Equity and Shared Mobility Services

Working with the Private Sector to Meet Equity Objectives

SHARED-USE MOBILITY CENTER

Acknowledgments

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SHARED-USE MOBILITY CENTER

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The shared mobility industry—carshare, bikeshare, scootershare, ridehailing, microtransit, paratransit, taxis, and fixed-route public transit—is in a period of rapid experimentation and change. It is a fertile time to apply the experiments and channel the changes to support low-income and transportation-disadvantaged communities.

In what ways can the public sector and the private sector work together to enhance shared mobility services for all? There are distinct opportunities across the shared mobility categories defined here:

- "Vehicle sharing" includes carshare and micromobility such as bikeshare and e-scooters.

- "Ride sharing" includes ridehailing services such as Uber, Lyft, and traditional taxis; shuttles or microtransit services that provide shared rides via flexible routes and/or schedules, including on-demand rides; and fixed-route public transit services including paratransit.

Transit remains the backbone of a multimodal system. Yet too often, the original "sharing the ride"— buses and trains—have times and places where services are inadequate or non-existent. A variety of shared modes can be a powerful tool to fill gaps in transit services that may have limited use cases and not always be accessible to all ages and abilities.

Shared mobility partnerships require holistic assessments of mobility needs and priorities. We offer broad lessons to factor into a context-based approach to partnership, offering recommendations that stem from research, interviews with industry experts, and deep staff expertise.

Best Practices for Public-Private Partnerships and Equity Initiatives

The following approaches help create the conditions for finding the best fit with a private sector partner and an environment that supports mutually desired outcomes.

Define partnership broadly and set clear objectives

Public-private partnerships work best when the public sector begins with clear objectives and uses the partnership process to develop and execute a detailed plan to meet them.

An agency can build a better shared mobility public-private partnership by:

- Building trusted partnerships
- Creating a shared vision
- Doing their homework
- Keeping the lines of communication open
- Accepting unsolicited proposals
- Employing a performance-based RFQ/RFP process, if appropriate
- Treating partnership as one phase of a longer process
- Staying current with the mobility industry
- Effectively engaging the community

Recognize equity along multiple dimensions

Low-income and transportation-disadvantaged populations face a number of barriers, and equitable solutions are equally multifaceted, ranging from where a service is located, when it operates and its travel time, to affordability and financial access, physical access, and any number of social and cultural influences. Table 1, on page 10 of this paper, summarizes the STEPS framework for Equity Analysis for Low-Income Groups Using Shared Mobility.

To mitigate challenges and barriers along these dimensions, partners can develop focused programs for selected populations or neighborhoods, or initiatives designed to make services that are open to the general public more inclusive. Partners who approach equity along multiple dimensions have greater success in improving options for low-income and transportation-disadvantaged communities.

The following checklist supports the process of developing equity objectives:

- *When developing equity objectives, public sector decision-makers should take a multi-dimensional approach* that looks at spatial, temporal, economic, physiological, and social barriers to using sharing mobility services.

- *Focus services to target specific objectives:* Equity programs start with a defined group or neighborhood and build a service specifically designed to meet their needs. The community should be involved in this process.

- *Consider annual permitting or licenses:* Many local governments are responding to competing private sector providers by regulating them through annual permit processes or licenses. Equity objectives can become part of the regulations or competitive permitting process.

- *Lower barriers of entry by ensuring inclusive access:* Some programs offer reduced fares or fees, options for cash payment, smartphone workarounds, and encourage wheelchair accessible and adaptive vehicles. Other vehicle sharing services dispense with membership and application fees altogether. Also used are equitable distribution requirements and policies enforcing non-discrimination.

- *Consider third-party funders, supporters, and champions:* Community-based groups, business groups, and local political champions are vital for widespread support as are third parties — governments, foundations, and corporations —that provide grant or seed funding.

- *Engage the community at every stage:* Programs for focused services and inclusive access should include significant marketing and outreach efforts that are culturally appropriate for the groups targeted to use the service.

- *Think ahead to mobility-as-a-service:* Public-private partnerships will be foundational to a mobility system where people travel by accessing a full range of right-sized shared mobility services paid for through a combination of monthly subscriptions and pay-per-trip options.
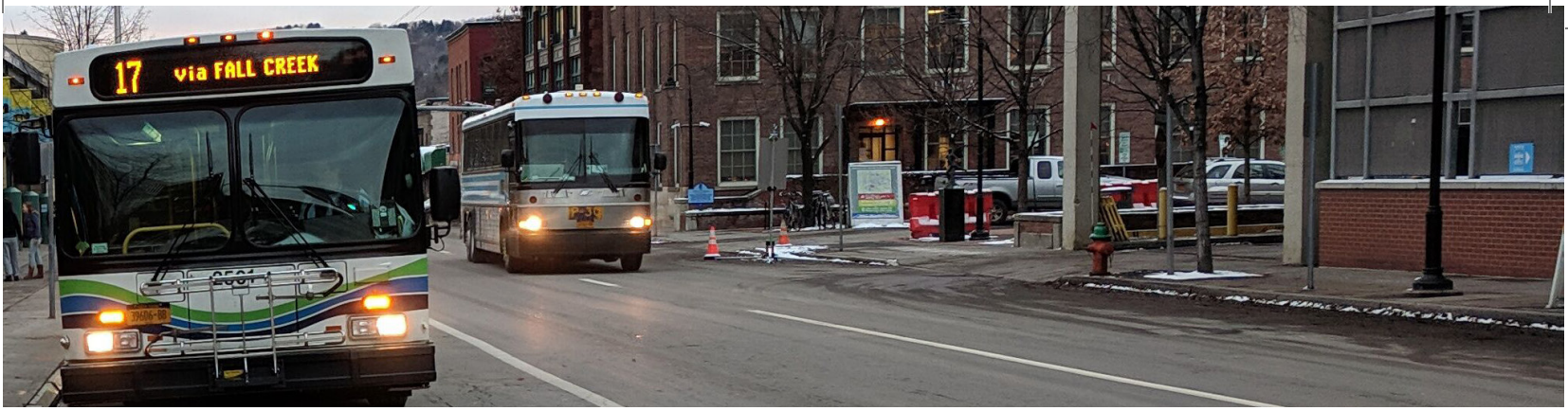
Both Sectors Can Learn From Each Other

Some technologies and services advanced by the vehicle sharing industry have equitable and accessible benefits imperative for public agencies as well. There are models to help low-income and transportation-disadvantaged communities access their services: these include workarounds for smartphones and credit cards, and mechanisms to offer discounts to low-income users. Many partners have devoted attention to the fair distribution of vehicles. Municipalities use their jurisdiction over the streets, sidewalks, and public parking facilities that the industry needs for parking to integrate equity requirements into both annual permitting processes and long-term public-private partnerships.

Members of the vehicle sharing industry, including carshare and bikeshare, have also taken strides to enhance inclusivity through hands-on, culturally appropriate approaches to community engagement. Whether through regulatory requirements or public-private partnerships, this category of industries has expanded into transportation-disadvantaged neighborhoods. Some new services, such as BlueLA carshare, are launching first in these neighborhoods. In many efforts, the public sector defines priority communities for investment along such criteria as low-income communities of color or high levels of transit dependency, and facilitates building relationships between the industry and local communities, including through local non-profit organizations.

For "sharing the ride," the public sector is experimenting with buying rides on the private sector's services. In the consumer ride industry (ridehailing in taxis, Uber, Lyft; shared-ride shuttles and microtransit; fixed-route public transit), public sector agencies have formalized private sector partnerships for focused low-income programs, such as Pinellas County's TD Late Shift Program. Local governments are also experimenting with neighborhood circulators that use new on-demand technologies and routing algorithms to provide local service in areas with suburban development patterns.

Partnerships that add on-demand ride options are letting American Disabilities Act (ADA) paratransit customers travel more spontaneously. Pilot projects that enhance the public sector's ADA paratransit services have revealed sizeable unmet demand. They offer the potential to reduce the high and growing cost of paratransit for agencies. These partnerships typically use transportation network companies (TNCs) and taxis for ambulatory service, i.e., for patrons who do not use wheelchairs. TNCs, however, have been slow to make their platforms accessible to riders who require wheelchair accessible vehicles. RideKC's Freedom on Demand, through a partnership with a locally-based TNC, offers on-demand rides to all types of customers.

Shared Mobility Partnerships Can Help Create Our Multimodal Future

Partnerships must recognize that low-income and transportation-disadvantaged communities that use shared mobility services lead multimodal lifestyles and neither vehicle sharing or ride sharing will address all mobility needs. Given the impossibility of creating a single, one-size-fits-all service, shared mobility partnerships that create a multimodal system are building blocks for a future when consumers can easily access a full range of right-sized shared mobility services bundled across public and private providers (mobility-as-a-service).

As the vehicle sharing and ride sharing industries work to make this vision a reality, now is a critical time to develop programs that will ensure equitable, accessible mobility for all.

Note:

"Public-private partnership" can refer to a form of procurement often used for large public infrastructure development projects. Typically shortened to "P3," this type of partnership assigns tasks to the private sector, such as securing financing or operating and maintaining the facility for a number of years after construction, that traditionally had been the responsibility of the public sector. This concept paper uses the term "partnership" more broadly than simply as public-private partnerships for infrastructure projects.

Introduction

There has never been a better time to examine the attributes and offerings of public-private partnerships in providing affordable, equitable mobility for all. Partnerships can make existing services more inclusive, help reduce the impact of air pollution in highly affected areas, and create new pilots that focus on the needs of low-income or transportation-disadvantaged populations. If implemented with care, they are a crucial part of our multimodal future.

Shared Mobility and the Public and Private Sectors: Major Actors

Public-private partnerships for shared mobility services typically involve one of three groups:

Shared mobility providers in the public sector. These providers are usually municipal governments or special-purpose authorities, such as transit authorities. Municipal governments have jurisdiction over other transportation infrastructure and services, such as streets, sidewalks, or public parking facilities, that shared mobility services require. State governments typically have jurisdiction over certain roads and highways and may also provide shared mobility services.

