Urban Innovation, Micromobility, and Equity

Electric Scooters as a Vehicle for Addressing Historical Transportation Inequities

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A FOREWORD REGARDING COVID-19

Between conducting the expert interviews and releasing this report, the world drastically changed in ways that no one could have foreseen. All interviews for this project were conducted before March 2020, when COVID-19 had not yet seriously impacted the United States. The subsequent stay-at-home orders, government and business closures of non-essential operations, and other social distancing precautions to prevent the rapid spread of the virus significantly impacted the global mobility landscape and swiftly affected the near-term trajectory for shared electric scooter companies.

We chose to use shared e-scooters as a case study of private sector innovation addressing a public problem; however, our focus was never just e-scooters. While COVID-19 drastically altered the micromobility landscape, it also highlighted the importance of this project’s focus: the interaction of equity and innovation. Our recommendations can be applied to innovation more broadly:

- Engage and partner with underserved communities to develop equity goals together
- Design outcome-oriented, dynamic pilot programs with phased equity markers
- Invest equitably in infrastructure
- Take a holistic approach, zooming out to view equity impacts of entire systems as opposed to individual pieces

Now, as the public and private sectors innovate to stop the spread of the virus and mitigate its effects, the need to prioritize equity considerations is more visible than ever.

In many ways, this pandemic further illuminated the existing and persistent inequities in our country. While all have experienced the effects of COVID-19 in some way, it is clear that low-income and minority communities are suffering from the greatest health and economic risks. As businesses shut their doors to help “flatten the curve,” wage and hourly workers who are generally mid- to low-income individuals, were hit the hardest. The latest unemployment numbers reveal that “more jobs were lost in the US in March this year than over the entire Great Recession of 2008-09,” with early evidence showing “workers with less than [a] college education taking the largest hit.”

For those whose jobs are deemed essential (ie. grocery store cashiers, delivery drivers, public transit operators), they face the difficult decision to either risk their health or pay the bills. Low-income individuals in urban areas are also more likely to rely on public transportation, putting themselves at further risk just to get to and from their workplace. We have begun to see these inequities manifest in health outcomes, with structural barriers to social distancing, inequality in health care access, and higher instances of underlying health conditions due to historical inequities contributing to disproportionately high deaths from COVID-19 among African Americans and other minority communities.

Shared e-scooter companies, which were beginning to gain popularity as a private sector solution to filling historical gaps in public transportation, were particularly impacted by the economic hardships of this time. The swift and calamitous impact of COVID-19 on shared e-scooter companies completely changed the trajectory of the market. The pandemic could not have come at a worse time in the companies’ budget cycle. E-scooters are seasonal in many markets, with the companies riding out the winter on the previous year’s profits and much of their Q1 and Q2 budgets based on projected spring revenues. Due to the financial uncertainty caused by the pandemic, Bird laid off nearly a third of its staff at the end of March, and Lime laid off 13% of its workforce at the end of April, following a round of layoffs earlier this year that had already cut its staff.

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1 Furceri et al., “COVID-19 will raise inequality if past pandemics are a guide.”
2 Van Dorn et al., “COVID-19 exacerbating inequalities in the US.”
3 Hawkins, “Bird lays off nearly a third of its staff during coronavirus pandemic.”
by 14% in its effort to achieve financial independence.4

Even before the pandemic spread throughout the U.S., David Zipper, a Fellow at the Harvard Kennedy School and expert on the interplay between urban policy and new mobility technologies, predicted a culling of the e-scooter market in 2020. He projected that cities would increase fleet caps while decreasing provider permits in order to streamline program management and increase rider convenience by upping e-scooter availability and limiting the need for multihoming. Now, instead of a culling, it is more likely that we will see a complete overhaul of the micromobility landscape, with only one or two big companies returning. As we have already seen with Lime and Uber announcing a deal in early May that included Uber contributing to Lime’s $170 million funding round and Lime acquiring Uber’s micromobility services (i.e. Jump),5 Uber and Lyft are likely to emerge directly or indirectly as the major players, further solidifying their dominance in the shared mobility market.

When it comes to transportation, shared mobility companies are not the only ones experiencing hardships. Public transportation and transit services have experienced drastic declines in ridership and revenues.6 Even once cities begin to open up, it is projected that transit ridership will remain low, as people continue to feel uncomfortable using public transportation (a trend that has already been observed in China).7 These residual effects of the pandemic will likely lead to increased reliance on personal vehicles, including personally owned bicycles and scooters. However, this once again brings equity issues into question, as low-income individuals, regardless of personal safety concerns, will not be able to easily make the switch to a private vehicle, and the broader retreat from public transportation will adversely affect the service they rely on.

While rates of personal e-scooter ownership were relatively low before COVID-19, they were growing. Shared e-scooter companies had introduced scooters to the public as more than a novelty, and commuters’ enthusiastic adoption of them as a mode of transportation led some shared companies to even sell scooters directly to consumers.8 Throughout our research for this project, we asked several city officials about how they were approaching regulations for individual scooter ownership. The overwhelming answer was that they were not; instead, the vast majority of the regulatory work centered on developing rules for, and passing responsibility on to, the shared companies. Yet, as demand likely increases for personal vehicles over the coming months, and with many of the shared companies not returning, we could see an uptick in personal scooter ownership. Given the limited regulatory framework for private ownership, including little to no enforcement mechanisms for individuals, this could be a challenge that cities will face in the near future. It is also an opportunity to begin to use our recommendations to think about new policies with equity concerns at the center, including which neighborhoods benefit from safe riding infrastructure, preempting potential over-enforcement for certain groups, and using taxes and fees for individually owned scooters to help improve transportation options in underserved communities. Most importantly, as we move out of this crisis and begin to think about shaping our new normal, aspiring for equitable outcomes is no longer enough - we must design more equitable processes, including voices from underserved communities in a meaningful way throughout.9

When it becomes safe for U.S. cities to open up and for people to once again move around, we will need innovative minds to come together to help move our country forward. We believe that decreasing the structural inequities so clearly exposed by COVID-19 should remain at the center of our recovery efforts, and our recommendations can be applied to innovative efforts across the board. Whether it is e-scooters, a different emerging mobility innovation, or innovation in a completely different market, these recommendations for designing more equitable processes and developing successful partnerships across sectors can - and should - apply.

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4 Peters, “Lime lays off 13 percent of its employees.”
5 Hawkins, “Lime squeezes $170 million from Uber and Alphabet as scooter-sharing plummets under COVID-19.”
6 Bliss, Laura & Kaske, Michelle. “Mass transit faces downward spiral of reduced revenue, ridership.”
7 Bliss, Laura. “A Post-Pandemic Reality Check for Transit Boosters.”
8 Dickey, Megan Rose, “Bird is now selling its electric scooters directly to consumers.”
9 Burgoyne, John, “Who gets to share the new normal?”
Cities worldwide face growing populations and severe congestion. As transportation becomes privatized and more innovations launch on public streets, cities must carefully consider the costs and benefits of new mobility technology. Without meaningful intervention and partnerships with provider companies, U.S. cities run the risk of perpetuating historical inequities in transit access.

