APPENDIX C
BEST PRACTICES
MEMORANDUM

SAN JOSÉ EMERGING MOBILITY PLAN

BEST PRACTICES REVIEW: POLICIES, PROCESSES, PROGRAMS, AND PILOTS

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INTRODUCTION

To guide the development of preliminary policy, practice, program, and pilot recommendations for the City of San José, the project team conducted a review of best practices (Task 4.1) as well as a literature review (Task 4.2). The project team began by working with City staff, community leaders, and the Equity Task Force (ETF) to confirm characteristics that would indicate contextually appropriate peer cities and applicable best practices with City staff. The key characteristics identified—**mobility, environment**, and **racial equity**—are rooted in the City's overall goal framework. Using these as the focal point for analysis, the project team reviewed planning documents, policies, reports, and academic journal articles to inform the development of preliminary recommendations.

Themes

The best practices are organized by themes. These themes reflect the types of strategies for San José in the near- and medium-term to advance its goals by approaching emerging mobility strategically. These strategies are informed with influence from community partners and are connected to several foundational plans, including Envision San José 2040, Climate Smart San José, and the Access & Mobility Plan.

Set the Foundation: Goal Setting and Policy Alignment

An effective approach to emerging mobility requires a strong foundation, rooted in community goals and oriented around addressing specific needs.

Take Action: Programs, Processes, Pilots, and Partnerships

The emerging mobility industry is in constant motion. Governments can work smarter, not harder, by taking strategic actions that get ahead of the pace of change.

Apply Lessons: Evaluation and Iteration

The purpose of these case studies is to demonstrate thoughtful evaluation frameworks and internal practices that empower cities to understand how well emerging mobility services contribute to their goals and whether the evaluation framework enables iteration, integration of community input, and improvement.

Case Study Assessment Summary

The project team also provided a qualitative assessment of each case study in their potential to advance community-generated goals for this plan. A summary of that assessment, with case studies listed in rank order, is provided below.

Figure 1   Case Study Assessment Summary

Theme	Case Study	Description	Impact Score
	Seattle New Mobility Playbook and Transportation Equity Agenda		HIGH

Theme	Case Study	Description	Impact Score
Set the Foundation			
	Seattle Racial Equity Toolkit		HIGH
		The creation of the Oakland Department of Transportation (OakDOT) and the department's Racial Equity Team (RET). The RET was created to operationalize the department's focus on delivering equitable outcomes in transportation.	MEDIUM
		The City of Toronto's Transportation Services developed new mission, vision, and principles and identified key organizational outcomes that guided them towards an alternative organization structure that would enable better service delivery.	MEDIUM
	California Clean Mobility Options	Voucher Pilot Program that awards funding for zero-emission mobility programs that provide service in the state's historically underserved communities.	LOW
Take Action		An on-demand community rideshare pilot seeking to promote more shared rides and to enhance accessibility and mobility for underserved communities in West Sacramento.	HIGH
	Míocar Carshare	A community-based EV roundtrip carsharing service serving residents and community members in the San Joaquin Valley. Members can access any one of the 27 EVs located at several affordable housing complexes and local retail centers.	HIGH
	LADOT Dockless Vehicle Pilot Program (MDS Implementation & Data Equity)		HIGH
	Urban Health Partnerships (UHP) Community Liaison Framework	Framework used to develop and promote community leadership to support ongoing local initiatives. This involves hiring and training residents to serve as liaisons to the community and to help connect them to services, resources, and opportunities.	HIGH
	Baltimore Dockless Vehicles Pilot Program (Equity Plan & Equity Zone)	Pilot program that established designated "equity zones" to ensure the equitable distribution of e-scooters. The program also required providers to offer low-income fares, a non-smartphone option, and a cash payment option.	MEDIUM
	OakDOT 3-Year Paving Plan	Data-driven paving plan that centered equity in determining streets prioritized for paving. This led to a proposed funding plan that would allocate funding based on an area's share of local streets in need of repaving and its share of underserved residents.	MEDIUM
	Mass Transportation Authority Rides to Wellness	FTA grant-funded, on-demand, door-to-door program that provides rides to medical appointments for eligible residents in Flint and the greater Genesee County area.	MEDIUM

Theme	Case Study	Description	Impact Score
	Sacramento Our Community Carshare Program	Carsharing program that allows residents at several partner subsidized housing developments to reserve zero-emission vehicles.	MEDIUM
	Sonoma County Clean Energy Electric Vehicle Incentives	Public utility provider-led incentive program aimed to increase the adoption of electric vehicles among. Eligible applicants can secure incentives to purchase of lease an EV.	LOW
	LADOT Dockless Compliance Program	Compliance program aimed towards verifying permitted operator compliance to MDS, deployment, and parking requirements.	LOW
Apply Lessons	Chicago E-Scooter Share Pilot Project	A two-phase e-scooter share pilot program where multiple adjustments informed by stakeholder input were made between phases. Changes included more stringent equity-centered deployment requirements, the addition of lock-to mechanisms, and updating on-vehicle communication to include Braille.	HIGH
	Portland New Mobility Snapshot	An e-scooter evaluation program where aggregated trip data and stakeholder input were used to inform the design of future pilot programs and the city's long-term permitting program. Lessons learned from program evaluation informed city-led initiatives focused on addressing micromobility parking concerns and increasing access to low-income programs.	HIGH

IMPACT

Each best practice was evaluated and assigned qualitative score on its potential for advancing ETF-generated goals and for making emerging mobility in San José more equitable and/or sustainable. Impact scores are based on measurable outcomes or impacts of the practice in another location in the context of programs and policies already in place or are being considered in San José. Best practices that help to advance several goals will receive a higher impact score than best practices that advance less goals.

IMPACT SCORE
Potential of best practice in advancing ETF-generated goals.

Less Impact → Greater Impact

LOW   MEDIUM   HIGH

The ETF-goals used for assessing and selecting best practices include:

- Collaborate, educate, and engage the community to inform options and services, and to ensure emerging mobility is inclusive, accessible, and affordable.
- Ensure emerging mobility fosters belonging, joy, ease, and safety for all communities, prioritizing those with the greatest mobility needs.
- Improve communities' wellbeing and personal safety, and promote health for all, focusing on communities historically harmed by public improvements, enforcement, and investment.

- Improve connections between local neighborhoods, essential services, jobs, and regional destinations, prioritizing communities where access and connection are most needed.
- Use emerging mobility to enhance economic opportunities for communities most harmed by transportation practices in the past.
- Expand awareness and education around emerging mobility services and programs in communities with the greatest mobility burdens.

BEST PRACTICES AND CASE STUDY HIGHLIGHTS

Set the Foundation: Goal Setting and Policy Alignment

Seattle New Mobility Playbook and Transportation Equity Agenda

Recognizing how the transportation landscape was changing, the Seattle Department of Transportation (SDOT) created and published "The New Mobility Playbook" in 2017 to guide the development and deployment of new mobility technologies. The Playbook features a series of strategies, policies, and "plays" that foster new mobility while prioritizing SDOT's safety, equity, affordability, and sustainability goals. For each of the five plays included in the Playbook, the authors consider the difference between what could happen if the development of new mobility is left to chance and then lay out a series of strategies that will enable the City to proactively shape it instead.

In addition to centering equity in the Playbook, SDOT introduced a Transportation Equity Resolution "affirming the City of Seattle's commitment to racial equity and social justice and recognizing the Seattle Department of Transportation's Transportation Equity Program,"[1] which was adopted by City Council in 2018. The Transportation Equity Program oversees activities to specifically support transportation options for communities of color, low-income communities, immigrant and refugee groups, and others. They also convene a Transportation Equity Workgroup, which is co-creating SDOT's first-ever Transportation Equity Agenda to establish equity goals and priorities for the department.