Shared mobility providers in the for-profit and non-profit sectors. Both for-profit and non-profit organizations provide shared mobility services on the business-to-consumer model. In addition, these organizations also operate shared mobility services on behalf of government.

Third-party supporters of shared mobility. Third parties can play crucial roles in launching and extending shared mobility services by offering financial and in-kind support. Such support includes grants or in-kind donations. Third parties may also be partners in project planning, implementation, and operation as well as participating in a community needs assessment, conducting educational outreach, and facilitating community participation in the planning phase.

Shared mobility can be further divided into two major categories: *vehicle sharing* and *sharing the ride*. Because of the significant differences between vehicle sharing businesses and services that share the ride, they are covered in separate sections of the concept paper.

Equity in Shared Mobility Services
What Is It?

How can my transit agency provide service for workers whose shifts extend outside the hours for fixed-route service?

How can our city provide people needing rides in wheelchair accessible vehicles the ability to travel spontaneously?

How can we encourage people with lower incomes to take better advantage of bikeshare?

How can we fill gaps in public transit service for a low-income neighborhood?

Considerable debate can ensue over whether the proper goal for public-private partnerships is equality of opportunity or equality of outcome. "Every neighborhood in the city should be served by bikeshare" is an equality of opportunity objective. "Everyone should be able to travel spontaneously" is an equality of outcome objective.

As discussed in the next section, public-private partnerships function better when the public sector actor begins by engaging stakeholders on needs at the outset, develops clear objectives that meet these needs, and then uses the partnership process to clearly articulate how the program will achieve them.

Types of Equity Initiatives and Programs

Equity initiatives typically fall into one of two categories:

Focused equity programs build a mobility service specifically designed to meet the needs of a selected group of people, certain neighborhoods, or trip purposes. Examples include mobility services open only to low-income customers or demand-responsive ride services for neighborhoods without frequent fixed-route bus or rail service.

Inclusive access initiatives seek to make a mobility service open to the general public more accessible and welcoming. Examples include special discounts on fares or fees, culturally appropriate outreach, and distribution requirements for vehicle sharing.

Strategies to advance both types of initiatives target either *people* or *neighborhoods*. Typical groups of people are defined by income, age, disability status, or other transportation disadvantage. Targeted neighborhoods can be selected through an analysis of demographic variables, by a lack of transportation services, or a history of discrimination and disinvestment. Successful equity initiatives and programs often deploy multiple strategies that target both people and neighborhoods.

Whether a person or neighborhood is transportation disadvantaged depends on context. For the purposes here, it means a person who cannot achieve, or a neighborhood that cannot provide, a high quality of life without relying on personally owned motor vehicles. This includes people who live in an area with robust shared mobility options, but who cannot use them because the services are not accessible to those with disabilities or are not available for regular use because of other limitations. This dependency on personal motor vehicles creates hardships for those with low incomes, but also for the elderly, teenagers, and anyone else who cannot or prefers not to drive.

Equity Analysis across Multiple Dimensions

Analyzing equity across multiple dimensions should be incorporated into community needs assessments and program evaluations. In its "STEPS to Transportation Equity" the Federal Highway Administration (FHWA) outlines a framework for considering equity in shared mobility services. "STEPS" is a mnemonic for five *barriers* to accessing preferred destinations or shared mobility services: Spatial, Temporal, Economic, Physiological, and Social.

Shared mobility services help remedy or mitigate some barriers, but they can also raise their own.[1] The STEPS are summarized for shared mobility services and applied to equity objectives for low-income populations in Table 1.

Spatial Barriers include long distances between origins and destinations and hostile landscapes that make walking, waiting at transit stops, or bicycling unsafe or uncomfortable. In addition, all shared mobility services depend to varying extents on urban density to generate demand for trips and thus revenue.

Temporal Barriers include the inability to complete time-sensitive trips, travel spontaneously, or make trips at certain times of the day or week. Fixed-route transit service is not usually available 24-hours a day and typically has reduced service frequency outside of peak travel periods and on weekends.

Economic Barriers are travel costs that prevent a person from buying other necessities or cause them to forgo a trip in the near term that makes them worse off in the long term. Examples of the latter include cancelling doctor's appointments, failing to fill prescriptions on time, rejecting a job interview or offer, on giving up on educational opportunities.

Physiological Barriers are physical and cognitive conditions that make using some transportation options uncomfortable, difficult, or impossible. This includes disabilities recognized under the Americans with Disabilities Act (ADA), but also may be related to age, physical fitness or capabilities, and willingness to risk injury.

Social Barriers are aspects of a person's social or cultural contexts that make certain shared mobility options less likely to meet their needs or feel like an acceptable option. This category also includes histories of discrimination and lack of trust in the institutions providing or supporting the shared mobility service.

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Table 1 summarizes one set of dimensions for equity considerations in transportation, the STEPS framework, with examples for shared mobility modes.

Table 1: STEPS Equity Analysis for Low-Income Groups Using Shared Mobility

EQUITY DIMENSIONS	Microtransit	Ridehail	Bikeshare	Micromobility (e-scooters)	Threshold
Spatial Barriers (Is it where I need it to be?)	• Size and location of service area		• Location of docks or am/pm placement and service area	• Am/pm placement and service area	• Location of approved parking: private or public?
Temporal Barriers (Can I use it when I need it?)	• Coordination with fixed-route service • Time cost of shared ride • Service hours	• Wait time	• Travel time or out-of-direction travel due to ineffective balancing • Free ride time	• Travel time or out-of-direction travel to access vehicle	• Travel time to access vehicle
Economic Barriers (Am I able to pay for it?)	• Smartphone • Un/under banked	• Smartphone or concierge service cost • Un/under banked • Cost of trip	• Smartphone • Un/under banked • Membership and trip fees	• Smartphone • Un/under Banked • Driver's license • Insurance	• Smartphone • Un/under Banked • Driver's License • Membership Fees, Trip fees
Physiological Barriers (Am I capable of using it?)	• Walk/roll to/from pick up/drop off • Wheelchair accessible vehicle • Strollers	• Wheelchair accessible vehicle	• Presumed physical capability of rider • Safety/comfort affected by weather • Risk of minor injuries	• Presumed physical capability of rider • Safety/comfort affected by weather • Risk of minor injuries	• Capable of driving • Wheelchair accessible vehicle • Car/Booster seats for children
Social Barriers (Is it desirable and approachable?)	• Safety/security in close quarters • Privacy of home location • Culturally and demographically appropriate outreach	• Fear of traveling alone with driver, especially among women • Culturally and demographically appropriate outreach	• One-person travel only • Culturally and demographically appropriate outreach	• One-person travel only • Legal rules murky: riders risk fines • Culturally and demographically appropriate outreach	• Car ownership tied to personal identity • Culturally and demographically appropriate outreach

Adapted from FHWA, Travel Behavior: Shared Mobility and Transportation Equity, August 2017, https://www.fhwa.dot.gov/policy/otps/shared_use_mobility_equity_final.pdf.

One aspect missing from STEPS is equity related to the planning and management of a mobility service. Community involvement has an equity component beyond sound outreach and marketing practices as the communities affected by public sector decisions should have an opportunity to participate in the decision-making process. Private sector involvement should not mean bypassing public sector accountability typically achieved through public meetings, votes by appointed and elected officials, complaint mechanisms such as 311 lines, and oversight processes.

In addition to equity for users and potential users, equity concerns can also attach to other practices of the private sector partner. Workforce development opportunities, inclusion of local or disadvantaged businesses for contracting/sub-contracting, and the treatment of labor may find their way into shared mobility service discussions and contracts.

For mobility services that are primarily provided by the private sector, public-private partnerships and government regulation can raise equity concerns if governmental action fosters a monopoly or otherwise encourages uncompetitive behavior that results in higher consumer prices. Government subsidies or preferences for privately provided mobility services that come at the expense of cuts to or revenue reductions for other governmental services should also be examined from an equity perspective.[2]

Lessons Learned

- To improve mobility for low-income and transportation-disadvantaged communities through public-private partnership, the public sector should develop equity objectives.

- Equity may be addressed through focused programs for selected populations or neighborhoods or through initiatives designed to make services open to the general public more inclusive.

- The STEPS process provides a structure for a multidimensional analysis of equity in mobility services.

Understanding Public-Private Partnerships

Public-private partnerships that support equity in the shared mobility industry cover a range of relationships between government and business. These relationships may be defined by elaborate, long-term contracts or they may be direct subsidies or incentives from government to business. They include more informal cooperative activities, such as co-marketing agreements or industry consultation before and after issuing new regulations.

Before engaging in a partnership process, both the private business and the public entity should determine that a partnership approach has the potential to achieve their objectives better than through normal regulatory or procurement processes. Research and interviews revealed a long list of possible partnership drivers, which are summarized in Table 2.

Table 2: Specific Drivers for Public-Private Partnerships

The Public Sector Wants	The Private Sector Wants
• Shared mobility service • Technology • Knowledge • Cost structures • Finance and funding mechanisms • Revenue • Political advantages	• Access to publicly-owned space (e,g., streets, sidewalks, parking) • Access to new market segments (e.g., defined through government social programs) • Grants/fee waivers/tax breaks to meet funding gap • Regulatory relief • Winner-take-all licensing or exclusive permitting • Real-world situation to test new technologies or services • Platform or opportunity for publicity and marketing • Political leadership and champions • Potential for widespread impact

Best Practices for Public-Private Partnerships

As a whole, an agency can build a better shared mobility public-private partnership by:

- Building trusted partnerships

- Creating a shared vision

- Doing their homework

- Keep the lines of communication open

- Accepting unsolicited proposals

- Employing a performance-based RFQ/RFP process, if appropriate

- Treating partnership as one phase of a longer process

- Keeping up and keeping in touch with the mobility industry

- Effectively engaging the community

On a deeper level, use the following recommendations to guide your partnership development.