To understand how U.S. cities are approaching and working with e-scooter companies, we conducted three in-depth case studies of U.S. cities along the e-scooter adoption curve: Boston, MA; Chicago, IL; and Portland, OR. For each case study, we investigated the existing mobility landscape, city and transit equity context, and micromobility progress. We interviewed public, private, and nonprofit sector leaders, and reviewed legislative documents, media coverage, and public data from city reports.

We identified several themes across the cities: the prevalence of equity considerations; the impact of precedence set by existing forms of mobility; infrastructure as key to physical safety; inequities in personal safety concerns; the hesitance to make long-term investments contributing to market sustainability; and the benefits of transportation alternatives and choice.

We drew on these connections across cities to identify key learnings: context is key, and it is important to recognize that e-scooters are situated in a larger landscape of mobility options and historical transit inequities; safety concerns are both personal and infrastructural, based on lacking infrastructure and over-enforcement for certain groups; overly burdensome regulations prevent progress, and it is unfair to expect companies to perform better than cities from day one; and cities’ hesitation to commit to this innovation, in some cases using pilot programs as a form of risk-aversion, is contributing to market instability.

For the public sector, we recommend robust and early engagement strategies, outcomes-based, dynamic pilot programs with phased equity goals, substantial investments in safe micromobility infrastructure, and taking a holistic approach to equity policies. For the private sector, we recommend deepening partnerships with community and municipal leaders, connecting directly with underserved communities to inform the parameters of access programs, and conducting learn-to-ride and safety seminars.

Above all, both sectors must prioritize direct engagement with underserved communities. It is vital to conduct meaningful engagement before, throughout, and after implementing a new innovation, allowing learnings to determine goals and directly inform policy.
Introduction

Credit: Colton Sturgeon on Unsplash
Cities worldwide face severe traffic congestion issues...

As the private sector increasingly adds new options to the mobility ecosystem, micromobility – most notably the recent wave of shared electric scooter ("e-scooter") adoption – has emerged as an innovative solution. Yet, innovation driven by the financially motivated private sector without intentional focus on equity has proven in the past to exacerbate historical disparities between communities. Without meaningful intervention, U.S. cities run the risk of perpetuating inequities in transit access as shared e-scooter – and subsequent mobility-as-a-service innovation – spreads.

**KEY QUESTION**

What equity-related policies and procedures have cities adopted for micromobility innovations, and how successful have these various interventions been in achieving equitable outcomes? On the other hand, what equity-related policies and procedures are cities not utilizing that they should be exploring?
It is increasingly clear that the transportation infrastructure in nearly all U.S. cities is not adequate to support growing urban populations. In addition to lost time and frustration of city residents, growing traffic congestion simultaneously contributes to increased carbon emissions. As the mobility landscape rapidly changes to meet growing demands, it is important that cities consider the questions we pose regarding equity, or else run the risk of adopting innovation that exacerbates - or, at the very least, perpetuates - existing historical transportation inequities.

In many cases, the history of U.S. cities documents how our country’s transportation infrastructure and policies have driven systemic inequities, often along race, class, and socioeconomic lines. Given the existing transportation landscape, including unequal access to public transportation, over-investment in our highway systems, and rising demands on household transportation expenditures, some might question whether all people need access to scooters, or if this is even the most important equity issue to focus on. However, we see both a moral and logical argument for pursuing strategies that will lead to equitable mobility access, including e-scooter adoption.

First, when it comes to innovation that seeks to tackle a public problem and utilizes space in the public realm, the benefits of the innovation should be available to all on moral grounds. While at first glance they may not seem like a priority, shared electric scooters are merely one of the first forms of widespread transportation innovation that local governments will be forced to grapple with. The success - or failure - in equity policies and regulations for shared e-scooters will set the stage and have implications on future mobility innovations, many of which we cannot yet predict.

Second, if the moral component alone is not compelling, we see a logical argument to the equitable utilization of shared electric scooters. Namely, e-scooters are an innovative way to reduce congestion and curtail carbon output. Yet, these wide-scale benefits can not be realized if only certain segments of city populations have access to, and are willing to use, this form of mobility. With appropriate policies and infrastructure in place, the likelihood that micromobility innovations can move the needle on congestion and carbon outputs dramatically increases.
Background & Methodology
“F"or millions, transportation is defined as a basic right. Transportation is basic to many other quality of life indicators such as health, education, employment, economic development, access to municipal services, residential mobility, and environmental quality.”

Therefore, any inequities in transportation systems serve as a foundation that intensifies other existing inequality issues. However, studies have shown that investments and innovations in transportation do not reach all communities equally.

After World War II, the prevalence and reliance on cars increased in the U.S., mostly due to policies that invested in highway development (through minority neighborhoods) over public transportation infrastructure. In 2003, Bullard found that 80% of transportation spending was earmarked for highways, while only the remaining 20% was earmarked for public transportation. Over the past several decades, transportation policies have both created and exacerbated inequities for the country’s low-income and racial minority populations.

Demographic data tell the story of “how transportation, race, poverty, and geography intersect.” Data also show that the majority of public transit users are low- to moderate-income minorities. These populations are captive, as they depend on public transportation as a cheaper alternative to owning an automobile and necessary to get from point A to B. More options exist for higher income and white populations. While low-income households spend a greater portion of their income on transportation, they tend to rely on bus service more than rail service. Furthermore, government expenditures on public transit are far less than highway infrastructure and maintenance, and policies have historically focused on attracting middle-income riders or “discretionary riders.” A 2017 study by the Massachusetts’ Metropolitan Area Planning Council (“MAPC”) revealed that buses had the highest rates of low-income riders among all transit options, and black bus riders in the Greater Boston area spent 64 more hours per year on buses than their fellow white passengers.

More often than not, policymakers are not from low-income or underserved communities and have limited strategies in place to include these voices in transportation policy decisions. This lack of outreach has resulted in unequal access to the decision-making process and limited influence over transportation decisions that directly impact these communities. Some point to language barriers and lack of information, while others point to minimal engagement efforts.

