

REMIX MOBILITY BRIEF

Micromobility's opportunity to serve the underserved edges

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THE REMIX POLICY TEAM is a resource for cities striving to proactively plan the future of their transportation systems.

REMIX MOBILITY BRIEFS outline our perspectives on the future of mobility, and are informed by local best practices and conversations with industry experts.

PEOPLE'S LIVES ARE DYNAMIC, with varying mobility needs throughout a single day. A given city dweller might start her day using public transit to get to work, followed by bikeshare to rush to a midday meeting. After work, she might take a scooter to the grocery store, then with bags in tow, take a Lyft or Uber home.

Having the ability to choose among many different modes of transportation is one benefit of city living. However, that benefit may not be accessible to all. Remix believes that if guided correctly, new mobility (or "micromobility," as we'll describe it here) can improve access to the greater transportation system in new and important ways.

Here, we'll evaluate key considerations when thinking about equitable access to transportation choices and share a few perspectives on how cities are approaching the problem.

The "underserved edges"

Transportation choices are not equally distributed to the "underserved edges," or areas outside the urban core. Due to decentralization of poverty, these underserved edges are home to many low-income members of the community. The lack of low cost mobility options may create increased social exclusion.^{1,2} Many cities have equity policy goals and projects that try to address this; however, delivering reliable and frequent mobility in these areas via traditional transit is challenging. Areas outside the urban core are often left without reliable and frequent options other than car ownership. The transit network becomes circuitous, and the bicycle network inconsistent and infrequent. Attempts to resolve this issue have primarily been targeted "group" solutions–finding ways to make public transit work in areas where it is difficult for it to be successful. Recent examples include microtransit pilots or TNC partnerships typically sponsored by transit agencies. However, these pilots are still limited and are typically scoped to finite service areas.



Seattle dockless bikeshare availability in December 2017

Source: Seattle Department of Transportation Free Floating Bikeshare Pilot Evaluation Report (2017)

 Name
 Wang, Kyungsoon, and Myungje Woo. "The Relationship between Transit Rich Neighborhoods and Transit.

 Ridership: Evidence from the Decentralization of Poverty."
 Elsevier, 27 July 2017

2 The discussion of equitable access in this paper focuses specifically on access barriers for low income users outside the urban core. Conversations around equitable access more generally can extend to women, people of color and/or people with disabilities.



Micromobility as a solution

The emergence of micromobility (shared e-scooters, mopeds, and bikeshare)³ provides a new opportunity to address the "underserved edges." Micromobility, like many new mobility services, supports the individual user's convenience, reducing the friction from parking, walking, and waiting. It is a new way for a city to offer publicly accessible mobility...but micromobility also brings new challenges. Micromobility companies are privately owned and managed. Their vehicles, as compared to transit or taxis, are individually unmonitored. The rapid adoption of these services indicate a clear market demand, yet, without government incentives or regulations, they tend to serve areas with robust transportation offerings, while continuing to leave the underserved edges vacant.



The most popular locations for micromobility are often locations that are already well served by transportation options.

Source: GoSaMo TMO (Santa Monica Transportation Management Organization)

Micromobility can potentially help agencies meet their equity goals related to the underserved edges to overcome specific, otherwise-vexing issues. A recent survey found that dockless electric scooters enjoy higher positive public perception from lower-income groups, indicating desire for the services in these communities.⁴ However, accessing these services can be an obstacle for this population for a few reasons. Two in ten Americans do not have a smartphone, and that number increases to three in ten for those who make under \$29,999 per year.⁵ Public transit, the most common publicly accessible service, almost universally accepts cash payments. Micromobility services, on the other hand, do not take cash, and may require targeted education on how to get a cash account established. The consequences here are stark: the United States' unbanked⁶ population currently stands at 7.7%, with that number rising to over 20% in African-American and Latino populations. Not addressing smartphone and payment barriers could increase disparities in access to a greater mobility system as micromobility continues to grow in its share of urban trips.⁷

Ensuring Equitable Access

Because private micromobility vehicles require access to the public right-of-way, cities have the authority to permit and regulate their use. NACTO's recent Guidelines for the Regulation and Management of Shared Active Transportation go into further detail on common permitting frameworks cities employ for these agreements.⁸ These agreements define important criteria including where vehicles will park, safe operating speeds, and insurance requirements. They are the lever cities can use to guide providers toward helping achieve local policy goals. The pilot permitting process for micromobility companies typically include requirements and a selection process where cities can encourage their desired outcomes.