Define partnership broadly and set clear objectives: Public-private partnerships work best when the public sector begins with clear objectives and uses the partnership process to develop and execute a detailed plan to meet them. Mutual desired outcomes create both the conditions for finding the best fit with a private sector partner and the environment to foster creative problem solving.

Create a shared, informed vision: Market analysis, planning, business principles, and stakeholder/community participation should inform this vision. No two low-income or transportation-disadvantaged neighborhoods are the same and low-income and transportation-disadvantaged persons live and travel to and from many different types of neighborhoods.

Be open to unsolicited proposals: In this current period of rapid innovation, both the public sector and the private sector have had success reaching out to each other with ideas and partnership opportunities. LA Metro's Office of Extraordinary Innovation is the most widely known example of a public entity that advertises its welcome of unsolicited proposals. It accepts proposals that advance a broad set of publicly available goals.[3]

Consider a performance-based RFQ/RFP process: Selection should be based on the best fit for the desired outcomes and willingness to enter a relationship built on trust because significant decision-making typically happens after the partnership is formed. A performance-based partnership aligns incentives with desired outcomes and service standards. Performance-based contracting requires a way to measure performance, which may require the private sector entity to share data or information that they would usually be reluctant to share.[4]

Recognize partnership may be one phase of a longer process: Public sector regulatory and procurement processes that require formal communications or competitive proposals are important and protect both public sector and private sector participants.

Be committed to a fair deal: The public partner needs to be able to show that the partnership advances key objectives, and the private partner needs to make a return on its investment in proportion to level of risk. Partnerships for shared mobility services, as they mature, should also develop common understanding of how to assess risk and reward.

Stay in touch with the mobility industry in your community: Both public sector and private sector leaders should stay abreast of what is going on in the mobility industry, including national trends, but also local changes.

Use the public sector's best practices for community engagement: Because shared mobility services are often experimental and quickly evolving, equity in service planning and management requires careful handling of their temporary nature, including their termination or transition to regular service status and changes in price.

Lessons Learned

- Define partnership broadly to include "creative alliances" between the public and private sectors to reach objectives that neither sector could achieve on their own.

- Use the partnership process to develop the details of focused equity programs or inclusive access initiatives.

- Follow best practices for public-private partnerships.

Opportunities to Meet Equity Objectives: Vehicle Sharing

Vehicle sharing, which includes car-, bike-, and scootersharing, offers the chance to level the playing field and create the right environment for mobility and opportunity for all. Carshare promises a convenient and spontaneous solution to get around and for trip purposes that would be difficult to accomplish via public transit. Bikeshare and scootershare fill the gaps between comfortable walking trips and longer public transit and ridehailing trips. The amount of government involvement for each mode depends in part on the amount of space needed for parking, which in turn depends on the business model:

Round trip vehicle sharing, typical of first generation carshare, requires only one designated parking space per vehicle. If the home parking spaces for these vehicles are on private land, the service may be an entirely private sector activity. However, the most convenient and desirable parking spaces are often located on the street or in public parking lots. In addition to permission to use public parking spaces, the spaces require signage and coordination with city services such as street cleaning and with parking restrictions such as snow emergencies.

Point-to-point, one-way vehicle sharing, where vehicles are only "at home" if parked in designated areas such as docks, racks, or parking spaces served by electric charging infrastructure, requires more space allotted to parking than round-trip vehicle sharing. One-way, point-to-point vehicle sharing is likely to need on-street parking or designated sidewalk areas to function.

Free-floating vehicle sharing, with large "home zones" for parking vehicles on the streets or sidewalks, will require significant coordination with government. Free-floating vehicle sharing is designed to be used for one-way trips, but can also be easily used for round trips. Dockless micromobility falls into this category.

In the past, the public sector helped support vehicle sharing by covering some of the capital expenditures required to launch the services. Federal, state, and local government funding was seeded to non-profit organizations, and local governments have even owned the services themselves. When private businesses entered the market, public sector incentives in the form of financial assistance declined. However, the public sector's interest in encouraging carsharing using electric vehicles that require charging infrastructure may be renewing a more proactive public sector role.

Permitting and Partnerships

Because of the need to access publicly owned space, the vehicle sharing industry has a history of entering into both regulatory and partnership relationships with government. The current trend leans toward regulatory relationships. For free-floating bikeshare, scootershare, and even carshare, cities are opting for annual permitting approaches that lay down requirements and assess fees. Governments ration space by limiting parking locations and/or capping the number of permitted vehicles.[5]

For the private sector, their perspective is reasonably straightforward. The business, whether for-profit or non-profit, wants to be able to put the right number of vehicles in the right number of locations at a cost that will make their business model work.

The government's objectives however could vary widely, which is why a partnership built on trust and honesty is important. Does the government want to encourage this business? Or is the government only willing to tolerate this business as long as it covers its cost burdens? Is the government's willingness to encourage this business primarily as a desired service for constituents or as a source of revenue? Or, is the government willing to encourage this business only as long as it helps meet other objectives, including equity objectives?

Governments using the regulatory approach can, and have, simply ordered the permittee to meet requirements built around equity. Equitable distribution requirements can set minimum thresholds for how many shared vehicles must be in all neighborhoods, or target specific neighborhoods that the government worries would otherwise be underserved. Sometimes equitable distribution requirements come packaged with requirements that the permittee engage in outreach to targeted groups. Equitable distribution requirements have proven difficult to enforce. App data is not always reliable. Some cities have even resorted to in-person spot checks. There are, however, emerging technology-enabled models for data access and sharing.[6]

Governments, if so inclined, can utilize multiple tools at their disposal to encourage vehicle sharing under a partnership approach. They can go easy on the fees or waive requirements to be compensated for lost parking revenue. They can enforce parking violations that interfere with spaces designated for vehicle sharing and explore co-marketing opportunities. If the government desires a location that the provider fears may be a losing proposition, the government (or another third party) can guarantee a minimum level of revenue. Governments can help with capital investments for the vehicles and infrastructure and foster operating organizations. Governments can even own the systems themselves.[7]

For small-vehicle sharing, the dockless, free-floating revolution seemed to be an easy solution to uneven distribution created by the costs of siting expensive docks in a limited number of locations. Concerned about clutter and access to sidewalks, however, cities appear to be leaning towards requiring designated parking areas or lock-to vehicles that must be parked at a rack. Regulations requiring designated parking areas, although not as infrastructure intensive as the bike share stations of the early 2010s, bring formal siting processes and parking enforcement issues back into play.

Concerns for Low-Income Communities

Improving Economic Access

Fees for application, membership, and trips, plus requirements for smartphones and credit or debit cards raise economic barriers to using vehicle sharing. Vehicle sharing services need ways to hold users accountable for the vehicle and encourage good behavior during the trip. The more valuable the vehicle and the more dangerous the consequences of bad behavior, the more important these accountability mechanisms become. These mechanisms range from extra penalty fees to being banned from the service.

Vehicle sharing services also pioneered substituting technology for the human interaction that until then had facilitated renting a vehicle. This use of technology pre-dated smartphones, but nearly all of this technology has now migrated to smartphones. Some services can only be accessed via smartphone.

The vehicle sharing industries have developed methods to make it easier for people with limited economic means to use their services. Waiving or dispensing with application fees, discounting memberships or fees based on income, providing affordable options for occasional use, and discounting vehicle trips originating in specific neighborhoods have all have been used with some success.

Although the discounts themselves may not be much of a cost burden, administratively these methods can lead to "high touch" situations that can tax staff resources. In addition, by encouraging low-income populations to use their services, cities and providers should anticipate that they bear some responsibility some of the standard fees and penalties when something goes wrong.

Much of the impetus for carshare and bikeshare arose out of environmental concerns, not equity. Before for-profit businesses got involved, the public sector often expected that while government grants might help with capital expenditures, these systems would and should be operationally self-sufficient. This economic model is regularly being tested. For businesses, siting vehicles and stations in transportation-disadvantaged communities who often have less purchasing power and fewer insured drivers may result in tension making ends meet.

Community Engagement Practices

Advocates for bikeshare and carshare have put considerable resources into community outreach to boost use by under-represented groups, including low-income populations, people of color, and immigrant populations. They have emphasized hands-on approaches that work with and through community-based organizations and that hire people from the community. Still, community engagement and outreach can be one of the most difficult pieces of the equity puzzle.

Knowing this, select cities have required that private businesses implement outreach and engagement plans and have even mandated meetings with community groups. They have also offered businesses the option of an in-lieu fee that would go to the city's own outreach programming. Overall, commitment and sincerity are vital for successful outreach and for sustaining long-term, trusted relationships.[8]

Safety and Security

There are concerns widespread among marginalized and low-income groups that community outreach can help address. These communities are often targeted by the police and ticketed for minor infractions, regardless of ability to pay. Because vehicle sharing takes place on public streets and requires users to follow numerous legal rules, promoting its use can have the unintended consequence of making certain users, often people of color, vulnerable to dangerous interactions with the police and financially burdensome fines. In Chicago, for example, black neighborhoods have received the most tickets for biking on the sidewalk.[9] Concerns such as this can lead to reticence on the part of people to participate in new mobility programs.

Another factor in the shared mobility and equity scenario is the impact of injuries from using vehicles. The effects of even relatively minor accidents can be economically devastating for lower-income individuals, given the limited to non-existent social safety nets in the United States. Indeed, when asked, lower income individuals identified fear of injury as a barrier to using bicycles. Safety and security also appeared as major concerns in focus groups of those living in disadvantaged neighborhoods. Although insurance is bundled into trip fees for car sharing, insurance is not offered for bikesharing and scootersharing.[10]

There are concerns widespread among marginalized and low-income groups that community outreach can help address.