Although the systematic and deep-rooted history of inequities in transportation makes confronting this problem complex, the ideal outcome is straightforward. As a transportation advocacy organization made up of local, regional and state leaders, Transportation for America

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10 Bullard, “Addressing Urban Transportation Equity in the United States.”
11 ibid
12 Sánchez, Stolz, and Ma, “Moving to Equity: Addressing Inequitable Effects of Transportation Policies on Minorities.”
13 Sánchez, Stolz, and Ma, pg. 7
14 Sánchez, Stolz, and Ma
15 Bullard
16 Sánchez, Stolz, and Ma
17 Bullard, pg. 61
18 McFarland et al., pg. 2
19 Sánchez, Stolz, and Ma
 (“T4America”) promotes progressive transportation and land use policy, and published a Playbook for Shared Micromobility in 2019, which includes an industry-leading discussion on equity in micromobility. T4America’s Outreach Director, Chris Rall, defines equity in mobility as “people’s mobility needs being met, regardless of their income, or race, or social status.” But, further, he says it also means recognizing that some people have different needs, and that we must be intentional about “meeting the needs of people where they are and where they’ve ended up because of historical disinvestment and injustice.”

**Urban Innovation**

Cities often aspired to reduce inequality (typically measured by income inequality) and increase rates of innovation; however, not much thought is typically given as to how these two factors interact. Innovation is often associated with economic growth and prosperity, yet “one of the unfortunate side-effects of innovation is its tendency to increase, or worsen, economic inequality.”20 A 2015 study conducted by the National Bureau of Economic Research revealed a “positive and significant correlation between various measures of innovativeness and top income inequality in the United States over the past decades.”21 “In terms of economic growth, prosperity and the overall well-being of a nation’s citizens,” economists and academics have growing proof of innovation’s relationship with inequality.22

**Recent Transportation “Disruptors”**

To understand the transportation innovation and regulation landscape that shared electric scooters encountered, it is necessary to consider both transportation network companies’ and docked bike-share programs’ relatively recent entrances into city markets. In many cases, the memory of working with - or against - these companies still colors city legislators’ and regulators’ perceptions of the costs and benefits of transportation innovations and their appetites for considering future partnerships.

Transportation Network Companies (“TNCs”) provide on-demand, pre-arranged transportation services that connect drivers with riders through an online platform or mobile application.23 TNCs entered the U.S. market in 2012 and, since then, state and city regulators have grappled with regulating, authorizing, or de-authorizing them.24 In the early days, Uber, the original TNC, took city leaders by surprise when it entered new markets. As the company gained traction in the marketplace, its leaders “viewed [a] willingness to break the rules as a core competitive

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20 Hiltunen, “The Relationship Between Economic Inequality and Innovation.”
21 Aghion et al., “Innovation and Top Income Inequality.”
22 Hiltunen, “The Relationship Between Economic Inequality and Innovation.”
23 California Public Utilities Commission, “Transportation Network Companies.”
advantage.” Uber executives espoused the adage of asking for forgiveness and not permission. Instead of working with city leaders, Uber’s tactic was to “boldly plow ahead in a legal gray area, and then wage political battles from a position of strength with customers already in place.”

In this abrupt shift to a post-Uber mobility landscape, policymakers struggled to find the balance between having the right safeguards in place to protect resident consumers while at the same time not stifling innovation. They were forced to weigh these tradeoffs while facing emboldened rider campaigns orchestrated by Uber. In most cases, policymakers erred on the side of limited regulation.

With the benefit of hindsight and the emergence of new issues and information, such as claims that TNCs are making traffic worse in cities, policymakers are rethinking their initial stance on limited regulation. Similarly, when we spoke with officials in our case study cities about micromobility, they compared their apprehension to working with scooter companies to past experiences working with TNC companies.

Methodology

Pilot program and other academic and industry reports served as a foundation for our understanding of the existing micromobility landscape. In addition to the data these studies collected, we were interested in exploring at what points of the permit and regulation process equity entered the conversation, and to what success. In an effort to capture the broader micromobility equity efforts, we designed and conducted in-depth case studies on three U.S. cities: Boston, MA; Chicago, IL; and Portland, OR.

25 Yglesias, Matthew
26 Ibid
27 Erhardt et al., “Do Transportation Network Companies Decrease or Increase Congestion.”
Selecting the Cities

To explore how equity may or may not play into each phase of the shared e-scooter adoption process, we chose cities that represent different points on the e-scooter adoption curve. Although cities have varying characteristics that could affect e-scooter ridership (i.e. weather, geography, demographics, history of transportation policy and infrastructure investment, existing ride-share and bike-share programs), focusing on different cities allowed us to explore the complexities that exist at the intersection of urban innovation, mobility, and equity.

We selected three cities based on the following factors: stage in micromobility (varied), region (varied), geography (similar), and availability and likelihood of obtaining data. We chose one city in each category of micromobility adoption and geographic region (See Table 1).

Table 1. Characteristics of Case Study Cities

<table>
<thead>
<tr>
<th>Category</th>
<th>Early</th>
<th>Middle</th>
<th>Mature</th>
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</thead>
<tbody>
<tr>
<td>Region</td>
<td>East Coast</td>
<td>Midwest</td>
<td>West Coast</td>
</tr>
<tr>
<td>City Chosen</td>
<td>Boston, MA</td>
<td>Chicago, IL</td>
<td>Portland, OR</td>
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Expert Interviews

Given the relatively new and rapidly shifting nature of the shared e-scooter industry and response to it, our main source of information was a series of first-person expert interviews. We identified a range of experts based in Boston, Chicago, and Portland, focusing on people who possessed specialized knowledge of micromobility, transportation policy, equity, and innovation. Further information about the objectives of these interviews can be found in Table 2.

At the end of each interview we asked our interviewee for referrals and recommendations of others they thought we should talk to, utilizing a snowball sampling method. A total of 23 interviews were conducted with representatives from government, industry, and advocacy organizations either in person or over the phone between December 2019 and March 2020. A full list of those interviewed for this project can be found in Appendix A.

Table 2. Expert Interview Objectives

<table>
<thead>
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<th>Expert Interview Objectives</th>
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<tbody>
<tr>
<td>1. Learn about how cities are thinking about micromobility, equity in general, and equity in terms of micromobility.</td>
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<tr>
<td>2. Identify common challenges and barriers to equity cities face in regard to micromobility.</td>
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<td>3. Identify regulations and other strategies cities are implementing to address these challenges.</td>
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<td>4. Assess a city’s existing level of micromobility equity.</td>
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Framework of Analysis

We approached the analysis of each city’s focus on equity in its shared micromobility policy and permit process from two dimensions: when and how.

**When:** Prior to beginning our research, we hypothesized that the inclusion of equity considerations from the initial stages of a city’s permitting of shared e-scooters would lead to greater diversity (demographic) and dispersion (geographic) of users.

In evaluating a city’s approach, we sought to discover at what point equity considerations entered the planning discourse, if it was sustained throughout the different phases, and how the timing of equity considerations might be a contributing factor to equitable outcomes.

