Community Mobility and Dockless Vehicle Survey
Methodology & Full Results

Overview

The Baltimore City Department of Transportation (DOT) Community Mobility and Dockless Survey aimed to gauge how the Dockless Vehicle Pilot Program affected mobility across the city. It was open for responses from December 21, 2018 until January 20, 2019. The survey was released online and paper copies were available upon request. Initially, the survey was publicized and distributed by DOT community liaisons, DOT social media, members of the Dockless Vehicle Committee, and the Mayor's Office of Neighborhoods. Two weeks and Three weeks after distribution, DOT performed analyses of response demographics in order to target outreach to underrepresented populations through community partners.

Survey Design

The survey was designed to answer specific questions about how the Baltimore City community gets around and how the pilot period of dockless vehicles is affecting the community. In addition, questions geared towards the users were designed to learn more about who uses the vehicles, why, and how.

Questions were based on similar surveys nationwide and on discussions at Dockless Vehicles Committee meetings. Survey questions were refined and finalized by:

- Baltimore City DOT Transit and Sustainable Transportation Bureau
- Baltimore City Mayor's Office of Sustainable Solutions
- Johns Hopkins Bloomberg School of Public Health, Center for Injury Research and Policy
- Baltimore City Dockless Vehicle Committee

Survey Distribution

The survey was initially distributed by the Department of Transportation through social media and community liaisons. Liaisons posted the survey on Next Door and spoke about the survey at all community meetings during the survey period. Community organizations within the 15 community statistical areas which were "equity zones" during the pilot were sent the survey a second time. Any organization or individual could request a paper copy of the survey by calling, emailing, or asking in- person. DOT delivered paper surveys to five community organizations upon such requests, a total of 300 copies.

Following DOT Distribution, other City agencies assisted with disseminating the survey: Mayor's Office of Neighborhoods, the Mayor's Office of Employment Development, the Department of Planning, the Department of Public Works all shared the survey. City Council staff were all invited to a briefing about the survey and asked to share it with their constituents.

The following community partners also distributed the survey based on their participation in the Dockless Vehicle Committee or from recommendations from that committee:

- AARP Maryland
- Baltimore City Community College
- Baltimore Metropolitan Council
- Bike and Brunch Tours
- Bikemore
- Bird Rides, Inc.
- Community Architect Daily
- Coppin State University
- Downtown Partnership if Baltimore
- Johns Hopkins University
- Lime
- Morgan State University
- National Federation for the Blind
- South Baltimore Gateway Partnership
- Transit Choices
- University of Maryland Baltimore
- Waterfront Partnership of Baltimore

Results

Initially DOT received 5420 responses, but responses were cleaned to remove duplicate responses. If multiple responses listed the same email address, the first response was kept and the subsequent responses were discarded.

TOTAL UNIQUE RESPONSES: 5283

The following results are presented with the same instructions as the survey. For each questions, the total number of responses to each provided answer is listed, along with the percentage of total responses. For some questions respondents could select multiple answers. For open ended questions, the most common phrases or words were selected to be counted and sample answers are listed.

How do you get around Baltimore? Please check all modes you use during an average month		
Answer	**#**	**%**
Driving in my own car	4,096	19.0%
Riding as a passenger with a friend or family member	2,257	10.5%
Taxi, Uber, Lyft or informal taxi (hack)	3,631	16.9%
Bicycling, using my personal scooter or alternative small vehicle	1,382	6.4%
Walking	4,203	19.5%
With a wheelchair, walker, or electric wheelchair	33	0.2%
MTA bus or Charm City Circulator	1388	6.5%
Lightrail or Metro	908	4.2%
Water taxi or other boat	587	2.7%
Lime or Bird Scooter/Bicycle	3024	14.1%
Other	1	0.0%
TOTAL	**21,510**	**100%**
100% of respondents answered this question		

Do you personally identify as having or living with a disability?		
Answer	**#**	**%**
Yes- feel free to tell us more by selecting "other" and describing your disability	211	4.0%
No	4925	94.4%
Other (listed a disability)	81	1.6%
TOTAL	**5217**	**100%**
98.8% of respondents answered this question		