Focus on Bikeshare:
Activists Organize to Advance Equity

In bikeshare, advocates made progress on equity in shared mobility services. Bikeshare as implemented in the United States in the early 2010s deployed first in dense cores of cities and in places already attractive to bicyclists. Activists, backed with data, soon protested that these systems were disproportionately used by young, white males. Many lower income neighborhoods were far from stations. Early membership-based fee structures, secured by credit card, raised additional barriers to transportation-disadvantaged populations using the systems. These systems were often paid for with federal grants and received operating funds from the cities.[11]

Activists mounted various efforts to draw attention to these equity issues including founding the Better Bike Share Partnership in 2014. Funded by the JPB Foundation, the collaboration's four partners, the city of Philadelphia, the Bicycle Coalition of Greater Philadelphia, the National Association of City Transportation Officials (NACTO) and the PeopleForBikes Foundation, work to build "equitable and replicable bikeshare systems." They conduct research and award grants to develop stations in underserved neighborhoods, to "identify and address the structural racism that may hinder efforts," and to develop best practices for educational and outreach programs.[12]

To a remarkable extent, these activists succeeded in opening additional avenues to participation in bikeshare programs. They developed methods and best practices for income-based discounted memberships, for low fees for occasional use (single rides), and for cash payment. Their methods have spread throughout the industry. In 2014, Bcycle's bikeshare equipment depended on credit cards. Today, the company, which has launched over 50 systems in the United States in partnership with local operators, advertises that its dockless model can be accessed with cash.[13]

Scooter and e-bike businesses have also embraced cash options and income-based discounts. Cash options typically use PayNearMe, a technology solution also used by many transit agencies, which enables adding cash to accounts (or paying bills) by visiting convenience stores. Private companies, such as Lime's Access and Jump's Boost programs, offer income-based discounts on memberships and fees with proof of participation in a government assistance program.

Chicago

The city of Chicago is building an e-bike offering as an extension of its existing public-private partnership for docked bicycles, Divvy, launched in 2013. Under the original public-private partnership, the city contracted with what is today known as Motivate International Inc. to operate the bikeshare system. The city of Chicago owns the equipment, and federal grants funded much of the capital expenditures. The city and Motivate shared risks on operating revenue. Motivate took all revenue from memberships and ride-generated fees, and the city took all the revenue from sponsorships and advertising. Motivate absorbed a certain percentage of operating losses and then the city covered the rest.[14]

Divvy for Everyone is Divvy's formal equity program. In 2015, the Better Bike Share Partnership awarded the city a grant that funded a citywide program discounting the first-year membership fee, from $99 to $5, for people below an income threshold. The grant funding covered the costs of the non-profit organization that handled enrolling low-income members and outreach activities to encourage ridership in low-income communities. Motivate and the city absorbed the costs of discounted memberships. Motivate took the lead in adapting its technology and training the nonprofit organization's staff and their own call center workers to handle income-contingent membership discounts and cash payments. Eventually, Motivate staff took over enrolling Divvy for Everyone members, at the nonprofit's offices and community events. Between 2015-2017, 5,000 Divvy for Everyone members cycled through the program.

Also in 2015, Divvy began the first major expansion outside of the dense downtown core and in 2016, began reaching lower-income neighborhoods. The system grew from 300 to 600 docking stations and to 6,200 bicycles. The city, as the owners of the equipment, controlled the siting of the new stations, which were placed in areas at a lower density than in the original core. These stations have struggled to attract customers, especially in low-income and African-American neighborhoods.

Also addressing equity, the city and Motivate negotiated a new pricing structure as part of a 10-year contract extension in 2018, introducing a single ride at $3.00 for 30 minutes, no membership required. This change made the service more accessible to lower income customers, who are less likely to want to commit to membership and are more likely to live in lower density parts of the city.

In the second half of 2018, the TNC Lyft bought Motivate, bringing new resources to the table. Lyft proposed an expansion of the bikeshare partnership, offering to invest $50 million for an additional 10,500 bicycles and 175 stations. All new bicycles were to be e-bikes capable of being locked to any bike rack, making it feasible to serve all of Chicago by 2021. The city also negotiated an expansion of Divvy for Everyone, an adaptive bicycle program, and a jobs program for youth and ex-offenders.

In return for the exclusive right to bikeshare and the Divvy brand, Lyft would give the city $77 million over nine years earmarked for transportation projects. They proposed to keep all bike-sharing revenues up to $20 million annually, with the city sharing 5% of everything over that. Chicago taxpayers would also receive $1.5 million a year in minimum guaranteed revenue from advertising and promotions.[15]

Minneapolis

Nice Ride inked a similar deal with Motivate in 2018. A non-profit organization active in Minnesota's Twin Cities area, Nice Ride launched bikeshare in 2010, both owning and operating the system. Funds from its title sponsor, Blue Cross Blue Shield, and federal grants paid for the equipment, and revenue from riders and station sponsors covered operating expenses, eventually ending service in 2022. When the 2017 dockless revolution began, Nice Ride had 200 stations and 1,850 bikes, but it also saw the potential that dockless bikes had for expanding the reach of bike sharing at lower costs.[16]

With an exclusive bikeshare license from the City of Minneapolis through 2021, Nice Ride issued an RFP for potential private sector partners to take over operations and invest their own capital to expand the system, "to serve and promote ridership in diverse communities." This included Nice Ride's existing service in neighborhoods of concentrated poverty, community outreach techniques, and subsidized subscriptions.

In the partnership, Nice Ride maintained the exclusive bikeshare license and with Motivate as the sub-licensee. The contract called for Motivate to invest to expand the system by at least 3,000 dockless bicycles before end of year 2019, and Motivate introduced e-bikes for the 2019 season. The contract shared revenue and costs, split by equipment ownership. Nice Ride achieved its goal of dropping prices, including pegging the single ride fare to the cost of local rush hour bus fare.

Nice Ride's contract with Motivate included a three-part equity plan. For workforce issues, the plan covered wages and benefits, performance expectations for workforce diversity, and training providers. On affordable pricing and access, the contract required Motivate to replicate Divvy for Everyone for Nice Ride, equitably rebalance bicycles, conduct outreach in identified communities including hiring local ambassadors, explore a cash-payment option, produce materials in multiple languages, advocate for bicycle safety, and other provisions. Finally, Motivate was required to expand to underserved parts of the city.

Seattle

Following the closure of Pronto!, Seattle's discontinued docked bikeshare program, city officials were approached by dockless bikeshare companies looking for a new city to begin operations. In 2018, the city announced that they would accept up to four providers for the 2018-2019 permit year and then permitted three businesses to offer up to 5,000 bicycles each after payment of a $50 annual fee per bicycle.

Permit conditions included a requirement to locate "no less than 10 percent of its deployed fleet" in "Equity Focus Areas" defined by the city and to offer certain customer communications in eight languages, also selected by the city. The permit also required a reduced-fare program for low-income persons and at least one method for renting a bicycle for customers without a smartphone, bank account, and credit card.[17]

Seattle also required an equity plan, which was scored as part of the permit evaluation. The plan's additional requirements focused on communicating and marketing the service to the widest number of groups in the city, including "staffing policies" and "incentives, disincentives, rewards, or penalties to shape rider behavior." The permit application also asked for an "optional" plan for adaptive bicycles and awarded two "bonus" bicycles for every adaptive bicycle deployed.

As of July 2019, the Seattle Department of Transportation (SDOT) determined that nearly 900,000 trips were taken in the first half of the year. SDOT is on track to add parking for 1,500 bikes by the end of the year and they have partnered with the non-profit Outdoors for All to increase access to their adaptive cycle fleet, which includes hand-cycles, tandems, and other cycles designed for people with various disabilities.

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Washington, DC

Washington, DC also decided to manage free-floating bike and scootershare through an annual permit system, even though the city already had a large docked bikeshare system. For the free-floating system, the terms and conditions related to equity require offering a cash payment option and the ability to locate and unlock a bicycle without a smartphone. Providers must serve all of the city's eight wards and must have at least six vehicles in each ward by 6:00 am. Providers are encouraged to make their vehicles available at all times of day.[18]

The permit application also explicitly addresses "equitable distribution and access" through requiring descriptions of plans to make vehicles "equally accessible" in all wards and inquiring about the pricing structure, any reduced fee plans, the availability of information in multiple languages, and any plans for adaptive vehicles. The permit application also asks "How will the applicant promote the use of dockless sharing vehicles among low-income residents and in communities of concern?"

Finally, the permitting process rewards high-performing providers with additional bicycles above the initial cap of 600. Two of the 11 performance criteria include "trips originating or terminating in Equity Emphasis Areas," which are defined by the district, and adaptive vehicles in operation. The District of Columbia also charges an annual fee of $60 per bicycle or scooter. As of September 2019, one bikeshare company and eight scootershare companies are operating in the city with approval and two with conditional approval.

Lessons from Bikeshare

The equity provisions incorporated into the annual permit approach used by Seattle and DC and into the longer-term public-private partnerships in Minneapolis and Chicago cover similar territory. For Seattle and DC, the annual permit approach allows them to incorporate lessons learned from year to year and avoids the city having to align itself with only one business. However, the short-term nature of the permit may deter businesses from making longer term investments in community outreach. As the industry consolidates, the power dynamic between regulator and regulated could rapidly change.

A city's willingness (or legal ability) to use the power of the exclusive license can reap considerable rewards. As the system expands in Chicago, the city will be working with a trusted partner with a shared understanding of what works and what doesn't when conducting outreach in the city's different communities. Nice Ride too translated their equity objectives into specific, unique contract provisions applicable to specific Minneapolis neighborhoods. Moreover, the work done to create Divvy for Everyone and by others in longer term public-private relationships opened the way for other cities to simply require income-based discounts and cash payments as part of the permitting requirements.

However, future evaluations will be needed to ascertain how different approaches—annual regulatory permits and exclusive long-term partnerships—best serve low-income populations and transportation-disadvantaged communities.

Lessons Learned

- A multidimensional equity analysis can lead to combining strategies—dock location or distribution requirements, ride price, ride length, membership discounts, cash payment options, adaptive vehicles, and specialized community outreach—to make mobility strategies more inclusive.

- Equity mechanisms can be included in both long-term partnerships with exclusive licenses and competitive annual permitting processes.