**How:** Once equity considerations entered a city’s shared e-scooter permitting process, a variety of approaches existed for policymakers to adopt in an attempt to reach equitable outcomes. Further details on these approaches can be found in Figure 1.

![Figure 1. City Approaches to Micromobility](image)

Criteria for Assessment

Cities generally define e-scooter equity as all city residents having equal physical access to e-scooters, as well as fair pricing options for low-income individuals. While intent and tactics are a good starting place when it comes to driving equitable change, we were also concerned with how these actions translated into outcomes. Before conducting our case studies, we determined criteria to evaluate the overall equity landscape of e-scooters in our focus cities (see Figure 2).
As we conducted our research, all of these factors - when, how, and to what extent - played a role in our assessment.
Findings
1. Prevalence of equity considerations
2. Impact of existing forms of mobility and precedence
3. Infrastructure as key to physical safety
4. Inequities in safety risks
5. Investment and market sustainability
6. Benefits of alternatives and choice
1. Prevalence of equity considerations

City governments are considering equity from the initial stages of e-scooter regulation. Pilot program designs reflect these considerations, imposing regulations on provider companies with the intent of achieving equitable distribution and utilization across neighborhoods. Yet, despite the good intentions of city officials, evidence shows that e-scooter equity conversations often remain internal until after a pilot program is underway, and do not directly translate to more equitable outcomes. Many acknowledge a gap in meaningful engagement with disadvantaged communities prior to launching pilot programs, often indicating the need to move quickly as a barrier.

2. Impact of existing forms of mobility and precedence

Government and advocacy leaders emphasized the effect of prior experiences and existing relationships with providers of rideshare and bikeshare operators on their e-scooter program decisions. For example:

- Boston’s investment in, and commitment to, the expansion of the Bluebikes (docked bike share) program made city leaders question the need to add a new mode.
- Chicago’s existing contract with Lyft for its docked bikeshare system regulated the time parameters of its e-scooter pilot.
- Portland’s recent learnings from the development of BIKETOWN’s equity program helped inform its e-scooter equity measures.

And, across all cities, prior experiences with TNCs’ (ie. Uber and Lyft) market entry strategy made most city leaders cautious in their approach and often more demanding in their permit requirements, especially around data-sharing parameters.

3. Infrastructure as key to physical safety

Across industries, interviewees most frequently cited safety as their greatest concern with e-scooters. In the absence of designated bike lanes, e-scooter riders must either follow the rules and ride alongside much larger and faster vehicles in the road, or break the rules and ride on the sidewalks, endangering pedestrians. Studies show a higher frequency of injuries occur when scooter riders ride in vehicle lanes on the street. Current best practices regarding safety include mandating the use of helmets and implementing speed limits; yet, the right mix of safety measures is challenging to determine in the absence of adequate separated/protected lane infrastructure.
Cities, companies, and advocacy organizations have addressed safety challenges by offering learn-to-ride classes and demonstrations, as well as helmet giveaways. Cities and provider companies should continue to partner on these types of programs, but only as a complement and not a substitute to increased investment in safer bike infrastructure.

### 4. Inequities in safety risks

Beyond typical traffic safety concerns, community advocates across cities also warned of additional personal safety concerns, specifically for women and racial minorities. Studies show that perceived safety is a significant factor in women choosing to use shared micromobility devices, including both e-scooters and bikes. A study by Portland State University (“PSU”), using data from Portland’s first e-scooter pilot, revealed a significant gender gap in e-scooter riders similar to the existing gap among cyclists - only 34% of Portland’s e-scooter riders identified as women. Although more research is necessary to definitively explain why this gap persists, women have indicated safety as a key factor. In the PSU study, “54% of women said a safe place to ride would increase their use.” This finding makes sense given female ride patterns studied with New York’s Citi Bike system, as women are “more likely to pick up and drop off children than their male counterparts,” and make up two-thirds of America’s minimum-wage workers, contributing to “longer or off-peak commutes that make cycling difficult or unsafe.”

Throughout our interviews, we also heard concerns about equitable enforcement of e-scooter use and regulations, particularly along racial lines. Louisa Gag, Public Policy and Operations Manager at Boston-area LivableStreets, said: “When you’re introducing a new mode of transportation and thinking about safety, you also need to think about

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**How safe are e-scooters? Austin, TX gave cities early insight**

E-scooter safety is a main concern for government officials. Thus, it is important to understand the factors involved, including the statistics (number of users and frequency of use), the role of infrastructure, allowed places of use, and scooter speeds.

Austin, TX, led the way in studying the safety of e-scooters in 2018. Overseen by federal epidemiologists and in a collaboration with the Centers for Disease Control and Prevention, the Public Health and Transportation departments of Austin collected data from hospitals to track scooter-related injuries over the course of three months. The study tracked location, type, reported cause, and timing of injury.

The study’s findings gave health and city officials a better understanding of the risks of e-scooter-riding, suggesting a series of individual safety measures and identifying policy implications to reduce injury rates and mitigate risk.

The team found 20 individuals injured per 100,000 e-scooter trips (0.02%) taken during the fall of 2018. There were no reported deaths during the study period, but there have been a few deaths reported across the country, leading to widespread negative press for scooters.

Over half of injuries took place in the street; a third were on the sidewalk. 16% of injuries involved a car, while 10% hit a curb and 7% hit an inanimate object.

Head injuries were most common (almost half), and 15% experienced traumatic brain injuries. The team concluded that many of these injuries could have been prevented with helmet use, showing the importance of protective gear. However, only 1 out of every 190 riders who were injured was wearing a helmet.

Of the reported causes, injured respondents said alcohol consumption prior to riding (29%), speed (37%), malfunctioning scooters (19%), or distracted driving (e.g. music playing and phone calls) (35%) as factoring into their injury.

Sources: “Dockless Electric Scooter-Related Injuries Study.” Hawkins, “Electric scooter-sharing…”
“When you’re introducing a new mode of transportation and thinking about safety, you also need to think about how enforcement is going to be involved, and how police enforcement impacts people of color, specifically Black people.”  

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Louisa Gag  
Public Policy and Operations Manager, LivableStreets

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how enforcement is going to be involved, and how police enforcement impacts people of color, specifically Black people.” Transportation for Massachusetts’ Statewide Organizing Director, Angela Johnson-Rodriguez, highlighted the same need for caution: “The issue that we run into that is not talked about so much, outside of advocates on the ground, is the interaction between users of scooters and public perception, but particularly with young Black boys who are already experiencing over-policing on their bikes, and are experiencing the same thing on their scooters.” While cities have collected information on rider demographics, more studies should be done to understand members of minority populations’ reasons for not using e-scooters, and policies to implement to increase these riders’ comfort levels.