How old are you?		
Answer	**#**	**%**
Under 16	30	0.6%
17-24	417	7.9%
25-39	3002	56.8%
40-55	1053	19.9%
55-65	495	9.4%
Over 65	286	5.4%
TOTAL	**5283**	**100%**
100% of respondents answered this question		

Race/ethnicity (select all that apply)		
Answer	**#**	**%**
African American / Black	739	13.4%
Caucasian/ White	4119	74.8%
Hispanic/ Latino	221	4.0%
American Indian or Alaska Native	64	1.2%
Asian	157	2.9%
Native Hawaiian or Other Pacific Islander	24	0.4%
Other	183	3.3%
TOTAL	**5507**	**100%**
97.8% of respondents answered this question		

To which gender do you currently identify?		
Answer	**#**	**%**
Female	2199	41.7%
Male	2961	56.2%
Gender variant/ Non-conforming	44	0.8%
Not listed/prefer not to say	67	1.3%
TOTAL	**5271**	**100%**
99.8% of respondents answered this question		

What zip code do you live in?		
Answer	#	%
21201	300	5.8%
21202	423	8.1%
21205	33	0.6%
21206	67	1.3%
21207	32	0.6%
21208	23	0.4%
21209	46	0.9%
21210	98	1.9%
1211	286	5.5%
21212	93	1.8%
21213	94	1.8%
21214	97	1.9%
21215	54	1.0%
21216	38	0.7%
21217	180	3.5%
21218	290	5.6%
21222	43	0.8%
21223	35	0.7%
21224	883	16.9%
21225	25	0.5%
21226	7	0.1%
21227	17	0.3%
21228	25	0.5%
21229	46	0.9%
21230	1084	20.8%
21231	502	9.6%
21234	31	0.6%
21236	17	0.3%
21237	11	0.2%
21239	29	0.6%
1251	2	0.0%
21287	1	0.0%
other	301	5.8%
Total	**5213**	**100%**
98.7% of respondents answered this question		

Have you ridden a rental scooter or bike in Baltimore City?		
Answer	#	%
Yes	3487	66.2%
No	1777	33.8%
TOTAL	**5264**	**100%**
99.6% of respondents answered this question		

If you have not, why? (select all that apply)		
Answer	#	%
I'm just not interested in riding a scooter or bike	817	35.5%
It is too expensive	57	2.5%
I didn't know about the program	2	0.1%
I didn't know how to unlock a scooter	89	3.9%
I don't know how to ride a scooter	144	6.3%
I don't think scooters are safe	709	30.8%
I don't have a smart phone	34	1.5%
I don't have a credit card	23	1.0%
Other answers: I have my children with me I have my own bike	390	17.0%
TOTAL	**2299**	**100%**
98.1% of respondents who had not ridden dockless respondent answered this question		

Did you use the Baltimore Bikeshare?		
Answer	#	%
Yes	756	14.5%
No	4474	85.5%
TOTAL	**5230**	**100%**
99% of respondents answered this question		

If you did not use the Baltimore Bikeshare, why not? (select all that apply)		
Answer	**#**	**%**
Inconvenient locations of bike stations	1719	24.8%
Cost to use	357	5.1%
Concern for safety while riding	915	13.2%
Limited understanding of how to use the bikeshare system	854	12.3%
Quality of the bikes	651	9.4%
Difficulty renting the bikes	569	8.2%
Limited understanding of how to ride a bike	95	1.4%
Riding a scooter is easier than riding a bicycle	958	13.8%
I heard negative things about the bikeshare	357	5.1%
Other answers: Already have my own bike There were never bikes at stations	458	6.6%
TOTAL	**6933**	**100%**
96% of respondents who did not use the bikeshare answered this question		

The following questions were only for respondents who had ridden the dockless vehicles. Other respondents were directed to skip ahead.