Measurable Results and Impacts

The New Mobility Playbook set the stage for the City of Seattle's approach to new mobility, and SDOT's New Mobility Program oversees bike share, e-scooter share, late-night pick-up zones for TNCs, and electric vehicle charging in the public right-of-way, among other projects. All these efforts are guided by the goals SDOT established through the New Mobility Playbook:

- Put People and Safety First
- Design for Customer Dignity and Happiness
- Advance Race and Social Justice
- Forge a Clean Mobility Future

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[1] City of Seattle. 2017. "Transportation Equity Resolution." Accessed at: https://seattle.legistar.com/LegislationDetail.aspx?ID=3156811&GUID=BA5CD22F-D023-4873-9206-EF7ADD892C05&Options=&Search=

- ▪ Keep an Even Playing Field

In practice, this has translated to requirements that bikeshare and e-scooters be accessible to rent without a smartphone or a bank account, for instance.

Applicability to San José

The New Mobility Playbook is directly applicable to San José because in the same way that the New Mobility Playbook has served as a foundation guiding decisions about how to intentionally implement new mobility services and programs in Seattle, the Emerging Mobility Action Plan is intended to do the same for San José. This requires setting clear goals like those laid out in the New Mobility Playbook. The ETF-generated goals will serve as the backbone for the Emerging Mobility Action Plan and programs and services should be designed to explicitly support those goals.

Impact Score

HIGH

Seattle Race and Social Justice Initiative & Racial Equity Toolkit

The Seattle Race and Social Justice Initiative (RSJI) is a citywide effort to end institutionalized racism and race-based disparities in City government. RSJI builds on the work of the civil rights movement and the ongoing efforts of individuals and groups in Seattle to confront racism. The Initiative's long-term goal is to change the underlying system that creates race-based disparities in our community and to achieve racial equity.

The Racial Equity Toolkit was developed through the City of Seattle's RSJI in 2012 and is designed to help align departmental racial equity goals and desired outcomes. The toolkit lays out a process and set of questions to guide the development, implementation, and evaluation of policies, programs, budget issues and more to address the impacts on racial equity. In 2015, the Mayor of Seattle began requiring city departments to carry out four uses of the racial equity toolkit annually.

Measurable Results and Impacts

In addition to being a widely adopted toolkit outside of the region, use of the tool has resulted in several important outcomes in the City of Seattle. The Government Alliance on Race and Equity has highlighted three outcomes from the application of a racial equity lens[2]:

- An amendment of Seattle's Public Accommodations ordinance that includes protections for a woman's right to breastfeed after it was identified that many women, including low-income women of color, were being harassed while breastfeeding in public spaces such as mass transit.

- The passage of an ordinance regulating the use of criminal records in employment, which included mechanisms to track the effectiveness of the law in addressing racial inequities through the explicit collection of demographic information.

- The approval of an application to the Seattle Office of Housing for an award from Seattle's Housing Levy of $7.9 million to El Centro de la Raza for the creation of the Plaza Roberto Maestas

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[2] "Seattle, Washington." Local and Regional Government Alliance on Race and Equity. Accessed at: https://www.racialequityalliance.org/jurisdictions/seattle-washington/.

project, which normally would have been denied based on traditional underwriting standards and procedures.

Applicability to San José

Several of the goals outlined by the ETF state that San José should explicitly prioritize BIPOC communities, communities with the greatest mobility burdens, and communities that have been most harmed by transportation practices in the past. To do so, the City of San José must begin by looking backwards to clearly identify how racist policies and practices have shaped its development and led to highly inequitable outcomes. This acknowledgement is an important first step for the City to take in order to work towards a more equitable future. From there, adopting a racial equity framework, which provided the backbone for the development of Seattle's Racial Equity Toolkit and enabled its broad and consistent implementation, can help to inform desired outcomes for the city. Given the important impacts use of the Racial Equity Toolkit has had in Seattle, San José should consider adopting a similar tool to support implementation of the Emerging Mobility Action Plan.

HIGH

Oakland Department of Transportation Departmental Reorganization

In 2016, the City of Oakland established a new Department of Transportation (OakDOT), which brought together transportation functions that were previously located in Public Works and the Police Department. To define OakDOT's mission and goals, the City of Oakland developed a strategic plan organized around four pillars (equitable jobs and housing, holistic community safety, vibrant sustainable infrastructure, and responsive trustworthy government) that aligned with the new Mayor's vision and the City's focus on equity. Since its inception, OakDOT has made equity the primary focus of its work, and has successfully incorporated equity into the department's mission, structure, and processes.

Lessons Learned

To operationalize the Strategic Plan's focus on delivering equitable outcomes in transportation for all of Oakland's diverse constituencies, OakDOT created a Racial Equity Team (RET). The RET's mission is to end systemic causes of racial disparity through improving and developing policies, programs, and practices at OakDOT. The RET has five subcommittees focused on capacity building, community engagement, data analytics, digital services, and recruitment and retention. In each focus area, the RET has taken the lead in examining existing practices to develop new ways to incorporate and prioritize equitable outcomes in decision making and identify gaps where a new process or program may be necessary.

Measurable Results and Impacts

Some of the key actions the RET has spearheaded include the City's 3-Year Paving Plan, which followed an equity-driven process to allocate resources, the development of a geographic equity toolbox, and an analysis of the department's hiring processes and practices.

Applicability to San José

Oakland's experience and success advancing its equity goals demonstrate the necessity of embedding equity into an organization's structure and processes to deliver results and impact. Structural inequities are deeply ingrained in procedures, policies, and decision-making processes. Oakland's experience illustrates that San José must take a holistic, comprehensive approach to rooting out the systems that created and maintain structural inequities and replace them with new structures that affirm and further the City's equity goals. The ETF-approved goals touch on mobility, safety, security, health, economic opportunity, and education, and a critical examination of how structural inequities are crosscutting is required to advance more equitable outcomes. While the Department of Transportation has a GARE/Racial Equity Team, it is a volunteer effort staffed with almost a dozen employees. The City of San José should consider not only dedicating full-time staff to advise on projects, programs, and internal processes, but also dedicating funding to support and expand this program over time.


MEDIUM

Toronto Departmental Reorganization

Toronto began the process of reorganizing its Transportation Services Division and its more than 1,200 staff in the summer of 2017—roughly six months after bringing in a new General Manager. Toronto has a very strong city council with a high degree of oversight and discretion. Transportation Services' previous structure reflected the City's governance context:

- Four district offices oversaw planning, development review, and road operations within their geographic area, and
- Three citywide functional units covered public realm, traffic management, and infrastructure management.

Transportation Services conducted a detailed organizational review that engaged leadership, managers, and staff across the organization to identify issues and develop new solutions. This process highlighted challenges around consistent and efficient service delivery, the department's ability to respond to emerging issues at a citywide scale, alignment between roles and skills, and the use of data and technology. As the City's transportation priorities evolved, including a heightened focus on equity and Vision Zero, it became clear that the organization's structure had not evolved in tandem.