5. Investment and market sustainability

While city officials were mostly excited about the potential of micromobility, many hesitated to fully invest time and resources in a wide-scale program given the perceived uncertainty about shared e-scooters’ sustainability. Most of our interviewees, particularly those in city government, expressed concern about the longevity of scooter companies. In fact, along with safety, it was the most noted concern among government officials, transportation agency leaders, and advocacy organizations. What worried people in our sample the most about scooters included: sustainability of the industry and the sector, survival of scooter companies, and the potential for city residents to begin to depend on a transportation mode that might suddenly disappear (See Figure 3).

In the same vein, however, private sector leaders pointed out how city requirements on providers’ business models hamstring their funds and lose them significant money, often in the name of equity but without translating into equitable outcomes. Despite enthusiasm from potential riders in new markets, strict fleet distribution requirements and operation fees from day one cause companies to struggle to turn a profit and get a foothold. The lack of investment in longer-term partnerships,
especially regarding infrastructure and incremental approaches to equity, handicaps the companies and makes operations unattractive in overly burdensome markets.

6. Benefits of alternatives and choice

Early results demonstrate that, with its ability to reach areas of cities lacking transit options, micromobility has a role to play in closing gaps in existing transportation infrastructure. For many, this means complementing existing options and enhancing rider choice. The Executive Director of Portland’s The Street Trust, Jillian Detweiler, explained: “To me, equity in mobility means everyone having the transportation choices they need to live a good life.”

Pilot program ridership data has shown that about one-third of shared e-scooter trips replace single-occupancy vehicle trips (including personal vehicles or TNCs). Yet, some public officials and advocacy organizations, including Chicago’s Active Transportation Alliance, noted widely-held concerns about e-scooters replacing more active and sustainable biking and walking trips. While we understand these concerns, it is important to consider equity in terms of the benefits of mobility choice. Overall, e-scooters should be seen as an additional choice that increases city residents’ – particularly residents who currently have fewer choices – ability to make the decision about which mode best fits their trip’s needs.
Key Learnings

Context is Key

*Micromobility must fit into specific transportation and equity landscape*

Each city has a history of transportation inequities, typically around race and income. Understanding these complexities and engaging with low-income and historically discriminated against communities will help public and private leaders design equity programs that address the actual needs of those communities.

Burdensome Regulations Prevent Progress

*Cities aren’t perfect; we shouldn’t expect companies to be from day one*

E-scooter companies can move the needle on equity, but they cannot be expected to solve centuries-old systemic discrimination in transportation. Requiring companies to enter and immediately operate in geographic locations where demand is low or protective infrastructure does not exist is unsafe and unsustainable. Scooters will not solve all transportation issues or gaps in transit, but if allowed to develop a sustainable model they have the potential to add to the overall mobility and micromobility landscape, both by increasing choice and through potential profit shares.
Safety is Both Personal and Infrastructural

*Bike lanes, law enforcement, and personal safety all are in question*

Physical safety is top of mind for city leaders and potential riders. Requiring helmets, minimum age, and speed limits all put good guardrails on use. However, it is important for cities to also consider broader safety concerns experienced by minority groups. City leaders should learn from others’ programs, but also tailor safety precautions to their specific populations and terrain.

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Uncertainty of Pilots Affects Sustainability

*Cities’ hesitance to commit to innovation drives market instability*

After safety, city leaders’ biggest worry tended to be “wasting” time and resources on developing a regulatory program for an innovation with uncertain longevity.

Yet, in several instances, companies have pulled out of cities due to regulatory-imposed losses and soured relationships. While pilot programs are a useful tool for iterative learning, pilots without clear, testable goals and metrics – and likely as a mask for hesitancy to commit to the innovation – play a significant role in the instability of the market, or at least the inability for scooter companies to get a foothold in new markets. E-scooters have clear issues (safety, sustainability, etc.), but the consensus is that they are coming, so it is best for cities and companies to think about how to develop the most mutually beneficial partnerships.

“We’re giving people these tools and we want to make sure they can do it safely, and that’s the biggest unanswered question for me right now with scooters.”

Sean Wiedel
*Chicago Department of Transportation*
Recommendations
City officials and agency leaders have access to a variety of strategies and policy tools they can use to welcome, regulate, control, or guide e-scooter adoption and use in their regions. Some options are more direct regulation, while others are more collaborative, flexible approaches. Drawing from our case studies, we recommend the following actions.

### 1. Early engagement with underserved communities

Overall, we heard and saw the need for a collaborative approach, not only for setting equity policies, but for defining equity goals. At times we observed misalignment between cities’ equity criteria for scooter companies and the outcomes desired by underserved communities. It is vital for cities to bring representatives of these communities to the table in a meaningful way from the initial stages to define what equity in micromobility means for those who have historically been left out of benefitting from new technology. However well-intentioned, when people in places of power make assumptions about the preferences and needs of underserved communities, it often results in apathy at best, and resentment at worst, as these communities come to feel that these programs and innovations are not for them. Through intentional and meaningful engagement, cities can design metrics for new programs that will more accurately measure progress toward outcomes desired by underserved communities. For example, while the most equal policy might be requiring distribution of scooters in similar amounts across neighborhoods, this might not necessarily be the most equitable in terms of transportation policy, as the needs of different communities might prioritize other transportation improvements over direct access to shared e-scooters.

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**Requiring Equity Assessments and Advisory: Key Learnings from Baltimore, MD**

Baltimore’s legislation is the “first of its kind nationally which explicitly calls out institutional and structural racism within governing, and actively puts in place structures and resources to make and support changes needed to address existing racial inequities.” The city outlined a variety of equity measures to ensure that equity is part of the conversation at the start of projects and formation of agencies:

1. Establishes training for City agencies to conduct equity assessments beginning in the first year of implementation.
2. Focuses on development of a plan and codifies action and implementation.
3. Creates and codifies an infrastructure and specific roles in local government, assigning responsibility for implementing activities.
4. Authorizes an assessment and review structure to track outcomes and effectiveness of policies, practices, and investments.

In addition to these important measures, Baltimore established an Equity Assessment Program, overseen by the Department of Planning, to proactively develop policies, practices, and investments, define terms, and require notices and reports, among other things, to aid in progress toward the goal of eliminating structural and institutional racism and discrimination.

Cities have a robust toolkit, along with hard-earned lessons from existing ride- and bike-share programs. Limited government resources and the temptation to draw comparisons and rely on existing knowledge make it easy to assume that the equity playbook for scooters should be the same as for bikes, buses, or other forms of transportation. In hindsight, multiple civic leaders admitted they could have done more outreach prior to launching e-scooter programs, and that these efforts likely would have increased their program’s success in underserved communities.

