS for active/current information and therefore insisted that we utilize the GBFS feed for that data, which is also what they use in their own applications.
    b. Inconsistencies with several vendors of transmitting scooter ID's in the same format as the ID's displayed on the scooters themselves. This is currently still pending resolution.
    c. The accuracy of the geolocation of the scooters are more accurate for some vendors than others.
    d. The frequency of data updates differs from each vendor. It would be prudent to agree on a frequency standard and impose that.
    e. There is a need to constantly supervise the incoming vendor data as fields change with little or no warning.
    f. For trip data, we need to ensure that all days are accounted for and contact vendors when this is not the case.
    g. There is a need for frequent communication with the vendor to ensure they refresh their data and feed is working correctly.
    h. The average number of trips per scooter only uses trips data because most vendors' data do not have the same IDs in their GBFS and trip feeds. This leaves out vehicles that have not had any trips We should include them and let vendors figure out their scooter IDs if they want to get a better, more favorable count.
    i. Guidelines provided by PS Team (Armando) included the Mobility Data Specification (MDS) and additional requirements. They were not followed because of vendor confidential information concerns. After adopting MDS, and after ironing out several issues with vendors, feeds started to work better and collection of data improved
    j. We do not keep history of all scooter feeds as they come in every minute and could mean large amounts of data, even if a scooter has not moved or moved a few steps.
    k. Initially, trips data were given with only start and end locations which were not useable to create route features that will show actual traveled route along a road. DoIT staff contacted vendors to improve data quality in this aspect.

l. Vendors did not turn off their vehicle when they were taken out of repair or maintenance. This caused additional data clean-up effort to find "outliers" of trips that behave abnormally. This includes extreme speed, high travel distance, and frequent out-of-bound travels.
m. Bird, Bolt, Lime, and Lyft have given us tokens which do not expire to retrieve data. Spin requires a token refresh/update every time we request data. Jump required new token every month. This caused the City's team additional maintenance and QA/QC efforts to ensure the data are received correctly and timely.

c. Traffic Concerns
d. Financial reimbursements
e. Legal/Safety Issues
f. Other
    a. Manhours of work: April 1 – July 31
        i. DoIT Lead – 90 hrs (continues at the rate of ~5hrs/week)
        ii. GIS Team – 600 hrs (continues at the rate of ~15hrs/week)

Recommendations

a. Continuation of Pilot Program
b. Expansion to other portions of city
c. Legislative changes
d. Program management changes
    a. DoIT will supply a revised guidelines policy updated based on Lessons Learned.
    b. As the data set grows, we need to define what to store, governance, and what can be shared through public records requests and open data
    c. We need to decide whether to continue to manage internally or commission one of the many OTS solutions.
    d. Refine the GIS Dashboard and optimize for usability and for future analysis.
    e. Define our intentions and involvement with Open Mobility Foundation.
    f. We need vendors to validate/indicate their MDS/GBFS horizontal accuracy. At this time, it is unclear on horizontal accuracy required by the City. A spot check by city employee may be helpful to help validate data.
e. RFP for Permanent Program

Scooter Pilot Program

Dashboard Application

I. Objectives

The dashboard application displays historical electric scooter trip/route information of six vendors including Bird, Bolt, Jump, Lime, Lyft, and Spin. It is intended to provide a single access for the need-to-know users with the ability to view graphical information of scooter usage, within the City of Miami's Commission District 2. Additionally, the application should be secure and restrict access to a specific user group. Finally, the application should assist in answering specific questions as part of the Scooter Pilot Program's evaluation process. The following questions were formulated to initiate analysis and assist in producing this application:

1. How many scooters each vendor had on the road each day?
2. How many scooters, per vendor, were out of bounds (District 2 boundary) each day?
3. Where are the hot spots for trip starting points?
4. What routes are frequently used by scooters (overall)?
5. What time of day are the most popular for scooter usage?

II. Terminology

Application Programming Interface (API): A method for computers to communicate and share data with each other via operating system, application, or other types of services.

Mobility Data Specification (MDS): Application Programming Interface (API) used for transmitting vehicle and trips information from "mobility" vendors to the city.

General Bikeshare Feed Specification (GBFS): These feeds are provided by the vendor to show real-time shared vehicle availability.

Out-of-bound: Any scooter trip/route that intersect Commission District 2 boundary. The trip may start inside or outside the boundary. The trip will be considered out-of-bound when any part of the segment, representing the same trip, crossed the boundary line of District 2.

III. Data Received

The vendors provided scooter data via Mobility Data Specification (MDS) for scooters trips and availability, andGeneral Bikeshare Feed Specification (GBFS). General processes to request data from vendors are as followed:

- HTTP request method
- cURL command

Data is processed at different frequencies and time of day, based on the availability.