How often have you ridden a rental dockless scooter/bike?		
Answer	**#**	**%**
Everyday	168	4.9%
Few times a week	1076	31.5%
Once a week	473	13.9%
Few times a month	1057	31.0%
Once or twice	637	18.7%
TOTAL	**3411**	**100%**
97.8% of respondents who had ridden vehicles answered this question		

Are you able to access a scooter when you need one?		
Answer	**#**	**%**
All of the time	1475	43.2%
Some of the time	1811	53.0%
Rarely	130	3.8%
TOTAL	**3416**	**100%**
98% of respondents who had ridden vehicles answered this question		

Why do you use a scooter? (select all that apply)		
Answer	**#**	**%**
Save money on transportation	1783	16.1%
Get around more easily or faster	3039	27.5%
As a more environmentally friendly option	1563	14.1%
As a healthier transportation option	656	5.9%
It looked fun and I was curious	2285	20.6%
To avoid traffic	1568	14.2%
Other answers: Parking issues Cheaper than uber/lyft Charing them	177	1.6%
TOTAL	**11071**	**100%**
98% of respondents who had ridden vehicles answered this question		

What is the most common reason you use a scooter?		
Answer	**#**	**%**
Commute to/from work or school	831	24.4%
Connect to an MTA/ CityLink/ CharmCity bus, lightrail, or metro	142	4.2%
Recreation or exercise	311	9.1%
Shopping or errands	557	16.4%
Entertainment/socializing (festival, museum, restaurant, etc)	1189	34.9%
For work or business during the day	273	8.0%
Other	103	3.0%
TOTAL	**3406**	**100%**
97.3% of respondents who had ridden vehicles answered this question		

Since first using a scooter, has your use of other transportation changed? (if you never use one of the options, select "same")	Less often	Same	More often
Walking	988	2037	255
Driving	1603	1589	29
Ridesharing/carpooling with a friend	882	2104	45
Riding personal bike	712	2205	58
MTA bus	603	2254	71
Charm City Circulator	670	2189	58
Metro or Lightrail	478	2353	62
Taxi, Uber, Lyft, Informal taxi (hack), etc.	1748	1353	62

Do you wear a helmet when riding a scooter?		
Answer	#	%
Yes	699	20.5%
No	2712	79.5%
TOTAL	3411	100%
97.8% of respondents who had ridden vehicles answered this question		

Have you received parking instruction from Lime or Bird on how to park your scooter or where not to park your scooter?		
Answer	#	%
Yes	3018	88.2%
No	403	11.8%
TOTAL	3421	100%
98.1 % of respondents who had ridden vehicles answered this question		

Do you predominantly ride on sidewalk or street?		
Answer	#	%
Always Sidewalk	206	6.0%
Mostly sidewalk	781	22.9%
Mostly Street	1879	55.2%
Always Street	540	15.9%
TOTAL	3406	100%
97.7% of respondents who had ridden vehicles answered this question		

Optional- Tell us how you decide where to ride. Common words or phrases in the text:		
Answer	#	%
Bike path or bike lane or cycle track	586	35.0%
Speed	57	3.4%
Safe	444	26.5%
Traffic	413	24.7%
Avoid Pedestrians or avoid people	137	8.2%
None of the above	37	2.2%
TOTAL	1674	100%
48% of respondents who had ridden vehicles answered this question		

The last questions were for all respondents, regardless of whether or not they had ridden a dockless vehicle.

Have you personally experienced a crash involving a scooter? (select all that apply)		
Answer	#	%
No, I have not experienced a crash Or other non-crash listed	4426	87.2%
On a scooter with a car	59	1.2%
On a scooter with a person walking	72	1.4%
On a scooter with another scooter	21	0.4%
On a scooter with a person riding a bike	10	0.2%
On a scooter with no other person (fell, hit a bump or other object)	331	6.5%
While walking with a scooter	111	2.2%
While driving with a scooter	35	0.7%
While biking with a scooter	3	0.1%
Other	8	0.2%
TOTAL	5076	100%
94.3% of respondents answered this question		