3 It's important to note that bikeshare has existed in US cities for several years. However, the recent growth of dockless bikeshare providers and transition of some docked systems to dockless has caused some confusion. Thus, "bikeshare" is used for simplicity's sake.

- 4 Populus. The Micromobility Revolution.
- 5 http://www.pewinternet.org/fact-sheet/mobile/
- 6 Those without access to a bank account
- 7 2013 FDIC National Survey of Unbanked and Underbanked Households
- 8 https://nacto.org/wp-content/uploads/2018/07/NACTO-Shared-Active-Transportation-Guidelines.pdf



For micromobility to increase transportation access, two criteria must be considered: **vehicle access** and **platform access** (defined below). We strongly believe that a third criteria–improving existing network access across modes–is also important. However, the needs may differ depending on the complexity of the transportation network and number of local operators.

- **1. Vehicle access:** requirements focused on vehicle fleet distribution
- **2. Platform access:** requirements focused on adoption needs of disadvantaged populations
- **3. Existing network access:** requirements geared towards interoperability across the entire transportation system

VEHICLE ACCESS

Cities are using different approaches to encourage distribution. The first approach is to mandate a **percentage distribution** in certain zones, such as communities of concern, low-income areas, or other priority zones for transit service delivery. The second approach is more market-driven, using **fee incentives**.

Example: Seattle Department of Transportation (Percentage distribution)

As part of their 2017 "Free-Floating" (dockless) bikeshare program pilot permit requirements, the Seattle Department of Transportation (SDOT) required operators with systems of 2,000 bicycles to distribute 20% of these bicycles in Tier 1 Priority Hire areas. Priority Hire areas include Seattle and King County neighborhoods whose populations indicate large portions of people living 200% below the poverty line, high unemployment rates, and high instances of people over 25 without a college degree.⁹ SDOT did not require operators to initiate their program with a focus on Priority Hire areas; operators were not allowed to exceed 2,000 bikes until the third month of the pilot.

SDOT evaluated the dockless pilot program 5.5 months after the launch of the pilot. The results of the evaluation showed some success on the part of the three participating providers at providing access to vehicles in Tier 1 neighborhoods. Rainier Valley and Beacon Hill, two Tier 1 neighborhoods, showed above average bicycle ridership. Other Tier 1 neighborhoods in the south, southwest, and northern parts of the city did not show high adoption. SDOT's qualitative inquiry into why this occurred returned recommendations related both to better distribution as well as platform access: outreach and education around ways to reserve a bike without a smartphone or data plan and ways to pay without a credit card.¹⁰

9 <u>http://www.seattle.gov/Documents/Departments/FAS/PurchasingAndContracting/Labor/Zip_Codes.pdf</u>

10 http://www.seattle.gov/Documents/Departments/SDOT/BikeProgram/2017BikeShareEvaluationReport.pdf





Tier 1 and Tier 2 Priority hire areas in Seattle

Source: Community Attributes Inc., Priority ZIP Codes, 2016 Source: 2017 Priority Hire Annual Report, City of Seattle