Equity is complicated, and can mean different things depending on context. City leaders should start by asking community members what they need to fill the gaps, and then design programs that put transit funds, including funds from profit-shares with private transportation companies, toward those goals. Baltimore, Maryland, provides a great example of how to put this into practice (see highlight above).

### Actions Cities Can Take: Engagement

1. Form an equity advisory body with representatives from all underserved neighborhoods, ideally providing financial compensation for members’ time.

2. **Before** drafting an RFP or designing a pilot program, allow the advisory body to work with city staff to define what an equitable scooter program would look like to their community. Continue to engage this group during and after the pilot program.

3. Do not limit engagement to the advisory body. Municipal staff should go to underserved neighborhoods and meet people where they are at to learn how equity provisions are translating into outcomes (or how they are not).

### 2. Pilot & RFP requirements: Design outcome-oriented, dynamic pilots

In our research we discovered that the intent of equity policies did not necessarily translate into equitable results. We recommend an outcomes-focused approach to new innovation, first collaborating with underserved communities to define an end-goal and ensuring that all equity policies directly connect back. Additionally, we heard in our interviews that companies were often confused about the goals and outcomes cities were looking for. The lack of clarity led
to confusion and disappointment when companies felt like they wasted time and resources solving a certain problem, only to be told that cities had changed priorities or shifted focus. Full transparency about policy goals and desired outcomes allows companies – often better equipped to work innovatively and iteratively – to be active contributors to developing solutions, and cities to more clearly benchmark progress. Additionally, rigidity in pilot programs can delay learning and detract from reaching desired outcomes. Instead, dynamic rewards based on clear benchmarks and outcomes throughout a pilot create incentives for companies to actively partner in developing solutions. Waiting until the end of a pilot to address issues in a program’s initial design could be wasteful of time and prevent opportunities to learn more.

At a minimum, cities should implement data-sharing requirements. E-scooter companies have demonstrated a willingness to collaborate in this area, presenting cities with an unprecedented opportunity for real time, informed decision-making and data-driven policy. However, access to the data is only a first step. As Eliot Rose, a technology strategist at Oregon Metro said, “Just having lots of data isn’t enough. We need to be looking at that and getting to a better standard of what service equity means for [mobility] services.” Yet, when combined with a roadmap based on clearly defined desired outcomes, data can be a powerful tool in allowing the public and private sectors to work collaboratively toward policy goals. Colin Erhardt, former Chicago Mayoral Fellow and current Harvard Kennedy School Government Innovation Fellow agreed, noting: “Thus far, the key to bridging the divide between those who do and do not benefit from transportation innovation is data collection, and allowing the data to inform how the private sector and government can allow for innovation while meeting equity goals.”

Portland’s pilots have exemplified the benefits of using a dynamic approach, as the city can adjust the number of vehicles as the pilot goes on. This flexibility, coupled with data collection and analysis, allows the city and companies to pivot and try something new, to further assess their methods and outcomes even during pilots.

**Actions Cities Can Take: Pilot & RFP Requirements**

1. Instead of developing rigid requirements, clearly define the policy priorities and end-goals developed with the equity advisory body. Allow companies the flexibility to innovate to help reach those goals.

2. Give companies an incentive to be a partner in solution development by instituting a dynamic reward structure at specified intervals throughout pilot.

3. Work with companies to gain as close to real-time data as possible to monitor progress toward desired outcomes and gain invaluable information about rider patterns and street usage.

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“Just having lots of data isn’t enough. We need to be looking at that and getting to a better standard of what service equity means for [mobility] services.”

**Eliot Rose**  
Technology Strategist, Oregon Metro
3. Phased approach for equity markers

Once desired equity outcomes are defined in partnership with community members, city governments should work with companies to determine reasonable timelines for reaching specific equity goals, recognizing that the best approach for a company’s sustainability and, in turn, long-term community benefits, might be a phased approach. Requiring e-scooters to be a “silver bullet” to solve transportation equity will not ultimately work for cities, companies or, most importantly, members of underserved communities.

During our interviews we heard frustration regarding the perceived double standard imposed on shared e-scooter companies. For example, many cities’ docked bike share programs started in city centers and then slowly spread outward; to this day, in most cases these programs still do not reach all underserved neighborhoods after nearly a decade in existence. Additionally, after ten years of operating, TNCs are just now starting to offer discounted rides, with Lyft providing free or discounted rides only in emergencies or to job interviews for those unemployed. Nearly all other modes of transportation that offer reduced fares for low-income riders receive public assistance to do so.

From the perspective of Scott “Mully” Mullen, formerly of Lime: “Scooters have to be 100% perfect from the start before they will even be allowed, but the reality is that no mode is. Yet, cities are exerting a level of control over this one discrete thing that they aren’t doing for any other mode. And on top of that, we’re being forced to pay.”

To be clear, we are not saying that equity goals are not important from day one. Rather, we recommend keeping desired equity outcomes at the center, working with companies to set realistic timelines so that overly burdensome requirements do not preclude the new innovation’s existence in the mobility landscape. Phased approaches will allow companies to get a stable foothold in the new market, develop and grow partnerships with the city and local community organizations, and build a solid foundation from which they can partner with a city on its equity goals for the long term.

**Actions Cities Can Take: Phased Approach**

1. Keeping equity end-goals at the forefront, work with companies to develop a realistic timeline, setting milestone markers along the way (i.e. 6-month equity goals, 12-month equity goals, 24-month equity goals, etc).

2. Ensure that companies stay on track to meet these goals, with clear incentives for meeting/exceeding them and consequences for falling behind.

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29 Klein, Jessica, “Lyft is helping nonprofits get low-income workers to their job interviews and first weeks of their new jobs.”
4. Invest in infrastructure

In order to make significant progress on converting short trips from cars to bicycles or scooters and to keep residents safe, municipalities must prioritize investments in redesigning the public right-of-way. Throughout the past century our society has subsidized the private ownership and use of automobiles in the design and allocation of our public streets. As mobility patterns shift, city governments have begun to reimagine and reassess the value of their curb space. Yet, while many cities have made significant progress in expanding bike lane networks over the past few years, they must move at a much faster pace to make substantial progress on incentivizing mode shift and reducing traffic congestion. However, while cities should retain responsibility for upgrading, improving, and maintaining public bike infrastructure, this does not mean that they must foot the entire bill.