If that crash caused an injury, can you tell us more? Common words in the text:		
Answer	#	%
Broke	16	6.8%
Stitch	5	2.1%
Scrape or scratch	41	17.4%
Bruise or bump	50	21.2%
Pothole	14	5.9%
None of the above	110	46.6%
TOTAL	236	100%
4.5 % of respondents answered this question		

How would you improve the shared scooter/bike service? (select your top 5)		
Answer	#	%
More scooter/bikes so I can find one when I need one	2181	15.4%
Fewer scooter/bikes parked in my way	661	4.7%
New scooters/bikes which fit my size or physical needs	361	2.5%
more accessible app to use and report scooters/bikes	265	1.9%
Make rental easier without a smartphone	359	2.5%
Make rental easier with a credit card	226	1.6%
Keep the scooter/bikes more well-maintained	1745	12.3%
Faster response from the companies to requests	363	2.6%
Access to helmets for me to use	939	6.6%
Parking hubs where I know I can always find a scooter/bike	1828	12.9%
More instructions and help with learning to ride safely	407	2.9%
More safe places to ride, like bike paths and trails	2776	19.5%
Designated "no ride" and "slow ride" zones for safety	1681	11.8%
Other	409	2.9%
TOTAL	**14201**	**100%**
88.7% of respondents answered this question		

I think Baltimore should continue the dockless scooter/ bike program		
Answer	#	%
Yes	4267	80.8%
No	1016	19.2%
TOTAL	**5283**	**100%**

Optional: If you answered No, why?	
TOTAL	921
17.4% of respondents answered this question	
Common word and phrases:	**#**
Teens/Kids/youth	122

Sample Answers
- I think it will only cause more accidents mainly among our youth who are fast drivers
- Too many kids under 18 using them dangerously. Too many kids riding them versus attending school. I have seen the scooters utilized to commit crimes in neighborhoods.
- I see way too many kids under age 18 using these. I also think it abets our juvenile criminal population. Full disclosure, I like using scooters but am worried that harm outweighs my personal benefit
- Too easy for kids to steal and use unsafely.

Sidewalks	272

Sample answers:
- Scooter users are out of control. Riding on sidewalks at high speeds. Almost knocked me down.
- Lack of adequate space on narrow city streets and sidewalks.
- Only if the speeds were reduced, keep them off the sidewalks, and enforced age restriction!!
- The scooters are left in front of our homes, blocking sidewalk access. They are usually knocked over. Husband who is blind, trip over them. No accountability by the business owner . Not ADS compliant. As a property owner we are responsible for the sidewalks in front of our homes and should not have to deal with these invasive things. People under the age of 18 are using the scooters on the sidewalks without helmets and when they are done they just toss them down.

If you are not in favor of the program, why? (Continued)	
Common word or phrases:	#
Unsafe or Dangerous	399

Sample answers:
- My answer is actually a qualified yes. Program safety issues need to be addressed. Bikes and scooters are a wonderful transportation option, but unsafe operation is a serious problem...
- HUGE PUBLIC HEALTH SAFETY ISSUE!!
- Extremely Dangerous To Ride w/All The Deadly Street Violence As Well As The MANY Distracted (texting) Drivers ... SAD

Crash/ Accident/fall/ injury	88

Sample answers:
- I find them a nuisance when I have to walk around them...not parked...but laying on the sidewalk. Left on my sidewalk where others are walking to the light rail. What if someone falls on my sidewalk as a result of having to go around the bike or scooter...am I responsible?
- The number of accidents in the poorly maintained roads full of hazards. Drivers are not respective and extremely aggressive at scooters.
- There is very little concern about safety of pedestrians. Proper rules need to be implemented about banning scooters from sidewalks, making designated bike/scooter lanes, making helmets and an insurance policy for accidents compulsory.

Trashy/ junk/litter/eyesore	85

Sample answers:
- They end up in random places causing an eyesore and people are inconsiderate so they leave them wherever and oftentimes in the way of vehicular and pedestrian traffic
- They litter the city, people riding them are disrespectful to walking people on sidewalks and cars on the street. Tired of calling to have bikes removed from my property and no one removes them.
- These things are going to become trash. Ask the city of San Antonio how they feel about their historic downtown being littered with them everywhere.