As part of the organizational review, Transportation Services developed new mission, vision, and principles that included a focus on equity, and identified a series of key organizational outcomes that guided them through the process of evaluating alternative organization structures. Transportation Services subsequently developed a Capital Program Prioritization Tool that guides project prioritization according to two distinct frameworks: a Risk Assessment and a Transportation Equity Lens. The Risk Assessment accounts for factors such as Health and Safety, Legislative Compliance, Reputation/Public Opinion, Sustainability, and Economic Development. The Transportation Equity Lens includes equity in service, prioritizing areas with the greatest needs and equity in the decision-making process. The Equity

Lens account for a variety of equity considerations, including age, ability, income, race, etc. as shown in Figure 2.
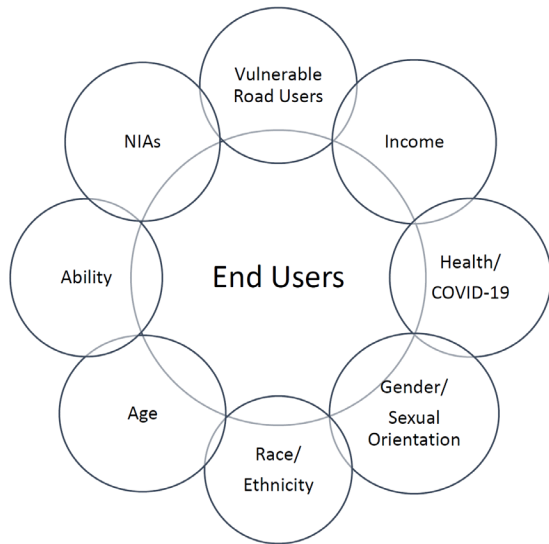
Results from both frameworks are reviewed by program staff and program managers in an effort to reduce self-bias.

Lessons Learned

In their efforts to integrate the Transportation Equity Lens framework into the reorganization process, Transportation Services staff conducted equity impact and equity opportunity assessments to understand needs, remove barriers, and identify opportunities for the division's unique programs. As part of that process, Transportation Services staff were prompted to reflect on dimensions of a project life cycle through an equity-focused lens. These dimensions included: data-driven decision making; programming and prioritization; design, policies, and standards; and supply chain. Prompts included reflecting on diversity of vendors, embedding equity in prioritization frameworks, and consulting underserved groups for program development. This self-assessment allowed the Transportation Services staff to identify gaps and opportunities to better integrate equity in their project delivery process.

Measurable Results and Impacts

Toronto only recently completed its organizational transition, but the City is one of the leading examples in North America in its commitment and action around Vision Zero, prioritizing transit, embedding equity as part of program and project delivery, and expanding its cycling network.

Applicability to San José

In addition to updating their organizational structure to improve efficiency, Toronto also incorporated geographic elements into their new structure in order to best serve communities, stakeholders, and elected officials. The Transportation Equity Lens (TEL) also encouraged better staff level understanding of program impacts on underserved groups. The introspective nature of the TEL helped transportation staff identify challenges and opportunities in the equitable delivery of programs through a close examination of internal functions within the Division. As San José seeks to engage diverse audiences and stakeholders

in transportation decision making, evaluating how to organize teams and resources around engagement and equitable program and project delivery is an important consideration.

Impact Score

MEDIUM

Clean Mobility Options

The Clean Mobility Options Voucher Pilot Program (CMO) awards voucher-based funding for zero-emission mobility programs that provide service in California's historically underserved communities. CMO is funded by California Climate Investments and is administered by a collaboration between CALSTART, the Shared Use Mobility Center, GRID Alternatives, and Local Government Commission.[3] CMO has made a concerted effort to center equity in its awardee process. To be eligible to receive CMO funds, organizations must conduct a community mobility needs assessment before applying or apply for funding specifically to cover the costs of conducting a needs assessment. Interested entities can apply for up to $1 million in funding to launch a clean mobility project if they have already conducted a needs assessment, and the results must be documented in the application. Otherwise, entities can apply for up to $50,000 for the express purpose of conducting a needs assessment. CMO has also set aside a percentage of the funds specifically for California Native American Tribes.

Lessons Learned

Inclusion of a needs assessment is based on lessons learned through the California Air Resources Board's SB 350 Barriers Report process and the Greenlining Institute's Mobility Equity Framework. The needs assessment not only allowed for clean transportation and mobility investments to better address community needs and interests but also helped to build trust with partner organizations and residents. Other lessons learned include dedicating considerable time and resources to create and implement a collaborative survey development process with communities and presenting draft materials to residents allowed for targeted feedback for final needs assessment materials.

Measurable Results and Impacts

CMO provided funding to 24 entities in 2020, its inaugural year, for a total of $1.15 million to support community mobility needs assessment efforts. Awards have been issued to entities throughout the state, in both rural and urbanized areas (Figure 3). Because this program is new, information about additional measurable results and impacts is currently limited.

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[3] Many of the program funded by CMO have been evaluated by The Greenlining Institute, and a report to their findings including recommendations and best practices is forthcoming.

Figure 3   Map of 2020 Clean Mobility Options Awardees

Source: Clean Mobility Options

Although the Clean Mobility Options Voucher Pilot Program is still quite new, it has applicability to San José because of how it has centered community in the process. CMO's funding model requires that organizations conduct community mobility needs assessment before launching a program and has set aside funding to ensure that order of operations. One of the ETF-approved goals is to "collaborate, educate, and engage the community to inform options and services, and to ensure emerging mobility is inclusive, accessible, and affordable." Conducting a community mobility needs assessment is a critical step in developing a program or service that is inclusive, accessible, and affordable in practice. The CMO is an important funding source for local nonprofits and other organizations and San José could help disseminate information about this resource.

Impact Score

LOW

Take Action: Programs, Processes, Pilots, and Partnerships

West Sacramento On-Demand Rideshare Pilot

Figure 4   West Sacramento On-Demand Rideshare Pilot

Source: City of West Sacramento

Lessons Learned

Halfway through the Pilot year (November 2018), a survey was conducted to help the city better understand who was using the service, how they were using it, and what potential impacts it was having on the travel behavior or quality of life of riders. A majority of respondents reporting annual household incomes ranging from $50,000-$74,999 and $100,000- $149,999 fell between the ages of 30 and 59. Generally, and as further supported in this report, this age and income group has access to a personal vehicle, suggesting that they may be less likely to use this service for compulsory trips, such as commuting or going to appointments. Older adults demonstrated a distinctly different profile of trip purposes using the On-Demand Rideshare service, especially for those at or around the standard retirement age (~60+). As would be expected, use of the service for commuting was comparatively much lower for respondents in these age groups. Seniors appear to be primarily using the service for daily goods and services such as "Groceries and Shopping" and attending "Medical or Dental Appointments", alongside some social and recreational trips.

Measurable Results and Impacts

The city launched this service in May 2018 with expectations of roughly 200 to 250 average daily rides. By Fall 2018, ridership had surpassed these early ridership estimates by 50% and continued growing, reaching 325 average daily rides by February 2019. More than half of all rides (63%) were shared rides and the average ETA was 10 minutes. According to a user survey, 40% of respondents reported driving alone less and 77% reported they were more satisfied with the city's transportation system.

One of the goals of the ETF is to "Improve connection between local neighborhoods, essential services, jobs, and regional destinations, prioritizing communities where access and connection is most needed." Traveling between neighborhoods in San José can be challenging, particularly in areas where transit service is limited. Creating an on-demand rideshare program that costs an affordable flat fare for travel within an entire service area can facilitate connections between neighborhoods. San José also has the highest proportion of seniors in Santa Clara County. The city's senior population is also expected to grow exponentially in the coming decades. Given the success of West Sacramento's On-Demand Pilot in serving senior residents for multiple trip types, this pilot can be adapted to meet senior mobility needs and can supplement existing paratransit and non-emergency medical transportation. The ETF also view emerging mobility as a means to support the city's transit system. An on-demand rideshare pilot can be designed with fare incentives to facilitate first- and last-mile connections to VTA rail stations or other regional transit hubs.