Across cities and sectors we found a nearly universal recognition of the importance of adequate and connected bike infrastructure in promoting transportation mode shift and closing gaps in transportation equity. Cities that already have protected or designated bike lanes have been more successful in e-scooter adoption, both in terms of utilization and safety. After a decade of experience working in the shared mobility industry, Mullen had a clear stance: “Cities shouldn’t be spending money on the mode, they should be fixing their rights-of-way. Cities should be focused on the infrastructure.” While some argue that cities should not spend public money to aid private scooter companies’ success, it is important to remember that e-scooters are merely the current form of micromobility innovation. These public right-of-way upgrades will not only benefit e-scooters, but will pave the way for all of the micromobility innovation that is sure to follow over the next several decades.

In practice, cities should invest in protected lane infrastructure, but also find ways to increase resources to dedicate to maintenance and improvements. Cities should thoughtfully design micromobility pilot and permit programs to include tax and fee structures to boost resources, with a particular focus on directing this capital into transportation infrastructure projects in historically underserved neighborhoods, often the last to receive these types of upgrades.

**Actions Cities Can Take: Infrastructure**

1. Focus efforts on completing connected, protected bikeways, shortening timelines wherever possible.

2. Use permitting fees and fines, or work with companies to develop a profit-sharing model, and use the increased revenue from scooters to directly invest in protected micromobility infrastructure in historically underserved communities.

3. Ensure that infrastructure projects in underserved communities are planned in conjunction with the established equity advisory body.
5. **Adopt a holistic, systems-based approach**

In order to fully envision the extent of the options in cities’ toolkits, municipal leaders must take a step back to view the mobility ecosystem as a whole. By thinking about e-scooters in the context of mobility-as-a-service, cities can design pilot programs, legislation, and regulation that incorporates e-scooters into the bigger transportation picture. Given that transit options are complementary, interconnected parts, partnerships, placements, investments, and financial models should be considered holistically.

**Subsidizing E-Scooters: Key Learnings from Dayton, OH**

One of the issues e-scooter companies must deal with, especially in comparison to other modes of transportation, is the lack of subsidies from cities, states, or federal government. Almost all cities subsidize their subway and bus system, as well as the newer bike-share systems.

However, Dayton, Ohio, stands apart from the rest of the local governments in the U.S. In August 2019, the city of Dayton brought 100 Spin scooters to the downtown area. Spin, a San Francisco-based company owned by Ford Motor Co., expanded to Ohio with the help of Dayton’s transit agency. Greater Dayton RTA runs the operations for the business.

Dayton is unique in that it is the first market where scooters are subsidized or fully supported by the city. Sandy Gudorf, president of Downtown Dayton Partnership, explained the value of adding scooters to the transportation system in Dayton: “The scooters are a complement to other mobility options, such as the Link bike share program and the RTA’s free Flyer bus, that give people the choice of different ways to travel in downtown.”

Sources: Gnau, “Downtown Dayton welcomes Spin electric scooters”, Frolik, “Spin scooters on temporary break from downtown Dayton”

For example, cities should adjust their e-scooter pricing and fee model to consider cross-subsidies. Once city leaders have worked with their equity advisory body to define equity goals, they should consider how they can take profits from e-scooters and invest them in attaining desired outcomes. This could mean allowing scooters to operate where they will be most utilized, using profits from scooters ridden in high-income areas, or by high-income users, to subsidize other modes of transit for low-income individuals. Further, cities and companies must be mindful of the costs that fees pass on to riders. Companies report that, with the current fine and fee structure imposed by cities, they end up operating at a net loss. However, if they pass their fines on to their users, it would price out the very communities that cities are trying to reach with equity programs.

As mentioned before, the government subsidizes most other transit equity programs. If cities instead allow scooter companies to operate with fewer geographic restrictions and increase revenue, a simple profit share model would allow the city to earmark the funds to boost investment in infrastructure or cross-subsidize bus fares, ride-sharing, or other modes. As an example of another creative option, Dayton, Ohio, has incorporated their e-scooter system into their city-run transportation operations (see highlight).

**Actions Cities Can Take: Holistic Approach**

1. Work with equity advisory body to determine what underserved communities need and want most in terms of transportation.

2. Instead of neighborhood quotas, work with scooter companies to establish a profit-sharing model, and use the funds to directly invest in equity priorities.
Private Sector Recommendations

While we understand that the private sector’s main motivation is increasing profits and maintaining financial sustainability, we believe that an intentional plan for working with city governments and engaging underserved communities could be mutually beneficial. From our case studies, we recommend that the private sector take the following actions to aid collaboration and demonstrate their commitment to broader benefits.

1. Intentionally partner with local governments

Overall, shared e-scooter companies should work with local governments as partners rather than approaching regulatory bodies exclusively as obstacles. Once cities have defined clear, outcomes-oriented transportation and equity goals, companies should work alongside cities as active contributors toward reaching them.

It is important to recognize the mobility innovation landscape into which e-scooters arrived. Uber’s market entry model of showing up unannounced and pushing ahead with operations in legal gray areas set the tone for an antagonistic relationship between cities and innovative transportation companies. The first wave of shared e-scooter launches did not help, with companies attempting to follow Uber’s playbook in the early stages. While scooter companies have since emphasized the change in their approach to work with the public sector, we heard lingering hesitation, skepticism, and general mistrust from municipal leaders when it came to working with transportation innovation from the private sector. Based on learnings from their experience with the arrival of TNCs - in which many cities now feel that they did not impose enough regulation - cities and towns are now turning to more onerous regulation as a countermeasure. While scooter companies are not at fault for much of these soured relationships, they still must face this obstacle as they work to launch and grow their product on city-owned streets. Scooter companies have the opportunity to help cities fill mobility gaps in a way that will contribute to decreasing traffic congestion; however, while this is a compelling proposition, they must also develop relationships with city leaders in a way that builds trust and eases long-term sustainability, equity, and safety concerns.

Before launching in a new market, scooter companies should actively work with city officials to understand the equity landscape into which they are entering. We recommend they work with the public sector to understand the city’s equity goals, and go beyond merely meeting minimum requirements to be active participants in helping to innovate to reach these goals. This will help increase transportation equity in these cities and will be an indicator of goodwill and assist in building positive relationships with the public sector.
Actions Companies Can Take: Partner with Government

1. Engage municipal leaders early, proactively asking questions about a city’s equity landscape and learning about its goals.

2. Contribute to achieving a city’s equity outcomes, going beyond minimum requirements to help cities innovate and overcome historical barriers to equity.

2. Increase community outreach

With an eye toward equity, companies should increase their community outreach and meaningfully engage with underserved communities from early stages of launching in a new market. Community outreach includes proactively engaging with community groups and advocacy organizations, and developing partnerships that expand a company’s reach. This will contribute to decreasing barriers to mobility access and could likely benefit companies by bringing more riders to the streets.