- More research is needed on whether exclusive long-term partnerships or competitive annual permitting is more successful at reaching equity objectives.
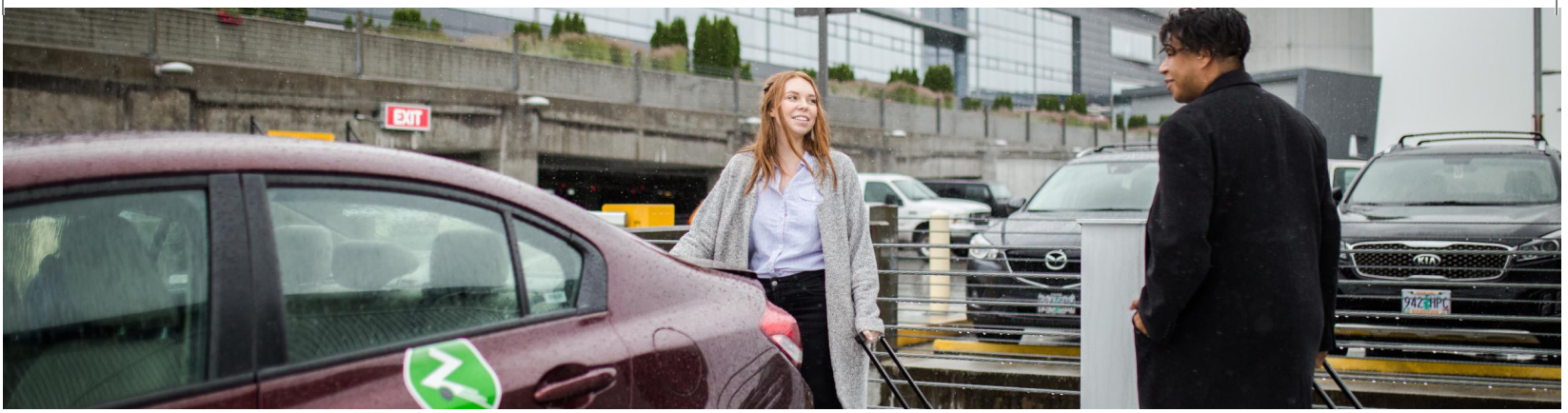
Focus on Carshare:
Model Programs for Low-Income Drivers

For over ten years, carshare businesses have offered subsidized rates for increased use.

Zipcar, a twenty-year old business owned by Avis Budget Group and offering round-trip car sharing in cities across the United States and internationally, offers special pricing for its own equity initiatives. In a partnership with the New York City Housing Authority (NYCHA), Zipcar waives the application fee and the first year of membership fees for residents of NYCHA properties. It also provides a one-time $20-driving credit and offers reduced trip fees for using cars parked on NYCHA property.[19]

In addition to lower usage fees, these businesses have also experimented with techniques favorable to people with lower incomes. Ithaca Carshare, a nonprofit organization that is now part of the Center for Community Transportation, initiated its Easy Access program with a federal grant. The program waives application fees that are normally used to cover the cost of verifying driving records. Easy Access still charges $10 per month in membership fees, but program members accrue $15 per month in driving credit. Unused credit is rolled over to the next month, allowing members to save up for longer trips. Ithaca Carshare also allows prepayment of trip fees in cash. While Ithaca Carshare lost funding when the federal government changed the grant program's allowable uses, they have maintained a smaller version of Easy Access on their own.[20]

GIG, a relatively young for-profit carshare operating in the San Francisco Bay area, does not charge application or membership fees, lowering economic barriers to use for all, and BlueLA offers unbanked customers a way to get a free bank account.

These various approaches show that many carshare providers believe there are untapped markets among lower income and transportation-disadvantaged communities that they could reach if they could afford to offer lower price points. However, the issue is not only finding a business model but also increasing community utilization rates to offset the loss in revenue from lower fees.

While government subsidies or third-party seed funding can fill this gap, there are differing opinions as to whether private services should receive direct subsidies. In addition, businesses are wary of expending resources—theirs or a government's—on locations that they predict will generate few trips.
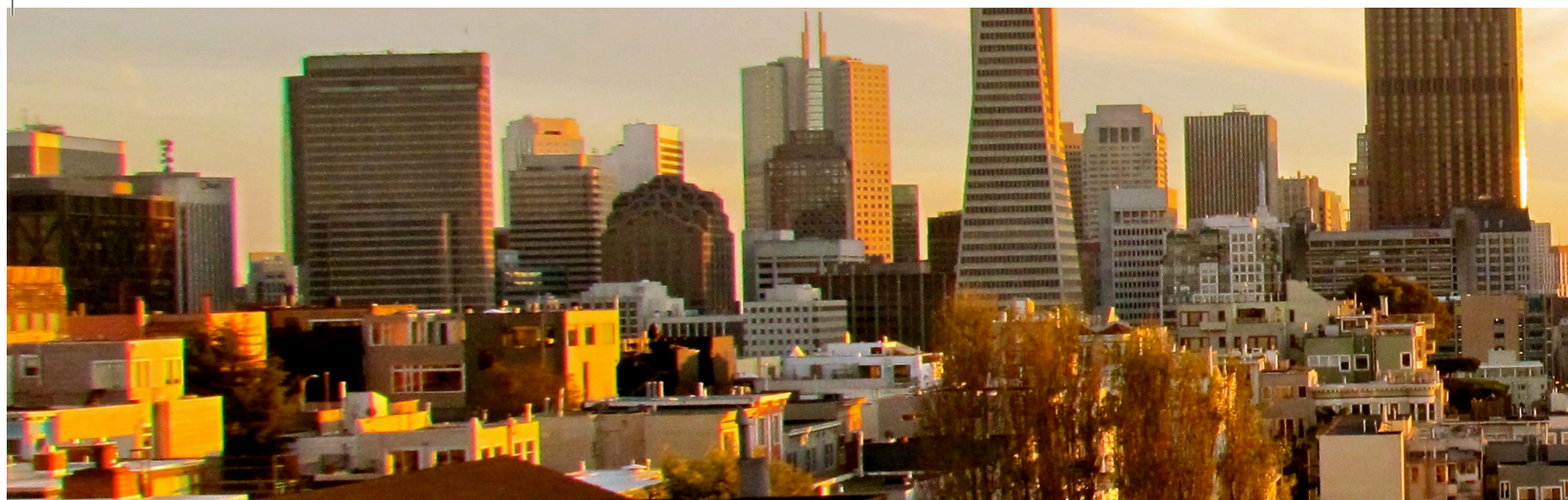
In 2015, the city of Oakland, California began developing policies and ordinances to prepare the way for carsharing businesses to set up shop. A grant from the Metropolitan Transportation Commission supported the effort and also funded outreach to Oakland's low-income neighborhoods.[21] Soon, two round-trip carshare businesses set up small fleets in the city, mostly parked on private land. The city then wanted to expand the availability of carsharing citywide, in a cost-neutral manner, and became interested in the one-way carshare model, which requires that vehicles be allowed to park in metered spaces or residential zones beyond duration limits.

For one-way carshare, the city developed required qualifications for carsharing companies and annual parking permits, including fees. The Free-Floating Zone Parking Permit allows carshare vehicles to be parked in two-hour metered parking for up to 72 hours, after submitting a map of the Free-Floating Zone Area for approval. Twenty percent of the zone area must encompass designated Communities of Concern, which are defined by a combination of low-income, racial, or ethnic minority populations, or other disadvantages (see Table 3). The carshare business pre-pays the meter fees based on estimated usage and then periodically reconciles payment for actual usage.

Table 3: Communities of Concern Framework for *Plan Bay Area 2040*

Definition – census tracts that have a concentration of BOTH minority AND low-income households, OR that have a concentration of three or more of the remaining six factors (#3 to #8) but only IF they also have a concentration of low-income households.

Disadvantage Factor	Threshold
1. Minority	70%
2. Low Income	30%
3. Limited English Proficiency	20%
4. Zero-Vehicle Household	10%
5. Seniors 75 Years and Older	10%
6. People with Disability	25%
7. Single-Parent Family	20%
8. Severely Rent-Burdened Household	15%

Source: MTC, "Equity Analysis," *Plan Bay Area 2040*, https://www.planbayarea.org/2040-plan/plan-details/equity-analysis.
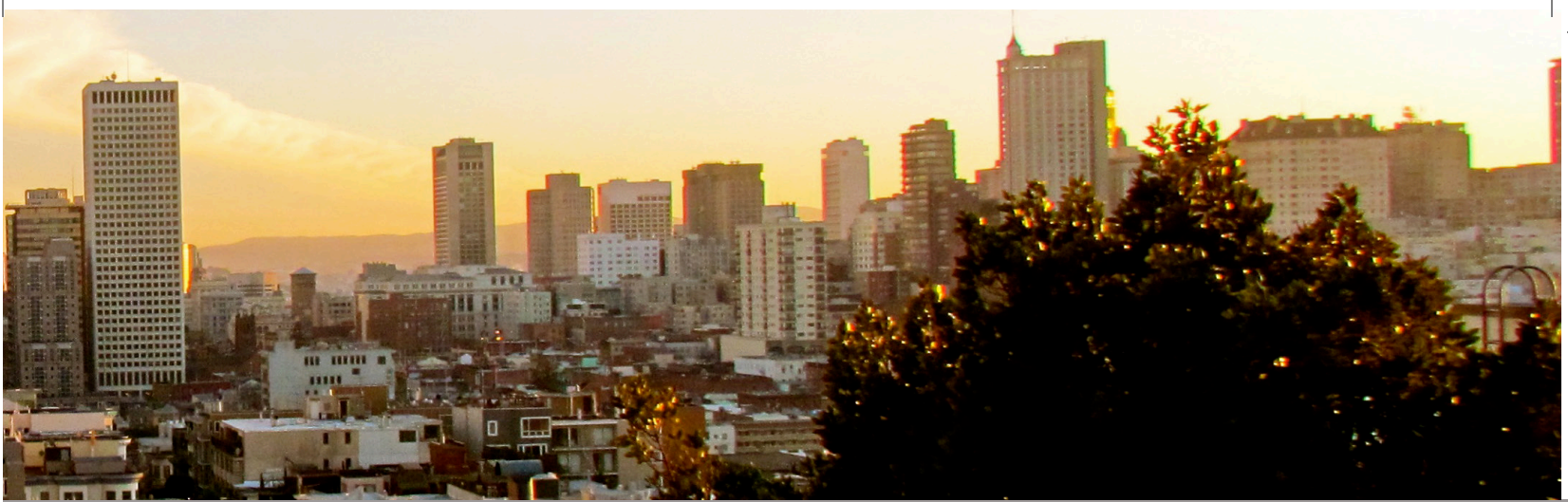
For the Master Residential Parking Permit, a flat fee per vehicle allows parking in all restricted residential areas for up to 72 hours.