Impact Score

HIGH

Míocar Carshare

Launched in July 2019, Míocar is an electric vehicle roundtrip carsharing service serving residents and community members in the San Joaquin Valley and is a strong example of a successful community-based mobility program. Currently available in the cities of Arvin, Cutler, Lamon, Orosi, Visali, and Wasco, Míocar enables residents to reserve one of 27 battery electric vehicles for $4 per hour or $35 per day. Included as part of the service is insurance, vehicle maintenance, roadside assistance, and bilingual customer service. Míocar vehicles have access to 34 parking spaces reserved for charging that are located at eight affordable housing complexes.

Membership is available to anyone over the age of 21 with a valid driver license (including California AB 60 licenses, which do not require proof of legal residency in the U.S.[4]), relatively clean driving record, and a credit, debit, or bank card. Users can reserve Míocar in advance on a mobile app, the program's website, or with a smartcard available to non-smartphone participants. Users can also request Americans with Disabilities Act (ADA)-adaptive controls to operate the vehicle once the vehicle is reserved. In addition, they operate a Míorides program to help expand access to people who do not have driver's licenses or unable to drive. Members can sign up as volunteer drivers and get driving credits for giving rides to others.

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[4] In California, AB 60 driver's licenses are for individuals who are not able to provide proof of legal residence in the U.S. but are available to provide proof of identity and California residency. (Obtained from: https://www.dmv.ca.gov/portal/driver-licenses-identification-cards/assembly-bill-ab-60-driver-licenses/)

Míocar is a non-profit collaborative involving Mobility Development, Self-Help Enterprises, the California Vanpool Authority (CalVans), and the San Joaquin Valley Air Pollution Control District. Program operations are overseen by Mobility Development, a social enterprise that supports planning, deployment, and operations management of carsharing, bikesharing, and volunteer transportation services in disadvantaged communities. Self-Help Enterprises is a non-profit community development organization that provides space for charging stations at several community housing developments. CalVans operates as the fleet manager and oversees maintenance and repairs.

Figure 5   Míocar BMW i3 Co-Located at Housing Development

Source: Míocar

Lessons Learned

Researchers with UC Davis who were involved in the initial program development have made note of key takeaways that have contributed to the ongoing success of this program. These include:

- The critical importance of building partnerships with community-based organizations who are already well connected to the community and developing culturally appropriate marketing materials.
- Involving community members in program development. In Míocar's case, a steering committee of local residents have contributed to the development of the carsharing program.
- Devoting time and resources to educational sessions about the program and how carsharing works.

Measurable Results and Impacts

As of January 2021, the program has 300 members and there have been over 1,000 member reservations since launch with 25,000 miles driven. Typical active members are female, younger than 44 years old, live

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Applicability to San José

Míocar is an example of a community-driven shared mobility program designed to serve clearly identified community needs, which aligns with San José's expressed desire to support community-driven programs and pilots. This example is also aligned with the ETF-supported goal to "Improve connections between local neighborhoods, essential services, jobs, and regional destinations, prioritizing communities where access and connection are most needed." A recommendation to support this goal is to consider integrating emerging mobility into new housing developments and to design the program in partnership with communities to meet community needs. San José has well-established relationships with local affordable housing developers and has been working with them on co-locating bikeshare stations and carshare vehicles at housing developments and bundling bikeshare membership into rental applications. San José could consider collaborating with local partners to design a carshare program that meets community needs.

Impact Score

HIGH

LADOT Dockless Vehicle Pilot Program (MDS Implementation and Data Equity)

LADOT formed a paid ad-hoc advisory committee to advise the agency on how to structure a more equitable Dockless Mobility Program. The Core Advisory Board (CAB) is composed of six leaders from community-based and advocacy organizations in the fields of public health, environmental justice, criminal justice, older adults, and people with disabilities. The CAB advised LADOT leadership on developing stronger equity definitions and goals for the Dockless Mobility Program and to provide community-based perspectives for how to apply and communicate about MDS.

Based on recommendations from the CAB, LADOT is shifting its approach for the next iteration of the pilot program. Setting operational requirements and incentives associated with deployment in Disadvantaged Communities (DACs) during the first year did not yield the intended outcomes. Instead, LADOT is adopting a tiered approach to equity zones based on mobility needs, displacement risk, and other important racial equity factors. Mobility Equity Zones (MEZs) are areas that are transportation disadvantaged *and* meet the Hardship Index as established by Rockefeller Institute, whereas Mobility Disadvantaged Zones (MDZs) are also transportation disadvantaged but do not meet the Hardship Index. LADOT will establish a price cap for trips that begin or end in an equity zone.

Lessons Learned

While most had personal opinions on dockless mobility, CAB participants were more focused on other current issues or historical harms that were impacting their communities. Many noted that dockless

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[5] CalCOG, "Rural, Electric Car Share? A National First in Miocar," October 2020. Accessed via: https://sumc public.s3.amazonaws.com/CMO/CMOWebinarPartnershipsWithMobilityProviders.pdf.

While many appreciated LADOT's commitment to promoting equity during the first year of the program, it was unclear as to how or if that intention resulted in equitable outcomes. Some felt the emphasis on geographic distribution overshadowed other concerns including affordability and barriers to access amongst non-smartphone and unbanked users. With this feedback in mind, LADOT shifted from using state-defined DACs to city-specific zones that are tied to operational incentives for providers and pricing incentives for users.

Applicability to San José

The first goal outlined by the ETF is to "Collaborate, educate, and engage the community to inform options and services, and to ensure emerging mobility is inclusive, accessible, and affordable" By creating the CAB and then iterating on the dockless vehicle program based on the CAB's recommendations, LADOT has demonstrated an example of what elevating community expertise can look like in practice.

Impact Score

HIGH

Urban Health Partnerships Community Liaison Framework

Urban Health Partnerships (UHP) is a Miami-based non-profit organization that works with local communities to promote equity and well-being in ways that emphasize community capacity-building. To develop and promote community leadership, they have developed a Community Liaison Framework. They hire and train residents to serve as connectors to "help community members understand and access services, resources, and other opportunities provided by coalitions, initiatives, human service organizations, government, and other key agencies."[6] UHP has used this community liaison model to support ongoing local initiatives, such as the Healthy Little Havana Initiative, which started in 2014.

UHP recruits, hires, and trains community liaisons who manage a wide range of outreach and engagement activities. These paid liaisons receive training around health outcomes, leadership, and advocacy, and are asked to commit to a certain number of hours per month. Generally, liaisons are grouped in pairs or on teams to ensure project continuity and to provide multiple perspectives. The framework centers on three primary objectives:

- Build capacity of community members.
- Deepen relationships with stakeholders.
- Integrate community members into the initiative's decision-making processes.

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[6] Urban Health Partnerships. "Community Liaison Framework Quick Guide." June 2019. Accessed via: https://urbanhp.org/wp-content/uploads/2013/11/QUICK-GUIDE_Final_2019-1.pdf.

Lessons Learned

Based on their years of experience working with community liaisons, UHP has outlined important lessons and learned and recommendations in their "Community Liaison Quick Guide." Some of these recommendations include:

- Clearly define, review, and discuss commitments related to the initiative on an ongoing basis.
- Engage in power analyses with partners, decision makers, and other stakeholders to ensure that power is ultimately with the community.
- Because the community liaison role is not a full-time position, community liaisons are generally managing multiple demands on their time. Having a tentative training schedule and plan before hiring community liaisons can be helpful, as well as developing a sustainability plan to ensure a reliable number of hours
- Build funds into the budget to cover expenses for liaisons, such as technology and equipment needs, transportation, and childcare.