Tier 1	Seattle Neighborhood	ZIP Code
Tier 1	Downtown	98101
Tier 1	Capitol Hill/Eastlake	98102
Tier 1	Downtown/ID	98104
Tier 1	Delridge	98106
Tier 1	Ballard	98107
Tier 1	S. Beacon Hill/South Park	98108
Tier 1	Interbay/Queen Anne	98109
Tier 1	Rainier Valley/Rainier Beach	98118
Tier 1	Belltown	98121
Tier 1	Central District	98122
Tier 1	Lake City/Northgate	98125
Tier 1	Delridge/High Point	98126
Tier 1	Bitter Lake/NW Seattle	98133
Tier 1	N. Beacon Hill	98144
Tier 1	White Center	98146
Tier 1	Rainier Beach/Skyway	98178
Tier 2	King County Neighborhood	ZIP Code
Tier 2 Tier 2	King County Neighborhood Kent/Auburn	ZIP Code 98002
Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way	ZIP Code 98002 98003
Tier 2 Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue	ZIP Code 98002 98003 98007
Tier 2 Tier 2 Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way	ZIP Code 98002 98003 98007 98023
Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent	ZIP Code 98002 98003 98007 98023 98030
Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent	ZIP Code 98002 98003 98007 98023 98030 98031
Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent	ZIP Code 98002 98003 98007 98023 98030 98031 98032
Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent Pacific	ZIP Code 98002 98003 98007 98023 98030 98031 98032 98047
Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent Pacific South Renton	ZIP Code 98002 98003 98007 98023 98030 98031 98032 98047 98055
Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent Pacific South Renton Northeast Renton	ZIP Code 98002 98003 98007 98023 98030 98031 98032 98047 98055 98056
Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent Pacific South Renton Northeast Renton Central Renton	ZIP Code 98002 98003 98023 98030 98031 98032 98047 98055 98055 98056
Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent Vest Kent Pacific South Renton Northeast Renton Central Renton Burien	2IP Code 98002 98003 98007 98023 98030 98031 98032 98055 98056 98057 98148
Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent Vest Kent Pacific South Renton Northeast Renton Central Renton Burien Boulevard Park/Tukwila	ZIP Code 98002 98003 98023 98030 98031 98032 98047 98055 98055 98056 98057 98148
Tier 2 Tier 2 Tier 2	King County Neighborhood Kent/Auburn Federal Way Bellevue Federal Way East Kent Northeast Kent West Kent West Kent Vest Kent South Renton Northeast Renton Central Renton Burien Boulevard Park/Tukwila SeaTac/Tukwila	ZIP Code9800298003980079802398030980319803298047980559805698057981489816898188

Table 1: Sample of distribution metrics

City	Initial Cap (per vendor)	Eventual Cap*	Distribution
Baltimore	1,000	1,000	25% in Community Statistical Areas (at least 1.5% in the 15 neighborhoods identified as a CSAs)
<u>Chicago</u>	50-250 (dockless bikeshare)	350	The city is divided into four quadrants as shown by the city's Equitable Distribution Map. Fifteen percent of a vendor's fleet must be available in each quadrant of the pilot service area at any given time.
Los Angeles	500-2,500	3,000	Additional 500 vehicles (from the initial 2,500 to the 3,000 amended cap) if located in disadvantaged communities
<u>Nashville</u>	500 - 1000	Further expansion may be permitted based on adherence to the city's policy	"Permitted operators shall have a plan to provide equitable access in neighborhoods and to communities and users that are underserved by mobility and transportation options"
<u>Portland</u>	2,500	2,500	Citywide, 20% of permittees' fleets must deploy to Eastern Neighborhoods Pattern Area
<u>San Francisco</u>	625	2,500	Skip: 20% in Southeastern quadrants of the city (Bayview, Hunters Point, Excelsior and Visitacion Valley) Scoot: 20% in census designated Communities of Concern
<u>Santa Monica</u>	500 e-bikes and/or 1,000 e-scooters	3,000	Operators must maintain ¾ of total devices outside of the city's downtown district
Seattle	500 (dockless bikeshare)	5,000	20% in Tier 1 priority areas for operators with a fleet size of 2,000

*In several cases, Cities are asking vendors to prove device utility to slowly expand their fleets over time.