Throughout our interviews, public and private sector leaders both noted that, for micromobility, it has not been an “if you build it, they will come” situation, particularly in underserved communities. Both Chicago and Portland had similar experiences when it came to bicycling infrastructure and new mobility innovations. In certain instances, people in underserved communities who had not benefited from proactive engagement were surprised by infrastructure changes in their neighborhoods, resulting in feeling that these mobility options were not for them and leading to low utilization rates. Some pilot programs have required minimum

In Portland, OR, Partnerships Expand Reach

As part of its dynamic rewards structure, Portland incentivizes scooter companies to partner with advocacy organizations to provide free “learn-to-ride” workshops. These events give potential riders the opportunity to try e-scooters in a safe environment, and often include a discount on future rides and free helmet giveaways.

Bird partnered with The Street Trust, an active transportation advocacy organization, to fund the development and delivery of an e-scooter safety curriculum that builds on the Trust’s experience in bike safety education programs. These free, voluntary workshops, set to launch in spring 2020, combine information on the rules of the road, skills training, and information on route finding.

Forth Mobility, an advocacy organization and industry group that promotes all forms of electric transportation, held a series of free e-scooter workshops in conjunction with Lime, Spin, and Razor in 2019. These workshops covered how to unlock and ride an e-scooter, riding tips, and safety information, and included free helmets and $10 ride credits for participants. They took place both in communities and on-site at Forth’s Electric Showcase. Additionally, at least one workshop was offered in Spanish.

Through these workshops, the organizers learned about what works for engagement and education. Joe Wachunas from Forth noted several key learnings from the first round of e-scooter workshops. Most importantly, in terms of attendance, Forth found that it was best to hold these workshops at existing community events than to create new, one-off opportunities. Additionally, toward the end of the year, Forth began to include other community-based partners in this initiative to help expand their reach in low-income neighborhoods. For example, one partnership led to a successful workshop outside of a heavily-trafficked food pantry, and Forth hopes to continue partnering with other organizations to combine their transportation expertise with the local expertise of their partners.

Sources: Interview with Jillian Detweiler, Interview with Joe Wachunas, “The Street Trust E-Scooter Workshop,” “Spin E-Scooter Workshop”
standards for rider education performed by companies; however, this should be applied more widely and proactively, and companies should not approach these initiatives alone. In our interview, Joe Wachunas from Portland’s Forth Mobility noted that one of the biggest lessons learned from co-hosting workshops with several e-scooter companies (Lime, Spin, and Razor) was the importance of participating in existing events in order to expand the effort’s reach.

In practice, companies should increase their focus on community engagement, including pop-ups (i.e. learn-to-ride trainings) at community events, giveaways (i.e. helmets), and electronic and paper communication that includes information on low-income access programs. Where appropriate, companies must ensure that these materials are available in multiple languages and are culturally relevant. E-scooter companies should establish relationships with community-based partners in underserved neighborhoods to bring this programming and information to low-income residents, meeting them where they are. Setting up test rides at various community events, outside of schools and affordable housing communities or other target locations will welcome potential riders to try e-scooters and increase uptake for economic access programs.

**Actions Companies Can Take: Community Engagement**

1. Proactively reach out to community-based organizations in new markets to establish relationships in low-income, underserved communities.

2. In conjunction with partner organizations, conduct learn-to-ride workshops and information campaigns on low-income access programs at existing community events and other highly trafficked locations in underserved communities. Meet low-income riders where they are.
Conclusion
Conclusion

We believe that cities, in the case of micromobility, are applying technical solutions to an adaptive challenge. Through technical requirements in pilots, such as geographic distribution, cities overlook the root causes of transportation inequities. For scooters to contribute to a move toward mobility-as-a-service and help build a more equitable transportation system, cities and companies must partner to engage with low-income and underserved communities to understand their actual needs.

Overall, cities are requiring equity programs when it comes to micromobility, but without significant uptake in target populations. Across city officials, researchers, and companies, the general sentiment is that the public sector is placing heavy burdens on companies to make up for gaps they themselves have not addressed - or even historically created.

We believe that most, if not all, civic leaders we spoke to have the best intentions and are working from the same toolkit. Before launching our interviews, we were able to brainstorm many of the policy options that the cities were already using. We were also encouraged that equity was top of mind for officials, advocacy groups, agency leadership, and private companies. However, with this new innovation, cities need to update their existing toolkit.

There seems to be a need to change mindsets and culture regarding equity and micromobility. The equity requirements cities mandate for companies to qualify for pilots, as well as the guidelines throughout their operation, could be placing too high a burden on private companies, not allowing them to gain a foothold in the market and affecting their sustainability.

Equity should be at the forefront of these discussions, and our recommendation is not to deprioritize it. Looking to docked bike share as an example, the service was limited to city centers and surrounding neighborhoods in the first few phases, but always operated with the goal of expansion to all communities. Yet, while docked bike share still has not reached all underserved communities in most cities, municipalities are requiring scooter companies to successfully accomplish this in their pilots. Additionally, while cities cite the need for time and network effects for lower rates of adoption in certain neighborhoods, they have much higher expectations for scooter companies.

In the face of these expectations, we are seeing that private companies cannot fix inequities by themselves. With a phased approach, we believe that cities will be more successful in bringing micromobility companies into sustainable, profitable partnerships. Pilot programs should focus on outcomes, and should be structured to allow companies to innovate to help cities meet clearly articulated goals, with a dynamic reward system to provide incentives. Further, a pricing model that allows profits (or fines) to be invested in micromobility infrastructure – particularly in low-income communities – should be developed.

Equity should continue to be in the conversations from the beginning phases of new innovation adoption, but cities should be willing to take a more long-term view. There should be earlier and more frequent engagement with historically underserved communities to develop equity goals together, and more opportunities for these communities to be a meaningful part of the conversation about bringing new innovation to their neighborhoods. Cities should allow companies to get solid footing in a market before making demands on their business model (i.e. phased equity goals). Finally, cities should focus more on reimagining the roadway and curb space, and work to improve active transportation infrastructure in formerly disadvantaged neighborhoods, as this is a key factor in micromobility uptake and safety.

“Electric scooters fall into the category of a growing, new innovation that we should nurture and support while at the same time maintaining oversight. The challenge is finding that sweet spot of not being overly onerous while at the same time having common-sense safeguards in place.”

Matt O’Malley, Boston City Councilor

# Works Cited


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<td>CHI</td>
<td>Whitehead</td>
<td>Kyle</td>
<td>Advocacy</td>
<td>Managing Director of Public Affairs</td>
<td>Active Transportation Alliance</td>
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<tr>
<td>CHI</td>
<td>Comeaux</td>
<td>Daniel</td>
<td>Government and Private</td>
<td>Former Consultant and Fellow in Chicago and Boston</td>
<td>MBTA, Civic Consulting Alliance, CTA</td>
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