Measurable Results and Impacts

"I can share that we have had 28 Community Liaisons across 13 projects which of course will be expanding soon with the Knight Foundation AV Initiative when we hire 16-20 more! We have a lot of anecdotal and qualitative stories as well about what some of our Community Liaisons have accomplished, for example, the story of an immigrant from Mexico who after working with us on projects for 2 years, receiving our capacity building and professional coaching and also participating in English courses (courses paid by us through project budgets), he is now a Coordinator at a non-profit in his community. We actually helped that non-profit adapt their own Community Liaison program and he coordinates it!"

Applicability to San José

One of the goals supported by the ETF is to "elevate community expertise to inform program and policies" and a preliminary recommendation is for the City of San José to co-create deployment strategies and identify barriers in partnership with community. A paid community liaison model like the one developed by Urban Health Partnerships could help support the goal of elevating community expertise. Paid community liaisons can also help inform and familiarize community members with new emerging mobility services and programs, which is tied to another important goal outlined by the ETF to "expand awareness and education around emerging mobility services and programs in communities with the greatest mobility burdens."

Impact Score

HIGH

Baltimore Dockless Vehicles Pilot Program (Equity Plan & Equity Zone)

The City of Baltimore conducted a six-month pilot program for scooter and bike share from August 2018 through January 2019. Following a substantive evaluation of the pilot, the City created ordinance and permit rules and issued year-long permits to four operators, which took effect in August 2019. (The permits have been extended beyond the first year due to the ongoing state of emergency associated with

COVID-19.) During the initial pilot, the Baltimore City Department of Transportation (BCDOT) mandated deployment of devices in fifteen designated "equity zones," which they set based on Community Statistical Areas. (CSAs are clusters of neighborhoods as determined by the City's Planning Department.) In the pilot evaluation they acknowledged that the equity zones were a useful but imperfect start to ensuring more equitable access to e-scooters. Based on their experiences with the pilot, they opted to redo their equity zones and to require providers to offer a low-income fare, a non-smartphone option, and a cash payment option. They also mandated equitable outreach in the equity zones. BCDOT has published two evaluation reports, one which summarizes their findings from the initial pilot and the other which summarizes the first year of the permit program. In their pilot report BCDOT also recommended the creation of a Resident Mobility Board (RMB) based on the structure of the Planning Department's Resident Food Equity Advisors (RFEA).[7] Through this program, residents can advise BCDOT on what is working, what is not, and how to move forward. Based on the RFEA model and insights provided by the Planning Department, the RMB would have clear goals[8]:

- Provide feedback on the performance of dockless and other mobility programs.
- Advise on updates and changes to dockless permit rules and regulations.
- Discuss obstacles to access and community connections in each geographical area.
- Create partnerships between key community stakeholders and BCDOT by aligning events for promotion and education around mobility programs or initiatives.

Lessons Learned

During the pilot, BCDOT created 15 equity zones consisting of Community Statistical Areas selected based on household income levels, they and required that vendors deploy 25% of their vehicles in the designated equity zones. They found that vendors sometimes fell short of the 25% requirements and that they often deployed vehicles on the borders of the zones rather than throughout the entire zone. As a result, they took a different approach to establishing their equity zones for the permit. They started by identifying 40 zones that were not well served in the pilot then mapped those locations against equity-related demographic measures to eventually select 20 equity zones that they incorporated into the permit. Furthermore, they required vendors to deploy at least three vehicles in each of the 20 equity zones each morning rather than a fleet percentage, and to rebalance vehicles if more than 35% were concentrated in one district.

Between the pilot and the permit program, BCDOT also changed its data reporting requirements, which allowed them to more easily monitor compliance. Data were submitted in spreadsheet form on a weekly basis during the pilot, which proved to be too cumbersome, but they adopted the Mobility Data Specification (MDS) feed for the permit.

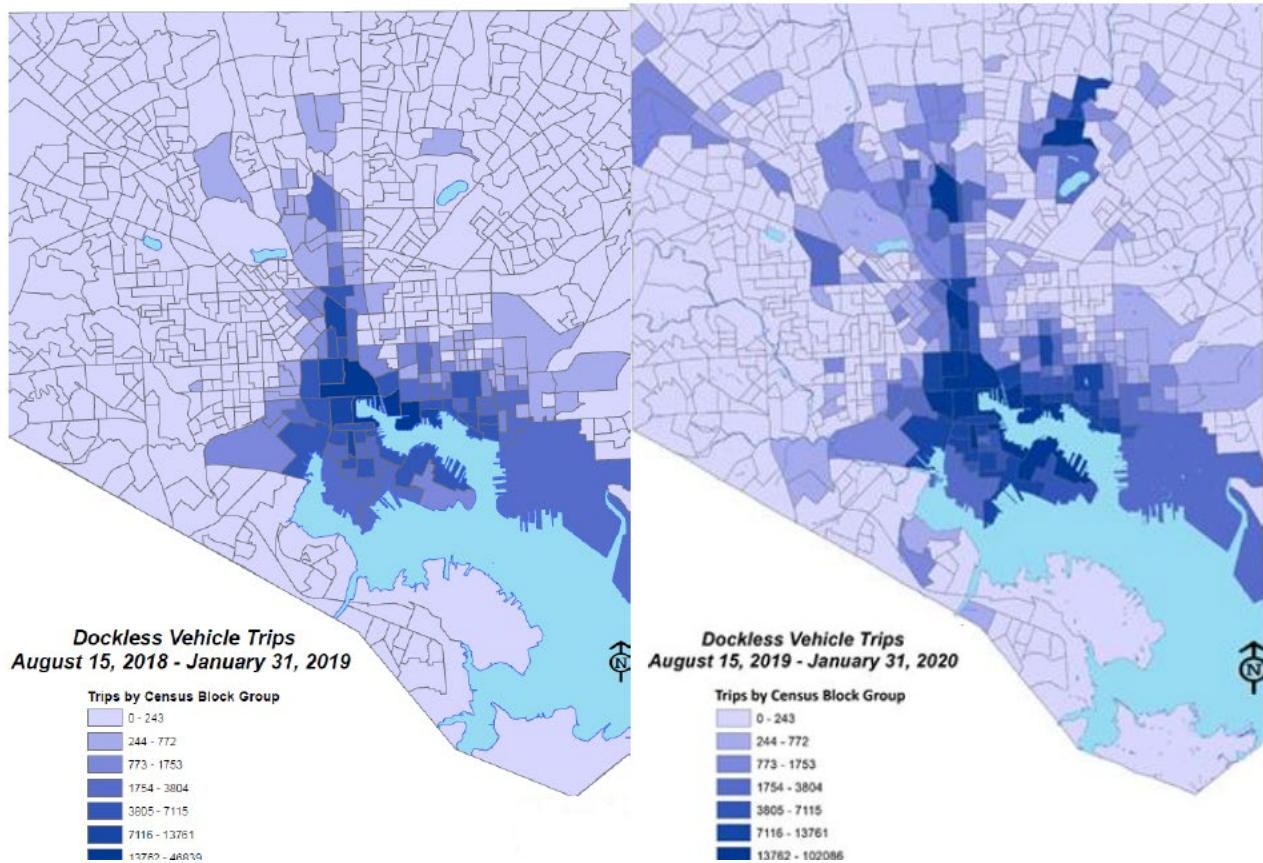## Measurable Results and Impacts

By amending their equity zones and changing vendor requirements between the pilot and the permit, BCDOT has found the results to be generally positive and that new pockets of ridership have developed. In their permit evaluation report, they note that ridership in the equity zones has two distinct periods of growth when compared with overall trips. There was a higher share of trips in the equity zones when the weather was colder and after shelter-in-place orders were announced due to COVID-19, suggesting that those who rely on the vehicles continued to use them. As part of their permit evaluation, BCDOT produced an "Equity Zone Analysis Deep Dive" in which they examine each zone separately and provide