Based on the eventual cap, we also evaluated two metrics from the sample cities to understand how existing policies map to city populations (residents per dockless vehicle) and land area (dockless vehicle density). These could be considered high-level proxies for distribution metrics, but do not sufficiently explain if users truly are accessing these new forms of mobility. Portland and Santa Monica defined citywide caps for total number of scooters while other cities only defined caps at the vendor level. For the purpose of these comparisons, we assumed that cities with no vendor caps would support three vendors. Based on this, we first examined the total number of residents per permitted scooter. Santa Monica had the lowest ratio of one scooter per 31 residents.



Santa Monica, given its relatively small size (about eight square miles) also had the highest scooter density with nearly 356 scooters per square mile in a full expansion scenario.



Example: Los Angeles City Council (Fee incentives)

Scooter permit rules recently adopted by Los Angeles City Council use caps and fees, rather than mandated percentages, to encourage distribution to low-income areas. Scooter operators are capped at 3,000 vehicles, with an option to add an additional 2,500 vehicles if they operate in disadvantaged communities identified by <u>CalEnviroScreen 3.0</u>.¹¹ Another 5,000 scooters could be added if they were to operate in the San Fernando Valley, a region that is generally disproportionately burdened by, and vulnerable to, multiple sources of pollution. Rather than use caps alone to encourage distribution, L.A. City Council also included fee incentives. Vendors must pay the city \$130 per vehicle on the street, but that fee drops to \$39 per vehicle in low-income areas.

It's too early to tell which of these approaches–incentives on caps and fees, mandating a percentage distribution, or a hybrid of the two–are most effective at delivering equitable coverage. By writing percentage distribution requirements into the permit requirements, SDOT's approach requires mobility providers who launch 2,000 bicycles to distribute 400 in low-income areas. L.A. City Council has opted to leave the decision to the scooter vendors, and over time must determine if the incentives are reaching the desired outcome.

11 CalEnviroScreen identifies, by census tract, California communities that are disproportionately burdened by, and vulnerable to, multiple sources of pollution.



PLATFORM ACCESS

Platform access requirements focus on reducing unseen barriers for disadvantaged users. These requirements move beyond distribution to encourage cash payment options, access for those without a smartphone, community outreach, and low-income passes. To examine this issue, we'll first take an in-depth look at San Francisco's scooter application submissions.

Example: San Francisco Municipal Transportation Agency (mandating platform access)

The San Francisco Municipal Transportation Agency (SFMTA) underwent a scooter permit application process that evaluated twelve potential e-scooter vendors. The agency developed a <u>rubric</u> to score applicants using their <u>Emerging Mobility Guiding</u> <u>Principles</u> as a guide for scoring criteria. In addition to scoring the companies for their ability to ensure scooters are rebalanced in underserved areas and several other criteria, the companies were scored for:

- Outreach approach to include strategies to ensure that low-income residents are aware of services and how to participate.
- Approach to providing service to low-income residents including diverse payment options and fare discounts to reduce barriers to participation.

Approaches that scored highest on outreach included:

- Partnerships with advocacy groups
- Merchant outreach
- Community benefit partnerships
- Outreach with affordable housing and public housing residents
- Pop-up events in communities of concern to register users who don't have credit cards or smart phone access



Scooter Share Pilot Program - SFMTA Application Assessments

Scorecard of all e-scooter proposals across seven categories

Source: Scooter Share Pilot Program - SFMTA Application Assessments



Table 2: San Francisco e-scooter proposals that scored "strong" on outreach to low-income residents

JUMP	 Detailed strategy to conduct outreach at affordable housing and public housing sites and established bike and scooter racks if desired Would ensure marketing materials reflect community diversity Would promote service to low-income users
Scoot	 Detailed plan to promote use among low-income communities through efforts to establish relationships with at-risk youth and youth health clinic groups, public and affordable housing groups Customer service in English, Chinese, and Spanish
Spin	 Plan to complement Muni Equity Strategy by focusing initiatives on Equity Work Group's priority needs and/or recommendations Detailed approach to promote service to diverse users Plan meet-and-greets with CBOs in equity neighborhoods, and propose 1 to 3 community outreach events with CBOs in each neighborhood Multilingual materials to promote low-income program

Table 3: San Francisco e-scooter proposals that scored "strong" on approach to providing service to low-income residents