A. GBFS-FreeBikes Status

i. This dataset is used on the Scooter Map to show available scooters. Also, it is used as supporting data of the "Search" tab on the dashboard.

ii. Free bikes data retrieved at two location one is at GeoEvent GBFS-FreeBikes features are maintained for 180 minutes before they get deleted off the list. This is also referred as "aging period." The deletion process of "aged" features happens every hour.

iii. Second location will be at task scheduler. Dataset gets processed every hour and gets the Freebikes available at that particular script runtime and inserts into table [GISEDIT].[GISADMIN].[SCOOTERGBFSFREEBIKES]

Note: GBFS script only affects scooter count by hour.

B. MDS-Status_Changes

i. This dataset is used on the Scooter Map to show current available scooters along with GBFS-FreeBikes. By using a combination of MDS and GBFS to show scooters availability, it increases our level of confidence in the data provided, an attempt to achieve a complete picture of available scooters.

ii. MDS-Status_Changes features are maintained for 300 minutes before they are deleted off the list. Deletion process of aged features happens every 2.5 hours.

C. MDS-Trips

i. This dataset affects most tables and applications used to create the Dashboard, include the following:

a) Routes - line feature class

b) vw_scooters_Hourly – SQL view table

c) Dashboard overview tab
d) Tabs with Vendor's dashboard heat maps and graphs
e) Dashboard Time of Day tab
f) Search query tab

ii. This dataset gets processed and updated at 11PM daily. The update includes the previous day's routes from 00:00 - to 11:59:59 PM

Notes: Trips with a duration less than 4 seconds and distance less than 30 meters will be omitted as this indicates customers were not able to successfully operate the scooter for unknown reasons. Additionally, trips more than 30 MPH will be omitted due to scooters are moving at abnormal speed. This indicates scooters are being transported by car for servicing or other unknown reasons. Normal max speed for these scooters are ranging between 17-22 MPH. Finally, trips that travel more than 720 miles within 24-hour period and with the speed higher than 30 MPH will be omitted. This is not realistic for real-world behavior and not sustainable without charging/maintenance of the vehicle.

IV. Scooter Data

A. Routes:

Source: (SDESTG12\GISEDIT.GISADMIN.scooters\GISEDIT.GISADMIN.routes)
Data type: Line features
Coordinate System: GCS_WGS_1984
Related Fields:

Field Name	Data Type	Description
PROVIDER_ID	Text	Vendor Global Unique ID
PROVIDER_NAME	Text	Vendor
VEHICLE_TYPE	Text	The type of mobility vehicle (e.g. scooter, car, bike)
VEHICLE_ID	Text	Vehicle Unique ID
START_TIME	Text	Trip start time
END_TIME	Text	Trip end time
DEVICE_ID	Text	Vehicle Global Unique ID
TRIP_ID	Text	Trip Global Unique ID
INSIDE_FLAG	Short Int	Identifying trip segment as inside District 2 boundary or outside using Trips processing script. 0 = inside only; 1 = traveled outside
TRIP_DISTANCE	Long Int	Distance of each trip in meters
TRIP_DURATION	Long Int	Time of each trip in seconds
MPH	Short Int	Miles per hour = (trip dist*0.000621)/(trip duration/3600)
X_Start	Double	X-coord of trip starting location
Y_Start	Double	y-coord of trip starting location

TraveledOutside	Short Int	Additional manual check to ensure inside/outside District 2 boundary are flagged correctly by using "Select by Location" tool. 0 = inside only; 1 = traveled outside
TimeBlock	Text	Time of Day in 3-hour blocks, starting with block "1" from midnight to 3AM

B. Scooter Hourly:

Source: (SDESTG12\ GISEDIT.GISADMIN.vw_SCOOTERS_HOURLY)

Data type: View

Related Fields:

Field Name	Data Type	Description
PROVIDER	Text	Vendor name
HOUR	Text	Date Format: YYYY-MM-DD HH
SCOOTERS	Long Int	Count of unique vehicle ID inside District 2 for each hour

This view is a grouping of the routes and freeBikes table (feeds) by provider/scooter ID/hour. The grouping by hours uses both the start time and end time for trips, and the actual time for freeBikes.

V. Application Security

The dashboard application requires two-level authentication to gain full access and view the data.

Level-1: Enterprise Login

The dashboard application is available to all users under the "Scooter Pilot Program" user group, identified in ArcGIS Online and administered by the GIS team. Additional security (see Level-2) is required to view vendor's specific data including Trip Count Overview, Time of Day, all individual vendor's tab, and Search tab.