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[7] The Resident Food Equity Advisors (REFA) are cohorts of Baltimore City residents that work to collectively drive equitable food policies through an inclusive, collaborative process. Each cohort has a focused issue in need of resident input and guidance. Accessed via https://planning.baltimorecity.gov/resident-food-equity-advisors

8 Baltimore Dockless Vehicle Pilot Program Evaluation Report https://transportation.baltimorecity.gov/sites/default/files/Pilot%20evaluation%20report%20FINAL.pdf

Figure 6   Distribution of E-Scooter Trips in Baltimore in 2019 Compared to 2020

Source: Baltimore City Dockless Vehicle Pilot Program Annual Evaluation Report: Pilot Year One, 2020

Applicability to San José

BCDOT's Dockless Vehicle Program is very applicable to San José given the goals and recommendations expressed by the ETF. The ETF has indicated support for requiring distribution of vehicles across geographies with requirements for minimum service levels, similar to what BCDOT has undertaken. BCDOT not only has a minimum deployment requirement, but they also have a rebalancing requirement to ensure that distribution is equitable across geographies throughout the day. BCDOT's process for establishing its equity zones (which is based on an evaluation of previous performance coupled with an overlay of demographic data) may be useful for San José to consider as it continues to refine its own processes and requirements for dockless vehicles. BCDOT has also released multiple public reports about the program, including an equity analysis deep dive. This is in line the ETF's recommendation to make evaluation reports publicly available.

Impact Score

MEDIUM

OakDOT 3-Year Paving Plan

The newly created OakDOT capitalized on the passage of a major infrastructure bond to allocate $100 million in funding to repave city streets over a three-year period beginning in 2019. What was unique in their process was the way they centered equity in determining how streets would be prioritized for paving. In past paving projects, 80% of paving funds were devoted to keeping major streets in good condition while only 20% of available funds were devoted to local streets[9]. Streets in various states of disrepair are not only unpleasant but also hazardous and can cause damage to vehicles that may be costly to fix. In the 3-Year Paving Plan, OakDOT elected to prioritize $75 million for local streets rather major streets in acknowledgement of the impact that street conditions have on local residents. They wanted to center equity in the allocation of funds, so in addition to considering the Pavement Condition Index (PCI) of local streets within each of the designated Planning Areas, they also evaluated each area based on demographic data.

This analysis revealed that the certain parts of the city, such as the North Oakland Hills, are predominantly white, higher income, and lower density with only 379 people per mile of street in of repaving[10]. In contrast, East Oakland, which is predominantly people of color, lower income, and higher density has 1,400 people per mile of street in need of repaving. East Oakland is an area that also been historically redlined. Using this data, OakDOT proposed a funding plan that would allocate funding based on an area's share of local streets in need of repaving and its share of underserved residents.

Figure 7   City of Oakland 3-Year Paving Plan
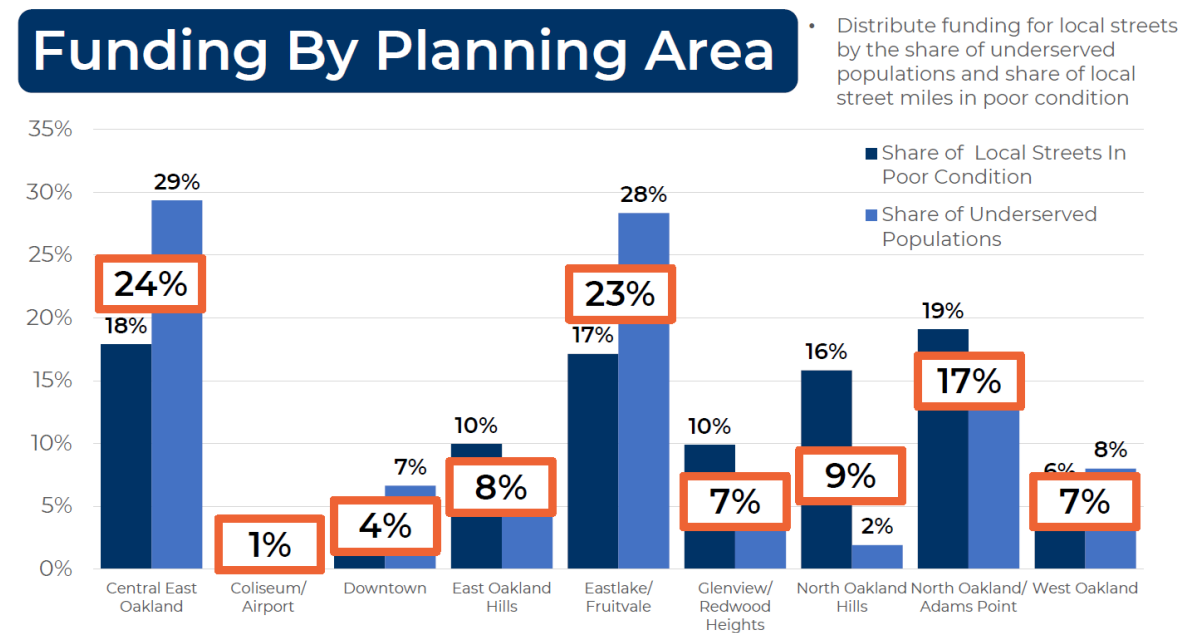
Source: Repave Oakland, OakDOT

Lessons Learned

OakDOT presented the paving plan proposal at community meetings throughout the city and asked residents to complete a short feedback survey at the end of each meeting. The same information presented at community meetings was also provided through a digital "open house" with electronic

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[9] OakDOT. 2019. Accessed at: https://www.oaklandca.gov/news/2019/oakdot-kicks-off-three-year-100-million-equity-focused-paving-plan

[10] Russo, Ryan. 2020. "Paving Equity Into the Streets of Oakland." Transfers Magazine. Accessed at: https://transfersmagazine.org/magazine-article/paving-equity-into-the-streets/.

versions of the presentation and maps on OakDOT's website. OakDOT posted links to this digital open house on NextDoor and summarized the plan through a series of tweets on OakDOT's Twitter account to reach a wider range of Oaklanders.

Through the surveys, they found that a majority of respondents felt that the equity approach was fair, although those respondents tended to be younger, more likely to be people of color, and more likely to have a household income less than $100,000. One particular zip code accounted for nearly 30% of survey respondents, and they represented half of all respondents who felt that the approach was not fair. This is an important lesson in making sure that surveys are representative and that engagement efforts themselves are equitable.

Measurable Results and Impacts

As of June 30, 2020, which is the end of Year 1 of the plan, OakDOT had paved 32 miles of streets, a new annual record[11]. Of those, 12 miles included local streets. (OakDOT had previously averaged 3 miles of local street paving per year.) They also completed 86 curb ramp improvements during the first year and added new pedestrian crossings and safety enhancements.

Applicability to San José

OakDOT's approach to repaving provides an illustrative example of how to do equity-driven planning improvements, resource distribution, and community engagement for citywide initiatives. This type of prioritization effort supports the ETF-approved goal of "Ensure emerging mobility fosters belonging, joy, ease, and safety for all communities, prioritizing those with the greatest mobility needs." One of the recommendations associated with this goal is to conduct racial equity analyses prior to major program, policy, and project decisions, which the OakDOT example does well. As San José considers what infrastructure improvements and investments need to be made to support new and emerging mobility, it will be important to consider how resources are allocated.