Carshare providers are also required to hold at least one meeting with affected neighborhood associations and business groups for the initial zone map and before any proposed zone changes. To stay in good standing, these mobility services must also respond to complaints from neighborhood associations and business groups.

Although the carshare company that Oakland hoped to attract withdrew from the California market, GIG Car Share, a homegrown entry, stepped up to the plate. GIG is affiliated with AAA Northern California and a product of A3Ventures, AAA's innovation arm. GIG is modeled after Evo Carshare, run by British Columbia AA. Because Berkeley, Oakland's northern neighbor, adopted similar carshare permitting policies, GIG was able to launch 250 vehicles with a home zone covering both cities in 2017. Since then, GIG has expanded its home zone throughout the Bay area with a fleet of nearly 500 Toyota Prius vehicles. GIG offers free memberships with no application fees and issues RFID cards that can be used instead of smartphones to start and end trips.[22]

GIG's next market was Sacramento, where it offers Chevy Bolt electric vehicles in a partnership with Electrify America. Despite the need to charge the vehicles, GIG has continued the free-floating fleet, large home-zone model and does not depend on users to re-charge its vehicles.[23]

Lessons Learned

- Governments can lay the groundwork for mobility businesses by developing regulatory requirements in advance, considering the conditions needed for business success.

- Carshare businesses are experimenting with foregoing membership fees, which could make their services more affordable and accessible to lower income customers.

- Free-floating, one-way carshare with large home zones can make it easier to serve a wide range of neighborhoods and destinations.

Vehicle Sharing as Part of a Multimodal Lifestyle

In today's multimodal neighborhoods, partnerships can offset the limits of existing services. For instance, the cost of carshare prohibits regular use by low-income households. For people comfortable using bike and scootershare, the service is inappropriate for many trips, including trips with children, during adverse weather, during an illness or when injured, while under the influence of drugs or alcohol, and when hauling even modest amounts of stuff.[24] When a range of services work together in a single area, the community benefits from greater mobility access and coverage for a range of conditions.

Many private sector companies now provide multiple modes of vehicle sharing, a fact that points to the importance of broader partnerships. Agreements with public agencies give private providers inherent reach and scale, and in the process support other shared mobility services; advance safety for walking, biking, and other vulnerable forms of transport; and contribute to a more equitable mobility landscape.

Lessons Learned

- Vehicle sharing services, mostly owned by the private or non-profit sector, can be powerful tools to fill gaps in the shared mobility system.

- Solutions exist that encourage customers with low incomes to take advantage of vehicle sharing-services.

- Vehicle sharing and equity raises questions about the larger context of mobility in neighborhoods and regions:

    - When is vehicle sharing the most appropriate response to pressing mobility needs, especially given limited government resources?

    - Is equity best served by ensuring equal access to a mobility type or by tailoring services to resident needs?

Opportunities to Meet Equity Objectives: Sharing the Ride

For shared mobility services that share the ride, the customer takes a ride in a vehicle operated by the consumer ride industry and open to the general public. Services that share the ride include ridehailing services such as Uber, Lyft, and traditional taxis and shared or pooled options from those services (e.g., Uber Pool and Lyftline); shuttles or microtransit services that provide shared rides via flexible routes and/or schedules, including on-demand rides; and fixed-route public transit services, including on-demand services. These services may have quite different congestion and environmental implications, depending on how and where they are used.

In public-private partnerships for "sharing the ride" the public sector buys rides for its constituents from privately owned and operated businesses in order to provide better services to low-income or transportation-disadvantaged communities. This may include ADA paratransit users, using ridehailing to fill gaps in fixed-route service, and neighborhood circulators.

The Public Sector's Role: Owner and Purchaser

Up to this point, public-private partnerships have taken two forms: government agencies, usually transit agencies, encouraging or buying rides on taxis/TNCs and public sector experiments with microtransit. Although shuttles, vans, or small buses offering shared, on-demand rides aren't new,

what is sparking renewed interest today is that technology entrepreneurs at companies such as Via and Ruby Ride are convinced that smartphone apps and new algorithms for rider aggregation and dynamic routing will give this old service type new life.

However, purely private sector attempts at microtransit have failed to get beyond the dense cities that have long supported dollar vans or jitneys, private transit services operating on fixed-routes for a flat fare. The question isn't whether microtransit service will need public sector support to survive, but how best to deliver public sector support for optimal results.[25]

For equity objectives, programs and initiatives for low-income and transportation-disadvantaged groups typically come out of public transit or social service agencies. Thus, these equity programs are in the context of limited budgets and customer bases that are already largely made up of lower income and transportation-disadvantaged populations. In addition, the politics of spending taxpayers' dollars dictates that buying rides from private ride services should meet a compelling objective that furthers the public interest.

The question isn't whether microtransit service will need public sector support to survive, but how best to deliver public sector support for optimal results.

Buying Rides and the Promise of Neighborhood Circulators

Transit agencies have partnered with TNCs, taxis, and microtransit providers for numerous pilot projects in recent years. Pinellas County, Florida is home to a program that is specifically built around the needs of late-night workers who have no other transportation options (see case example). Neighborhood circulators, using the new technologies, could dramatically improve low-income customers' access to local community services and institutions. Most of these experiments, however, have involved first mile/last mile service to/from rail stations or bus transit centers.

Motivations for first mile/last mile partnerships to transit stations have ranged from growing ridership, compensating for cuts in fixed-route service, and avoiding the cost of constructing additional parking. At the low end, these partnerships are simply cooperative marketing efforts, with no public subsidy of private sector services. Some of the subsidy programs for trips to/from transit stations have targeted neighborhoods or populations that are at some transportation disadvantage (low-income neighborhoods, students, etc.). Although equity objectives are not necessarily the intent of the partnership, provisions for low-income and transportation-disadvantaged groups show up in associated requirements such as requirements for a call center, cash payment options, and to meet federal regulations requiring an option for people needing wheelchair accessible vehicles. A local taxi or medical transport provider, secondary to the main TNC providers, is often the solution.[26]

Despite the focus on first mile/last mile solutions, partnerships for microtransit services are actually heading in a much more promising direction with neighborhood circulators. These shared ride services, which can be tailored for people using wheelchairs and other accessibility devices, connect homes with nearby shopping and community services. Neighborhood circulators can combine fixed-route service that stops at major community destinations with on-demand service through residential areas. Or, the service can be completely on-demand. The algorithms may even be powerful enough to be able to cost-effectively meet local trip needs in places with suburban development patterns, though this has not been proven.

Arlington, TX ended its single, fixed-route bus line for on-demand, shared ride service in 2018 and has renewed the one-year contract with microtransit provider Via for 2019. In this public-private partnership, Via provides rides in a defined area within Arlington, promises a wait time of 10-12 minutes, and offers some wheelchair accessible vehicles. Trips are ordered and paid for through Via's app or by calling the call center, and cash payments require buying a pre-paid credit card. Via retains all revenue from the flat $3 fare, but the vast majority of funding comes from the city of Arlington and federal grants. The vans and app bear Via's branding as prominently as Arlington's, and even Arlington's website calls the service Via Rideshare, instead of "Arlington On Demand."[27]

The District of Columbia's Neighborhood Ride Service is an exception to the "buying rides" model of partnership. The District's Department of For-Hire Vehicles supported fixed-route neighborhood

circulators with a capital grant to the local taxi industry. The funding paid for the vans, with a stipulated requirement to cap fares at $5.00. At roll out, the fare was $3.25. (For comparison, the fare for travel on Washington Metropolitan Area Transit Authority buses is $2.00, and the mayor recently announced that the city's fixed-route DC Circulator buses will be free.)

Without funds for ongoing operating assistance, however, the taxi company needs the service to at least break even. They sought and tested routes in areas poorly served by fixed-route transit including in DC's most disadvantaged wards, but routes in these wards didn't make the revenue target and were cut in the second phase in 2017. The second phase incorporated street hails and virtual bus stops through the app. The driver accepts cash, credit cards, and Apple Pay, but not the region's mass transit card. The service survives as two routes that run for limited hours, Monday-Friday. A third phase incorporating on-demand routing is still in the planning stage.[28]

Public-private partnerships are also being used for trials of on-demand neighborhood circulators in Austin, Texas and Johnson County, Kansas. The technology companies are providing planning support, routing technology, and the customer app for free or at significant discounts, but the local governments are providing the vehicles and drivers. If the local governments decide to go forward with permanent service, a competitive procurement process will be required. In Austin, if the services go forward, the plan currently is that they will be part of their regular transit service offerings.

Neighborhood circulators and first mile/last mile services have the potential to improve mass transit's ability to serve a broader range of customers and trip needs. Whether these services will make mobility in a community or in a region more equitable depends on the details. Still to be determined too is whether a public-private partnership model is the best approach or whether these services should be operated as part of the public transit agency's portfolio.[29]

Improving Mobility for ADA Paratransit Customers

One of the most successful use cases has been using ridehailing businesses to provide on-demand rides for those who qualify for paratransit service under the Americans with Disabilities Act (ADA). However, as TNCs have opened up new freedom for some ADA riders, they have been slow to welcome those needing wheelchair accessible vehicles to their platforms.[30]

For people served by fixed-route transit but in need of door-to-door paratransit, current federal minimum standards allow ADA paratransit providers to require reservations at least one day in advance and also allow providers to negotiate a pickup time up to one hour before or after the customer's desired departure time. (For example, for an appointment on Wednesday at 4:00 pm requiring an estimated one hour of travel time, you would order a ride on Tuesday for Wednesday at 2:00 pm. You could wind up with a scheduled pickup time anywhere between 1:00-3:00 pm and a wait time at your destination of up to two hours.)[31]

Transit agencies look to ridehailing companies to offer their paratransit users at least the option to make spontaneous trips. Transit agencies also look to taxis and TNCs to save costs. Because ADA paratransit service is often designed around the customer with the most extensive needs for support, it can be very expensive. Generally, transit agencies hoping to save costs on ADA paratransit by using TNCs or taxis repeatedly discover that an on-demand option boosts ridership. Although cost savings may be minimal, the revealed demand for higher quality service among the transportation disadvantaged has been striking.