JUMP	 \$5/year plan includes 60 minutes riding time per day Subscription plan available Cash option No plan for SMS access
Lyft	 \$5/year plan includes unlimited 30-minute rides Subscription plan available Cash and SMS options
Skip	 Two free rides per day Cash payment SMS options for booking the vehicles

Table 4: San Francisco e-scooter proposals that scored "strong" on servicing area beyond the downtown core and commitment to rebalancing in underserved areas

JUMP	 Detailed strategy to conduct outreach at affordable housing and public housing sites and established bike and scooter racks if desired Would ensure marketing materials reflect community diversity Would promote service to low-income users
RideCell	 Detailed plan to promote use among low-income communities through efforts to establish relationships with at-risk youth and youth health clinic groups, public and affordable housing groups Customer service in English, Chinese, and Spanish
Skip	 Plan to complement Muni Equity Strategy by focusing initiatives on Equity Work Group's priority needs and/or recommendations Detailed approach to promote service to diverse users Plan meet-and-greets with CBOs in equity neighborhoods, and propose 1 to 3 community outreach events with CBOs in each neighborhood Multilingual materials to promote low-income program

Despite Jump scoring high on all these low-income adoption related metrics, Skip and Scoot were the two companies selected to receive permits after a comprehensive scoring of all evaluation metrics. The twelve application responses can be viewed <u>here</u>.¹²

The multiple and diverse strong proposals on low-income metrics in SFMTA's application process provide insight into creativity on the part of vendors to deliver low-income adoption when the "how" is left open in a competitive application process. These proposals also provide insight into an array of approaches that are possible to require as part of a pilot agreement. Table 5 outlines approaches taken in other cities.

12 https://www.sfmta.com/projects/powered-scooter-share-permit-and-pilot-program



Table 5: Sample Platform Access Approaches

City	Description of Program	Outcomes
Baltimore	Dockless operators to provide a low-income customer plan, such as waiving vehicle deposit or providing a prepaid affordable trip package, to individuals showing proof of receiving local, state or federal assistance	<u>"OneBird eliminates \$1 base fee for those</u> who are enrolled in, or eligible for, state or federal assistance programs"
Chicago	Vendors must be committed to addressing equity issues and utilizing their dockless service to expand mobility to people facing financial and technological barriers. These barriers must be addressed in vendors' operations and communications programming.	 JUMP Boost Plan: \$5/Month for 60 free minutes a day. "Available to anyone currently enrolled in one of the following programs: LINK Card Food Stamps LIHEAP Program RTA Reduced Fare Enrollment requires Zagster Pace Pledge: \$5/Month for 60 free minutes a day for EBT members Ride with cash through PayPal Cash and PayNearMe Text to Pace to unlock bikes through SMS
Santa Monica	It is desirable that operators offer a means of accessing devices that do not require the use of a smartphone and/or access to a credit or debit card and establish low-income qualified rates, and provide a system for user sign up and payment that enables easy use of the reduced rates. Other incentives such as education, outreach and payment plans for low-income or other disadvantaged users is strongly encouraged.	 OneBIrd (as described above) JUMP Boost Plan (as described above) The Lyft Community Pass Low-income, discount program that costs \$5 per year and includes unlimited, free, 30-minute rides within service area. "We are currently working to support users without smartphones. Stay tuned for updates." Lime Access Eligible for anyone who participates in any state or federally-run assistance program. Lime Access members receive a 95% discount on all Lime pedal bike rides and a 50% discount on all Lime-E electric-assist bike and Lime-S electric scooter rides. Ride with cash through PayNearMe

Table 5 continued on next page

Table 5: Sample Platform Access Approaches (Continued)