Impact Score

MEDIUM

Mass Transportation Authority Rides to Wellness (Flint, MI)

Mass Transportation Authority (MTA) in Flint, Michigan has developed Rides to Wellness, an on-demand, door-to-door program to improve health outcomes. They launched Rides to Wellness in September 2016, building on an FTA-funded grant they received in 2015. They received an additional $310,000 in funds through the FTA Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility Grants program. The goal of the program is to provide rides to medical appointments for eligible residents in Flint, as well as greater Genesee County, which are areas that have been impacted by Flint's municipal water crisis.[12] Studies have shown that inadequate transportation, limited personal assistance services, and limited financial assistance for people with low incomes compound health problems and can lead to

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[11] OakDOT. 2020. Accessed at: https://storymaps.arcgis.com/stories/f598b414ab374cb6b8104f932b3cc776

[12] Federal Transit Administration. FY 2016 Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility Grants. Accessed at: https://www.transit.dot.gov/funding/grants/fy-2016-rides-wellness-demonstration-and-innovative-coordinated-access-and-mobility.

[13] MTA has partnered with several service providers, including Genesee County Department of Veteran's Services, American Cancer Society, and the Michigan Department of Health and Human Services. The Rides to Wellness program is available to passengers who are connected with one of these partner agencies, who certify and pay for their clients. MTA works with these partner agencies to arrange for drivers to pick clients up at their homes and take them to local clinics. Clients can also arrange for an additional stop at a pharmacy or grocery store.

Lessons Learned

The Rides to Wellness program helped to illuminate health and wellness transportation needs that exist outside of what Medicaid covers. In addition to non-emergency medical transportation, passengers also needed affordable and flexible transportation options to access grocery stores, social services, non-profits to obtain services, laundromats, senior centers, and the bank. Access to food in particular is a major issue for Flint residents living in food deserts, older adults, and persons with disabilities.

The program also found that while ride-hailing services like Uber and Lyft offer scheduling and payment flexibility, the lack of capacity and oversight to transport wheelchair passengers, older adults who may require assistance, and others with specialized transportation needs reinforced barriers for seniors and people with disabilities. Integrating the flexibility of ride-hailing into existing public transportation services, rather than leaning on the ride-hail business model, allows agencies to deliver a low-cost, innovative solution to addressing community mobility needs.

Measurable Results and Impacts

The program has grown considerably since its launch in 2016. They started with just five vehicles originally, but by November 2019 they had grown to over 100 vehicles. Passengers can schedule via phone, internet, or using the app, and MTA aims to fulfill ride requests within a 30-minute window. MTA announced that they provided 13,300 rides in the month of October 2019, a 64% increase from October 2018.[14]

Applicability to San José

San José has indicated interest in exploring if on-demand shuttles to and from healthcare sites and/or social services could be used to fulfill identified mobility gaps. This example is connected to the ETF-supported goal of improving personal security and safety and promoting health, focusing especially on communities historically harmed by infrastructure, such as BIPOC communities. In the case of the Rides to Wellness program, people who have been impacted by the municipal water crisis are prioritized. This program is supported in part by local service providers, which is a partnership model that San José could explore.

Impact Score

MEDIUM

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[13] National Council on Disability. The Current State of Health Care for People with Disabilities. September 2009.

[14] "Flint MTA Rides to Wellness sees 64 percent ridership increase." Mass Transportation Authority. Nov. 13, 2019. Accessed at: https://www.masstransitmag.com/alt-mobility/shared-mobility/press-release/21114338/mass-transportation-authority-mta-flint-mta-rides-to-wellness-sees64-percent-ridership-increase-in-one-year

Figure 8   MTA Rides to Wellness Program Flyer

No car? No problem!

Don't let your lack of wheels keep you from getting to your doctor appointment, the pharmacy, grocery store, Flint Farmers' Market, or Help Center.

Michigan Department of Health and Human Services has partnered with MTA Flint to offer FREE rides to health and wellness destinations.

Eligible riders:

- *Must have an active and open MDHHS case number.*
- *Must contact Medicaid/HMO before calling Rides to Wellness to book a ride.*
- *Do not need child car seats — MTA will provide them for the infant/ child.*
- *Must live in one of the zip codes listed: 48501, 48502, 48503, 48504, 48505, 48506, 48507, 48532.*

For a FREE ride, call
810-780-8946
Rides to Wellness: Same Day Service
Hours: Monday — Friday, 8:00 a.m. to 5:00 p.m.

Call today! Ride today!

MDHHS Michigan Department of Health & Human Services   **MTA** MASS TRANSPORTATION AUTHORITY   **Rides to Wellness**

Source: MTA

Sacramento Our Community Carshare Program

Our Community Carshare (OCCS) was one of the first electric vehicle carsharing programs in the nation. The program enables users to reserve zero-emission vehicles for up to three hours a day or a total of nine hours per week[15] and is a free, membership-based service. To be eligible, participants must be residents at any of the nine-partner low-income, subsidized housing developments, have a valid driver's license, be at least 21 years old, and have an active email and mobile phone number. A program survey distributed following the initial rollout indicated 61 percent of eligible residents were unemployed, 24 percent have a disability (largely in senior housing communities), and 45 percent of residents do not own a vehicle, indicating the need for alternative transportation options.

As part of the program, residents are also eligible for a free, preloaded Transit Incentive Card. The Transit Incentive Card is a monthly service that connects residents with first- and last-mile transportation options. The card can be used to pay for transit passes and rides with Lyft, Uber, Taxi, Amtrak, Greyhound, and paratransit.

Since launching the program, OCCS recognized that they needed to find a way to provide access to people who are unable to drive or obtain a driver's license. In order to meet this need, they developed a

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[15] Hours can be broken up (e.g., 1 hour in the morning, 1 hour in the evening) but this requires separate reservations.

Community Carshare Representative program that connects volunteer drivers with other community members in need of rides.

Lessons Learned

Despite enabling investments from CCI grant, the project encountered challenges early on with the cost-sharing and in-kind service components of the grant. Some partners had difficulty providing cost-share and in-kind matches, particularly the housing agencies serving low-income residents due to resource constraints. To alleviate the pressure of upfront costs, the cost-share approach changed in Phase II of the pilot by requiring partners to provide matches at the end of the grant term rather than at the beginning.

The project also encountered challenges with the legislative and administrative requirements of the program when delivering matching funds. Many partners leveraged funds from different sources to meet match requirements, and each source had varying timelines, allowable expenditures, reporting requirements, and other administrative requirements to track and manage during project implementation.

Additional challenges include some residents not having access to computers or smartphones, mostly in low-income senior housing sites. To address this barrier, the project team designed kiosks and installed them on site. The program is looking to further upgrade kiosks to be all-weather and to include signage in multiple languages to meet community needs.

Securing proper permits, parking spaces for vehicles, and design for the project was challenging given the multiple agencies involved in the process. These issues caused delays for program launch, which was further exacerbated by weather and EVSE permit technicalities. Collaborating with the various permitting agencies to develop a more streamlined permitting policy and process specific to EV carshare pilots can help smooth the construction and implementation phase of the project.

Figure 9   Sacramento Our Community Carshare

Source: sacbreathe.org

Measurable Results and Impacts

As of December 2018, 113 residents were enrolled in the program and had taken 13,586 trips, equating to 208,802 vehicle miles traveled.16 Residents drove an average 20 miles per trip and spent two and a half hours per trip. Between July to September 2019 during the Phase II launch, an additional 149 members enrolled and logged 6,255 hours of use.