Level-2: Data Service Login

An additional username and password will be required to view data relating to a specific vendor. Without this username and password, users will not have the ability to view any pie charts or bar graphs for all tabs. To obtain this login, please contact gis@miamigov.com.

Note: The search tab is only available for access via VPN or LAN connection within RIVERSIDE network. At this time, users will not be able to access this functionality offsite without VPN. For peak performance, we recommend the users to view the dashboard using Internet Explorer or Google Chrome.

VI. Dashboard Components

TAB 1: Trip Count Overview

Objective: To provide a single view of scooter uses of all vendors inside District 2. The total count above each pie chart represents total number of trips for each vendor based on specified dates in the "Custom Date Range" tool.

Custom Date Range: This tool allows user to adjust the dates and data associated with the pie charts and total counts for all vendors.

Total Count: Each block indicates the total number of trips by vendor. Use the Custom Date Range tool to adjust the data based on date-of-interest.

Pie Chart: Each pie chart indicates the actual count and the percentage of trips that stayed inside District 2 boundary or had traveled outside at any point during the trip.

Traveled Outside: Red indicates trips that crossed over District 2 boundary line at some point during the duration of the trip.

Inside Permitted Area: Green indicates trips that stayed within District 2 boundary and never crosses the boundary line.

Note: Trips counted as "traveled outside" include all trips that may have started outside District 2 boundary and end inside the boundary, same as reverse.

TAB 2: Time of Day

Objective: To provide time block overview of scooter use at different time of day. Time blocks are broken down into 3-hour blocks.

Bar graph: Total count can be adjusted based on dates by using the Date Range Tool at the top of the page. Vendors are indicated by unique assigned colors within the time block. Users can hover the mouse over the bar to view individual information.

TAB 3-8: Specific Vendor

Objective: To provide vendor's specific summary of scooter usage within District 2.

Custom Date Range: This tool allows the user to adjust the dates and data associated with the Trip Count Per Day bar graph and Heat Map.

Total Count: This indicates the total count based on the date range indicated at the top of the page (Custom Date Range tool).

Bar graph: Date range can be adjusted by using the Custom Date Range Tool at the top of the page. Users can hover the mouse over the bar to view individual information.

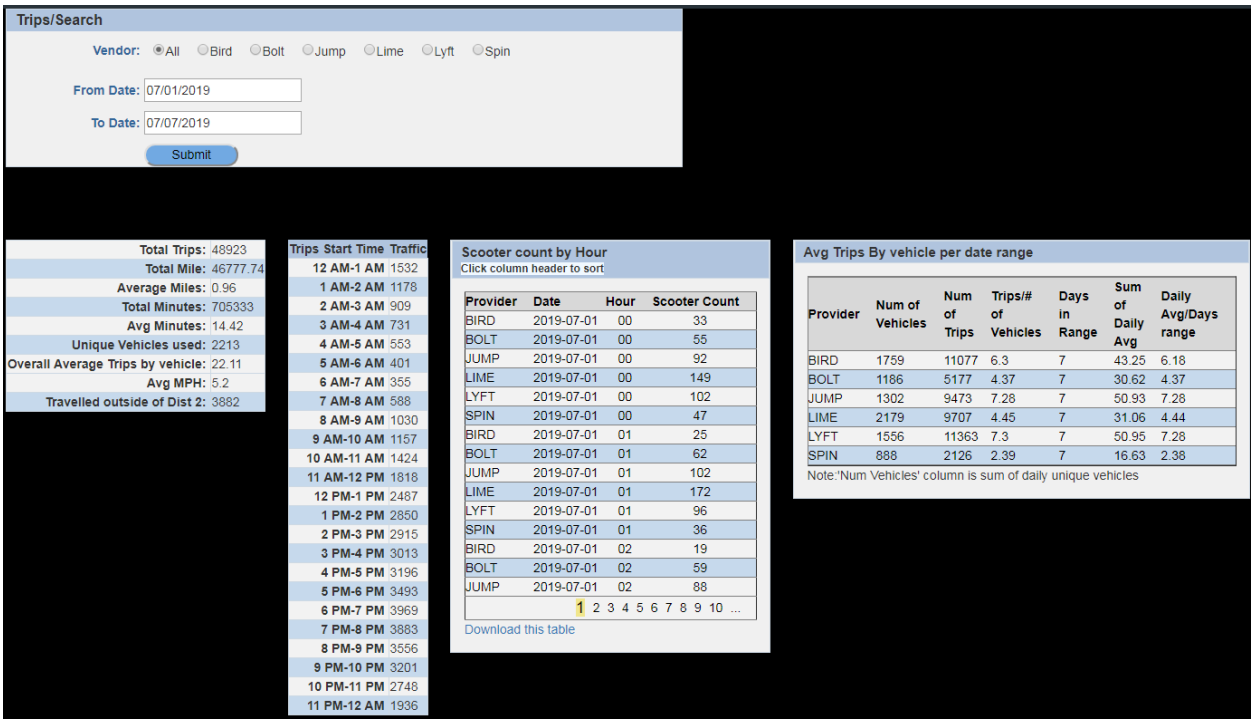
Heat Map: User can use to magnifying glass icon or the mouse wheel to zoom into the area of interest. Heat map clusters will adjust based on the zoom level.