For ambulatory ADA customers, subsidizing the use of taxis and TNCs to provide on-demand rides is relatively straightforward. For customers using wheelchairs, tapping into the private sector to provide timely rides in accessible vehicles has been more of a challenge.

At one end of the spectrum of buying rides for ADA paratransit service are transit agencies that turn to TNCs to supplement the fleet providing regular ADA service. Central Pennsylvania Transportation Authority has a service agreement with both Uber and Lyft to help the agency meet peak demand. The rider served by a TNC vehicle doesn't receive the benefit of on-demand ordering, although all peak period ADA paratransit customers are presumably better off.[32]

At the other end are transit agencies that have turned to TNCs for much of their ADA paratransit service. The municipal transit agency in Santa Monica transitioned to Lyft for all of its ambulatory ADA service, with provisions for a call center and cash accounts. The program has been deemed successful, although some ambulatory customers still call for wheelchair accessible vehicles because Lyft's curb-to-curb service (as opposed to ADA's door-to-door service) does not meet their needs.[33]

In 2017, Kansas City Area Transportation Authority (KCATA) piloted on-demand rides for ADA customers as a premium service in addition to its regular ADA service. KC Freedom on Demand operates through a partnership with the Kansas City Transportation Group (KCTG), a locally operated subsidiary of the Transdev conglomerate. It uses a smartphone app developed by Transdev. Transdev also has significant experience providing regular ADA paratransit service in the United States, including for KCATA.

KC Freedom on Demand charges $5 for the first five miles and $2 per mile thereafter and subsidizes up to 60 one-way rides per month for ADA paratransit customers and adults over age 65. The service is available 24 hours a day, seven days a week, and zTrip also provides trips in wheelchair accessible vehicles and with drivers trained to serve people with disabilities. Riders can use the app or call center to order a ride and can pay with cash, credit card, or through the app. KCATA's regular ADA paratransit service, requiring reservations 24 hours in advance, costs $3 per trip, takes exact-fare cash only, and operates when and where fixed-route bus service operates. Taking the bus, if possible, is free for ADA-eligible customers.[34]

The popularity of KC Freedom on Demand led to its expansion throughout the Kansas City region. After a trial period of low fares to determine demand, which outstripped expectations, KCATA settled on the current fare structure and subsidy level, which it believes will be sustainable for the foreseeable future.

As partners, KCATA and KCTG/zTrip/Transdev had a history of working with each other and with ADA-paratransit clientele. KCTG/zTrip/Transdev brought unique strengths to the table, as it combines a local company committed to the Kansas City area community with the resources of a multinational corporation. The inclusion of wheelchair accessible vehicles on zTrip—for ADA-paratransit users and the general public—is a notable success worthy of further evaluation. Currently, zTrip is available in over 60 American cities, and four cities internationally.[35]

Lessons Learned

- The current focus of public-private partnerships in the consumer ride industry involves the public sector encouraging or buying rides on the private sector's shared-ride or microtransit services.

- Neighborhood circulators, using new technologies and offering on-demand rides, may be a promising way to fill gaps in fixed-route services and connect customers to local destinations and transit stations.

- Buying rides from ridehailing companies is a way for transit agencies to meet the sizeable unmet demand for affordable, on-demand rides for people who qualify for ADA paratransit service, including those who need wheelchair accessible vehicles.
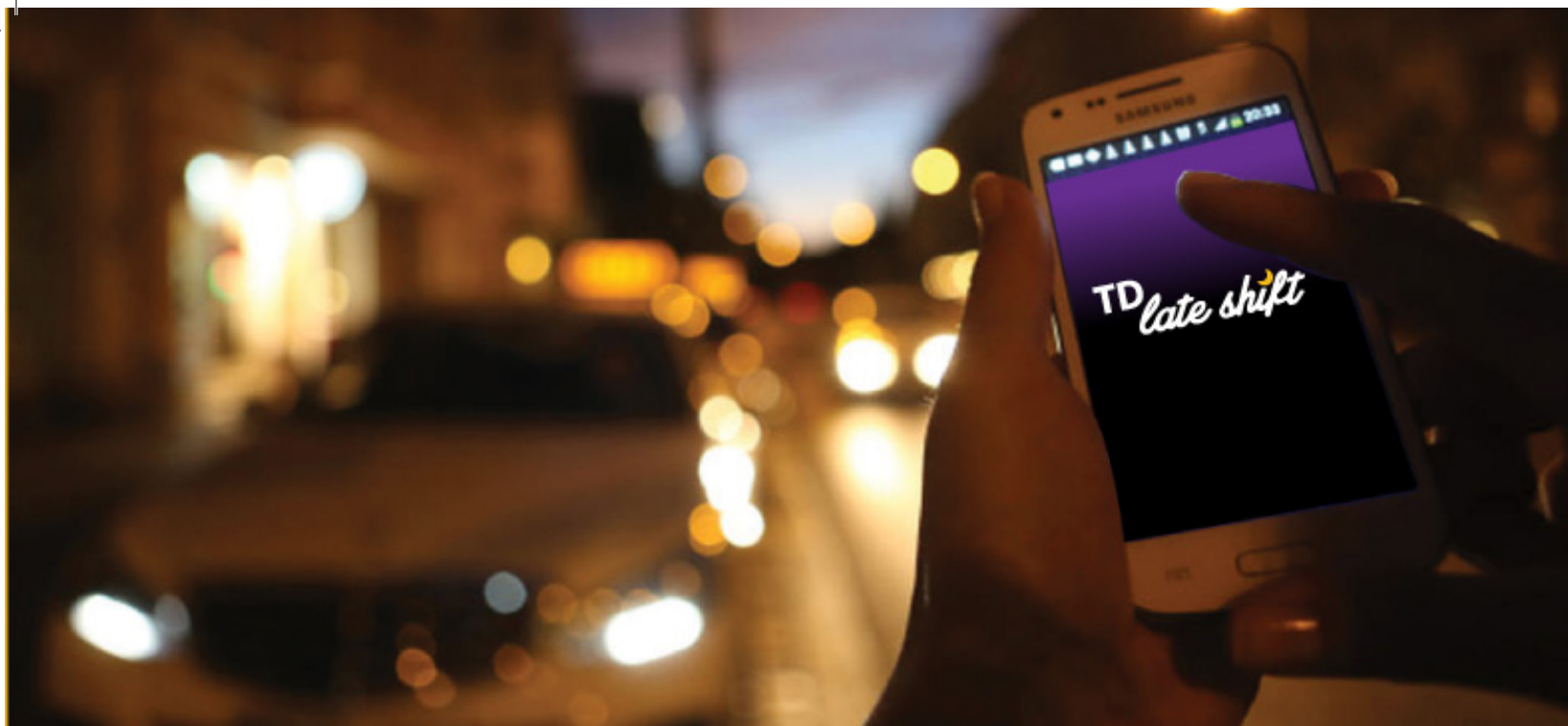
Case Example:
Using Ridehailing to Get Home from the Late Shift

Pinellas County, Florida is a tourist destination filled with jobs that cater to night life, yet its fixed-route bus service doesn't meet the ridership benchmarks that justify late night service. Could ridehailing help fill the gap? Pinellas Suncoast Transit Authority (PSTA) won a grant to test the idea from Florida's Transportation Disadvantaged (TD) Program, which arranges transportation for people with no other transportation options and for trips to "medical appointments, employment, educational, and other life sustaining services."[36]

PSTA's regular TD program already offered its participants heavily discounted bus passes. For the cost of a bus pass ($11.00) plus a premium ($9.00), TD participants can enroll in TD Late Shift and use ridehailing for 25 trips to or from work each month. Trips must take place, between 10:00 pm and 6:00 am. PSTA holds participants accountable through registering their employer's address. Trip data from ride providers show whether participants are making trips to or from their employer's address.

Launched in August 2016, TD Late Shift hit a peak of 4,730 rides in April 2018. When demand outstrips funding, PSTA has periodically closed enrollment and used attrition to manage the limited budget. Participants choose their ride provider from among a taxi company, TNC, or a wheelchair ride provider that has signed on to the program, and then PSTA reimburses the provider. Giving riders their choice of providers was important to PSTA, although the agency works with participants to help them use the most cost-effective ride provider for their trip.

PSTA, however, has no direct relationship with the employers who benefit from staff with reliable transportation. PSTA contacted employers when doing initial outreach, but employers are at this point an untapped resource. Without grant funding, funding from employers or business organizations may become necessary to continue the program.

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Although PSTA encourages participants to use the bus for one direction of their commute, they discovered that many shifts didn't fit neatly into this pattern. Participants use a range of strategies to get to work: the bus, rides from friends, sharing rides with co-workers, and the TD Late Shift option. For unexpectedly short shifts, a worker might need to call on TD Late Shift twice in one night. Because of TD Late Shift, PSTA has learned more about how late-night workers actually make their commutes.

Buying rides—leveraging the capacity of the private sector—has allowed PSTA to meet the needs of some of its most transportation-disadvantaged customers.

Lessons Learned

- There is an unmet need for mobility services at affordable price points outside the service hours of traditional mass transit.

- When designing new equity programs, leave flexibility to incorporate lessons learned about targeted users and their service needs.

- The private sector can be a source of untapped mobility capacity that is easily deployable and does not require the public sector to make long-term commitments.