City	Description of Program	OUTCOMES
San Francisco	Under the scooter share business model, private companies profit by providing a service that uses the public right-of-way. Programs receiving permits from the SFMTA must be available to all, including groups who have historically lacked access to mobility benefits. Regulation can ensure that service is available in diverse geographic areas and that service is available to low-income residents through discount programs and varied payment options.	 JUMP Boost program (as described above) "The JUMP Boost Plan in San Francisco is available to anyone currently enrolled in one of the following programs: Calfresh SFMTA Lifeline Pass PG&E CARE" Scoot "[Scoot is] expecting to implement an automated sign-up and qualification process for users who are eligible through Calfresh, PG&E Care and Muni Lifeline as acceptable income verification proxies for affordability membership." Ride with cash options available for eligible members Skip Skip aims to fund two rides a day for qualified low-income users. Users can qualify through CalFresh, PG&E CARE or SMFTA Lifeline Program Skip is partnering with Cashstar to develop a cash payment methodology Skip has proposed creating Skip Cards, which can be funded with cash Skip "will support Clipper Card as a functioning payment method no later than year-end" While cash payment methodologies are still being developed, Skip will set up kiosks "in communities of concern" to create and fund accounts for neighborhood residents.
Washington DC	N/A	Lime Access (as described above)OneBird (as described above)



Soon, the TAP Card in Los Angeles will enable free transfers between transit and bikeshare. Source: Los Angeles Metro

EXISTING NETWORK ACCESS

We believe that the true benefit of micromobility and modal access will come when the private and public efforts work seamlessly. How can cities and private operators work together to make links to those who need mobility with the greater system as a whole? LA Metro recently reduced fares on the Metro's bikeshare system to match transit fares, as they move to make free transfers between these two modes available through the TAP card. In July 2018, Lyft announced plans to integrate real-time transit information, and plan multi-modal Lyft Bikes and Scooter trips. Discounted bikeshare passes such as those offered by Divvy in Chicago and Indigo in Philadelphia use the same disadvantaged population criteria as the local transit system. These are early examples of how new mobility options have the potential to serve as a bridge across transit networks and different modes of travel.

With new modes on the street, there are major opportunities to make the disparate parts of a transportation system feel seamless to the consumer. Cities should be creative in exploring those partnerships.

Measuring Equitable Access

Policy outcomes such as "equitable access" need associated metrics to measure progress and to make recommendations for improvement. We've identified the following potential lenses for success:

- Percentage vehicle access: this can be measured by tracking the percentage of trips starting in underserved communities, or percentage of vehicles distributed in underserved communities daily.
- Percentage platform access: this can be measured through survey data of how many low income users have adopted the service, or percentage using alternative access services, such as SMS, low-income passes, or cash payment programs.

Each of these measures takes some planning to establish a baseline to measure against that feels right to the agency. As examples, using the composition of the city as the baseline for success is fairly common (e.g. percent of demographic makeup of the city should be reflected in the percent outcome).

RECOMMENDATIONS

The last six months have revealed creativity between the public and private sector working to address the core opportunity of new mobility options: bringing greater access to the transportation system. Evaluating new mobility permits have left us with the following suggestions for cities to consider when evaluating new mobility policies:

- 1. How can micromobility help achieve or bolster your city's equity objectives?
- 2. What distribution, platform, and network access regulations or incentives can you require of operators to encourage these objectives?
- 3. What metrics are necessary to understand if you've achieved these goals?

The examples presented in this document provide an initial framing to answer some of these questions. If you'd like to connect with other cities who have considered similar challenges, please contact me at <u>rachel.zack@remix.com</u> and we'd be happy to put you in touch.

NEXT UP

Mobility Data Policy: How should cities prepare to adapt, accommodate, and make use of massive volumes new information?

Our next Remix Mobility Brief will focus on mobility data policy and how cities can take tangible next steps to take advantage of this mountain of information. Sign-up for our newsletter at <u>remix.com</u> to stay up-to-date.



Rachel Zack is a Mobility Strategist at Remix. Rachel comes to the policy team with almost a decade of consulting and public sector work helping transportation agencies plan for and with new mobility. Her experience includes developing pilots, policy, evaluation criteria, operational agreements, and strategic plans to help agencies achieve a mobility future in line with public policy interests. She can be reached at <u>rachel.zack@remix.com</u>