Hack/vandalism	17

Sample answers:
- Not unless the companies can correct their software so that teenagers can't hack into the scooters and ride them recklessly around the city.

Crime/ Drug	63

Sample answers:
- Gives criminals an easy way to commit crimes and get away.
- The Drug Runners are taking them over, busting them up, striping them down. It also looks like they have found a way to cheat the pay system.
- The program was started to help people have transportation options now drug dealers have taken over the use of scooters for their business.

Enforce, Police, ticket	82

Sample answers:
- Dangerous since there isn't any accountability or enforcement. City will be sued
- Revamp with safety and accountability. Do not let companies drop their products on our streets without contracts and enforceable rules.
- Until riding on sidewalks is addressed in a better manner. Many times users have went passed me at high rates. I have personally contacted Bird customer support with little or no help in address riding scooters on sidewalks. I think things like ticketing by police, disabling the scooter function on sidewalks, or having Bird or Lime tack on fines for sidewalk riding would address this issue but no response was received or no concern was expressed from Bird.

Categorized Results

The following results are cross referenced results which look at respondents' answers to multiple questions.

In favor of the program by Age	
Of respondents who are:	**% in favor**
24 & Under	95%
25-40	90%
40-54	71%
55 & Over	51%

In favor of the program by Race/Ethnicity	
Of respondents who are:	**% in favor**
African American	81%
Caucasian	81%
Hispanic/Latino	82%
Other	73%

In Favor of the Program by Ridership	
Of respondents who:	**% in favor**
Have not ridden the vehicles	51.5%
Have ridden the vehicles	96%

Ridership by Age Group	
Of respondents who are:	**% who have ridden vehicles**
24 & Under	84%
25-40	80%
40-54	50%
55 & Over	23%

Ridership by Gender	
Of respondents who are:	**% who have ridden vehicle**
Female	53%
Male	76%
Non-Conforming or prefer not to say	64%

Ridership by Race/Ethnicity	
Of respondents who:	**% who have ridden vehicles**
African American	58%
Caucasian	68%
Hispanic/Latino	75%
Other	63%

Ridership of Dockless Vehicles v. Ridership of Baltimore Bike Share

Have not ridden dockless (1777), rode Baltimore Bike Share (65)	3.7%
Have ridden dockless(3487), (692)rode the Baltimore Bike share	19.8%
Of people who rode the bike share (757), (692)ride dockless	91.5%

Zip Code	In Favor		Ridership	
Answer	#	%	#	%
21201	257	85.7%	207	69.0%
21202	304	71.9%	258	61.0%
21205	28	84.9%	21	63.6%
21206	46	68.7%	24	35.8%
21207	23	71.9%	17	53.1%
21208	17	73.9%	8	34.8%
21209	37	80.4%	27	58.7%
21210	77	78.6%	51	52.0%
21211	234	81.8%	167	58.4%
21212	74	79.6%	51	54.8%
21213	70	74.5%	44	46.8%
21214	74	76.3%	36	37.1%
21215	42	77.8%	20	37.0%
21216	28	73.7%	18	47.4%
21217	151	83.9%	102	56.7%
21218	243	83.8%	189	65.2%
21222	31	72.1%	20	46.5%
21223	32	91.4%	24	68.6%
21224	721	81.7%	648	73.4%
21225	21	84.0%	14	56.0%
21226	4	57.1%	5	71.4%
21227	14	82.4%	10	58.8%
21228	16	64.0%	12	48.0%
21229	36	78.3%	23	50.0%
21230	911	84.0%	848	78.2%
21231	421	83.9%	370	73.7%
21234	21	67.7%	19	61.3%
21236	10	58.8%	5	29.4%
21237	7	63.6%	3	27.3%
21239	18	62.1%	9	31.0%
21251	1	50.0%	2	100.0%
21287	1	100.0%	0	0.0%