Scooter Count Per Hour: This bar graph date range CANNOT be adjusted using the Custom Date Range tool. Users can use the slider at the top the bar graph to narrow down the dates. By moving the slider from the left removes/adds dates to the beginning date range, moving the slider from the right removes/adds dates to the ending date range.

TAB 9: Search

Objective: To provide users the ability to perform a query based on date range and/or specific vendor.

Trip/Search Tool: Users can input a date range and export the results into Comma Separated Values (CSV) format.



Note: User can get results based on a selected vendor and/or a date range; if no date range is chosen, data from inception of the scooter program is used.

Total Trips: Total number of trips in selected dates

Total Mile: Total miles driven by scooters

Average miles: Average between Total Miles and Total Trips

Total Minutes: total minutes travelled by scooters

Avg minutes: Average minutes between total minutes and total trips

Total Vehicles Used: Total count of unique vehicles in selected date range. Note: unique vehicle count is for uniqueness within the date range and not daily.

Overall average trips by vehicle: Average between total vehicles used and total trips

Avg MPH: Average between total MPH and total trips

Travelled outside of Disttric 2: Number of scooters that travelled outside of district 2 boundary

Trips Start Time Traffic: Total number of trips started at the given hour

Note: This table uses data from the trips feed only

Scooter count by hour: To view Total number of scooter count at by hour; user can filter based on vendor and/or dates

- Hour: hour in question (01 AM, 02 AM, etc)
- Scooter count: Number of unique scooters within the hour from both feeds

Note: This table uses both, trips and GBFS/Free Bikes Data feeds to obtain unique IDs

Avg Trips by vehicle per day:

- Number of Vehicles: Sum of daily count of unique vehicles
- Number of Trips: Sum of daily trip count
- Trips/# of Vehicles: Average of the above
- Days in Range: Number of days with valid trips within the requested range. i.e. if the request is from July 1st to July 7th , it would have 7 as the number of days with valid trips. If there are no trips on one of the days, then it would be 6 and so on.
- Sum of Daily average: Total sum of the daily average. Note: Daily average is the daily trip count divided by daily unique scooter count for each requested day in date range
- Daily Average/Days in Range: Average of the sum of daily averages divided by the number of days in the requested date range.

Note: This table uses data from the trips feed only

Note: The search tab is only available for access via VPN or LAN connection within RIVERSIDE network. At this time, users will not be able to access this functionality offsite without VPN.

TAB 10: Hot Corridor

Objective: To provide users an overview of most traveled routes based on scooter trips data. This tab provides an overall count of trips for the top 20 streets, most traveled.

Bar Chart: This indicates the top 20 streets of most traveled routes.

Map: The map is interactive. Users can use the mouse wheel to zoom into area-of-interest and click on the line for more information.

Note: Data on this tab is updated as needed. Please see notes at the top of the bar graph for dates included in this analysis.

VII. Challenges and Discussion Items

1. MDS status type and GBFS should be equal, but at the initial stages they were different. We are more confident that GBFS is more accurate. More testing and evaluation will be needed to validate this theory.
2. We need vendors to validate/indicate their MDS/GBFS horizontal accuracy. At this time, it is unclear on horizontal accuracy required by the City. A spot check by city employee may be helpful to help validate data.
3. Initially, trips data were given with only start and end locations which were not useable to create route features that will show actual traveled route along a road. DoIT staff contacted vendors to improve data quality in this aspect.
4. Vendors did not turn off their vehicle when they were taken out of repair or maintenance. This caused additional data clean-up effort to find “outliers” of trips that behave abnormally. This includes extreme speed, high travel distance, and frequent out-of-bound travels.
5. Bird, Bolt, Lime, Lyft have given us tokens which do not expire to retrieve data. Spin requires token refresh/update every time we request data. Jump required new token every month. This caused the City’s team additional maintenance and QA/QC efforts to ensure the data are received correctly and timely.