Using Public-Private Partnerships to Improve Mobility and Equity

Public-private partnerships work better if the public sector partner has clear objectives that create the conditions for finding the best fit with a private sector partner and the environment to foster creative problem solving. The following approaches can support this process.

Checklist for Achieving Equity Objectives and Outcomes

When developing equity objectives, public sector decision-makers should take a multi-dimensional approach, such as the STEPS framework. Simply designing a program around economic issues or geographic disparities alone will miss opportunities to create a more fair and just transportation system.

Focus services to target specific objectives: Equity programs such as TD Late Shift, BlueLA, Kansas City Freedom on Demand, and neighborhood circulators start with a defined group or neighborhood and

build a service to meet their needs. Community involvement and marketing also target the selected group or neighborhood. The solution that is designed for a specific group may also serve a larger constituency.

Consider annual permitting or licenses: Many local governments are responding to competing private sector providers for bike share, scootershare, and carshare by regulating them through annual permit processes or licenses. Equity objectives can become part of the regulations or competitive permitting process, but whether these regulatory processes can reap the benefits of long-term partnerships is yet to be seen.

Lower barriers of entry by ensuring inclusive access: Programs that aim to make a mobility service more widely accessible typically offer reduced fares or fees, options for those wanting to pay cash, smartphone workarounds, and they encourage wheelchair accessible vehicles and adaptive vehicles. Some vehicle sharing services dispense with membership and application fees altogether, lowering barriers for everyone to try the service. Equitable distribution requirements and policies enforcing non-discrimination rules can come into play too.

Consider third-party funders, supporters, and champions: Public-private partnerships often involve additional participants and partners as external support. Community-based groups, business groups, and local political champions can be crucial to success. Especially important have been third-parties —governments, foundations, and corporations —that have provided grants or seed funding to launch projects or equity programs.

Engage the community at every stage: Programs for focused services and inclusive access should include significant marketing and outreach efforts that are culturally appropriate for the groups targeted to use the service. Staff dedicated to outreach and trained in reaching out to diverse communities are a must. Non-profit organizations have also been formally integrated, through grants, in community engagement efforts.

Think ahead to mobility-as-a-service: Public-private partnerships will be foundational to a mobility system where people travel by accessing a full range of right-sized shared mobility services paid for through a combination of monthly subscription and pay-per-trip options.

Case Example:
BlueLA's Electric Vehicle Carshare in Disadvantaged Communities

In 2016, the City of Los Angeles embarked on an electric vehicle (EV carsharing pilot project through a grant from the California Air Resources Board (CARB. The city's grant proposal, "L.A. Leading by Example: Partnering to Pilot EV Carsharing in Disadvantaged Communities," was developed by the city with support from lead technical partner the Shared-Use Mobility Center and submitted to CARB in April 2015. It emphasized serving low-income residents and reducing greenhouse gas emissions (GHGs. Implementing a progressive EV carshare pilot in a historically-steadfast car culture such as LA would prove to be challenging for a variety of reasons, but BlueLA EV Carshare (BlueLA) has already begun delivering results to Angelenos through reducing GHGs and providing a new mobility option. As of October, 2023 BlueLA has 4250+ BlueLA members who have taken over 635,000 total trips over 21 million gasoline-free miles throughout the Los Angeles area.[37]

BlueLA was chosen as the private sector partner after a competitive RFQ/RFP process. The city chose a one-way, point-to-point car sharing service that requires vehicles parked at each station to be connected to charging infrastructure. BlueLA promised $10,000,000 in private investment in equipment in return for exclusive use of dedicated public parking spaces for an initial term of five years with three two-year options. CARB funding, $1,669,343, covered community engagement, consultant technical services, and parking conversion costs. The city contributed $1,180,000 in fee waivers and Los Angeles Department of Water and Power rebates. In addition to LADOT and the mayor's office, five other city agencies were involved in the complex partnership negotiations.

The CARB grant could be used only for service in disadvantaged communities, defined by a combination of thresholds for income and exposure to air pollution. BlueLA keeps all revenue that the service generates and can expand its charging infrastructure to non-targeted neighborhoods at its own expense. BlueLA also can open its charging infrastructure to private vehicle owners.

A Steering Committee hired a grant-funded Outreach Manager and worked according to a self-developed, goal-oriented community plan that called for aggressive community outreach. The partners held community forums and participated in community events, and BlueLA hired local Street Ambassadors.
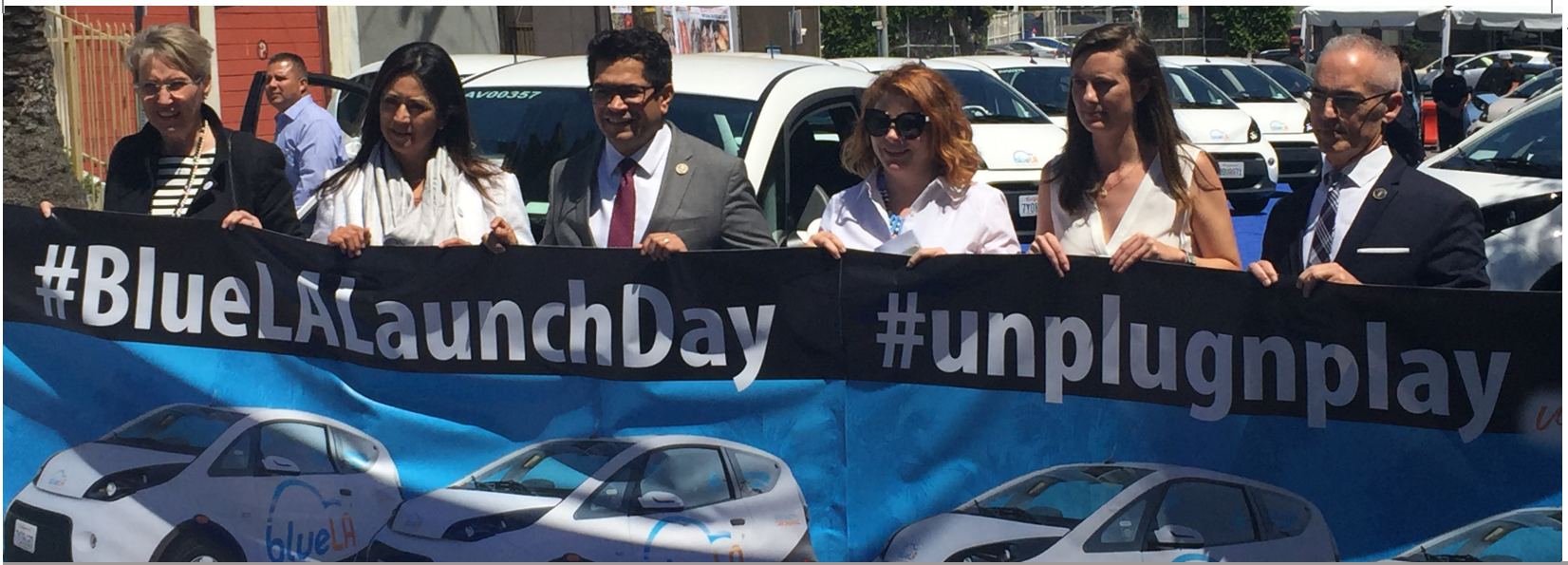
As additional encouragement to use the service, BlueLA discounts "Community Memberships." Qualified low-income customers pay a membership fee of $12/year billed at $1/month and 15 cents/minute, as compared to Standard Membership of $60/year billed at $5/month and 20 cents/minute. Community Members also receive the 2nd and 3rd hours of a reservation for free.

BlueLA does require all members to secure their account with a credit or debit card. However, for customers without bank accounts, BlueLA has partnered with Motiv, which offers no-fee bank accounts and debit cards to participants in partner organizations. In effect, the $12 annual membership fee comes with a free bank account and debit card.[38]

In April 2019, CARB announced $3 million in additional funding to expand BlueLA in Los Angeles.

Lessons Learned

- The use of grant funding, fee waivers, and parking preferences can leverage significant private investment in carsharing and electric vehicle infrastructure from the private sector.

- Disadvantaged neighborhoods can be the starting place for new shared mobility investments.

- Successful community engagement involves significant resources and may be best served by a partnership approach with non-profit organizations as well as the private sector mobility provider.

- Engaging the community in decision making from the start creates buy-in and better design for end users. Continue involvement throughout the development process with decisions around price, selection of vendor, locations, and marketing approach.

Further Evaluation and Research Needs

Below are five areas where the industry is at a crossroads regarding service models or where solutions are still wanting for low-income and transportation-disadvantaged communities.

Free-floating versus point-to-point vehicle sharing: Further research needs to be done to determine whether free-floating fleets or one-way, point-to-point service is the better model for equitable mobility, and under what circumstances.

First-mile/last-mile service versus neighborhood circulators: Which better serves the needs of low-income or transportation-disadvantaged persons?

Solutions for the unbanked and underbanked: While customer workarounds for smartphones (call centers, RFID cards) are relatively straightforward, solutions for those who want to pay cash often involve multiple steps in multiple locations. More evaluation is needed of solutions for those without credit cards as well as of new techniques that instead provide bank accounts tailored to the needs of people with lower incomes.

Services for all ages and abilities: The private sector's shared mobility services are too often inadequate for disabled persons. More evaluations are needed of successful and attempted efforts to make vehicle sharing and ridehailing services more inclusive and also of the appropriate government role in public-private partnerships.

Community outreach, including marketing: Although a body of best practices for community involvement, including needs assessments and community surveys, has developed for the planning and siting of shared mobility services, successful marketing techniques are less certain. Public-private partnerships present an opportunity for cross-fertilization and co-learning on marketing strategies and shaping service to demand.

Conclusion

Public-private partnerships for shared mobility services in the US are expanding in response to technological advances and new private sector business models, making this an opportune time to test how well shared mobility services can meet equity objectives.

In the face of high unemployment and rising income inequality, transportation equity is more important than ever before in creating a level playing field where everyone can access the means to live well. All shared mobility services have roles to play in creating this system, essential for a just society.

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