Applicability to San José

There are several ways that this example is applicable to San José and support goals and recommendations made by the ETF. The provision of free, preloaded Transit Incentive Cards addresses the ETF's call for affordable transportation options that do not require registration with a driver's license, a requirement for many emerging mobility services that continues to be a barrier for undocumented residents. Additionally, one of the ETF goals is to "Improve communities' wellbeing and personal safety, and promote health for all, focusing on communities historically harmed by public improvements, enforcement, and disinvestment." One way of supporting this goal is to ensure that emerging mobility services are environmentally sustainable. Sacramento's Community Carshare uses EVs, and membership is available to residents of affordable housing developments.

The City of San José has already made efforts to leverage its relationships with affordable housing developers to support similar EV expansion efforts. In addition to EVs, city could consider locating

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bikeshare and other emerging mobility options at affordable housing developments to give residents who do not have a driver's license a variety of sustainable mobility options

Impact Score

MEDIUM

Sonoma County Clean Energy Electric Vehicle Incentives

To promote the adoption of electric vehicles, Sonoma Clean Power (SCP), the public electricity provider for Sonoma County, launched the three-year DriveEvergreen Program (DEG) in 2016 to incentivize the adoption of electric vehicles (EVs). During the first year of the program, which was administered by the Center for Sustainable Energy, interested applicants could obtain a certificate that could be used at one of two participating dealerships selling EVs. Lower-income applicants participating in California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) were eligible for $5,000 incentives, while others were eligible for $2,500. In the second year of the program, the incentive amounts were reduced but the number of participating dealers increased and used EVs became eligible at a lower incentive level. In the third and final year, the incentives for CARE/FERA participants were increased by $500 compared to the year before.

Sonoma Clean Power increased its marketing and outreach efforts each year to better promote awareness of the project. In the first year, they relied solely on email campaigns and social media, but in the second year they sent direct mailers to SCP customers, took out newspaper ads, and attended community events. In the final year of the program, they also sent targeted letters to CARE/FERA customers, residents in the Northern Sonoma County Air Pollution Control District, and Burbank Housing residents.

Lessons Learned

The CARE/FERA program participation rate decreased by 9% between Drive EverGreen 1.0 and 2.0 when the incentives decreased with cost concerns being a significant barrier to EV adoption. The additional $500 that was offered in DEG 3.0 did not make a significant difference in program participation compared to DEG 2.0.

This program helped to promote the adoption of EVs, but with the way the program was structured it was hard to manage the "free-rider" effect wherein people who claimed certificates reported that they were likely to have purchased an EV even without the incentive. The final evaluation report notes that there was an increase in "free ridership" between DEG 2.0 (17%) and DEG 3.0 (22%) with evidence to suggest that a proportion of program participants were previous EV adopters.[17] They also found that 15% of survey respondents in DEG 3.0 had participated in previous years of Drive EV and 42% of those respondents reported having purchased or leased an EV in previous years.

These findings indicate that while the program was successful at promoting EVs among select groups of people, many of those participants were already EV adopters. People who benefited from the program were largely concentrated in certain parts of Sonoma County and were more likely to identify as white and have a higher household income than the overall population. While this program made an effort to

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[17] Orose, Jamie; Pallonetti, Nicholas; and Russell, Nicholas (2019), "Drive EV Incentive Program: Final Evaluation Report," Center for Sustainable Energy, San Diego CA, April 2019. Retrieved from: https://sonomacleanpower.org/uploads/documents/DriveEV_EvalReport_SCPreview_FINAL.pdf

address income disparities by providing larger incentives for people participating in CARE/FERA, there were no specific equity-related goals which likely would have proved useful.

Measurable Results and Impacts

In the first year of the program, SCP issued certificates to 522 participants, 206 which were redeemed to purchase or lease an EV. Lower-income applicants were issued 108 certificates, of which 35 were redeemed. In their first-year evaluation report, SCP noted that participants felt the program needed to be better promoted to build awareness. (Staff used social media and email campaigns to share information about the program.)[18] By the third year, SCP received 1,586 applications and issued 1,374 certificates, of which 485 (35%) were redeemed. CARE/FERA applicants were issued 208 of the certificates, of which 22% were redeemed.

Applicability to San José

SCP's Drive EverGreen Program and others like it that incentivize EVs provide a helpful illustration of ways that financial incentives can be used to influence adoption of new modes, but its applicability to San José is more limited than others included in this document since the program was funded by the local public utility and could have been implemented more equitably. This example actually reinforces why some of the goals and recommendations outlined by the ETF are needed, such as conducting racial equity analyses in partnerships with CBOs prior to major program, policy, and project decisions. If Drive EverGreen had started by establishing equity-related goals at the outset, the benefits of the program may have been distributed more equitably. The Drive EverGreen program also struggled with marketing and outreach efforts and would likely have benefitted by partnering with CBOs to engage and inform the community about new services and programs, as the ETF recommends.

Impact Score

LOW

LADOT Dockless Compliance Program

The Los Angeles Department of Transportation (LADOT) has been at the forefront of the conversation around dockless vehicles. Following a temporary moratorium on dockless vehicles, LADOT established a One-Year Pilot Program with clearly defined requirements of all providers issued permits. Among these requirements included sharing data using LADOT's Mobility Data Specification (MDS) feed. This pioneering digital tool established a common standard that has been adopted by cities around the U.S. LADOT also developed and tested two mobile data collection tools to streamline the compliance auditing process. The Audit Mobile App allowed LADOT to verify whether operators had registered and reported their deployed vehicles in the Mobility Data Specification feed. They also developed an ArcGIS Collector Tool to assist with compliance audits. LADOT created designated Drop Zones as the allowed parking areas for dockless vehicles in particular parts of the city, including Venice.

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[18] Center for Sustainable Energy. 2017. "Drive EverGreen Electric Vehicle Incentive Pilot Program: Evaluation Report." Retrieved from: https://sonomacleanpower.org/uploads/documents/Drive-EverGreen-EV-Incentive-Pilot-Evaluation-Report.pdf

Lessons Learned

Mobility program staffing should be commensurate to the size of a city, fleet size, and size of the compliance and enforcement operation. While a robust team can efficiently manage all program aspects, teams should leverage the potential of MDS and associated analytics and compliance tools to automate processes. This may require providing technical training for staff and hiring additional staff to support compliance efforts.

Measurable Results and Impacts

Collecting, vetting, and documenting compliance issues allowed LADOT to engage in meaningful dialogue with mobility providers, elected officials, and staff when issues came up.

Applicability to San José

The ETF has expressed support for the establishment of a fine, penalty, incentive, and/or enforcement framework and thresholds that can be used to hold providers accountable to serving disenfranchised communities. San José is in the process of adopting an enforcement framework. Being able to easily monitor compliance is key. San José is already using MDS, but the mobile data collection tools developed by LADOT that assist with compliance audits may be useful to consider. Making sure that compliance measurements are clear for operators is also imperative.

Impact Score

LOW

Apply Lessons: Evaluation and Iteration

Chicago E-Scooter Share Pilot Project

The City of Chicago conducted a 4-month e-scooter share pilot that ran from mid-August to mid-December 2020 as a follow-up to a previous pilot conducted in 2019. The City issued permits to three providers in 2020, down from the ten they permitted to operate in 2019. Before launching the second pilot in 2020 the City made multiple adjustments to the program, incorporating feedback from stakeholders such as the National Federation for the Blind and drawing on their experiences working with the e-scooter providers in 2019. Some of those changes included:

- Each vendor must deploy at least 50% of devices within an Equity Priority Area, and stronger daily assessment tools were developed to improve compliance over a similar rule in the 2019 pilot.
- E-scooters must be equipped with locks that riders use to lock the device to a fixed object in the public right-of-way in order to reduce sidewalk clutter and avoid obstructions.
- Identifying company contact information must be included in Braille on each device.

Figure 10   City of Chicago 2020 E-Scooter Pilot Area and Equity Priority Area
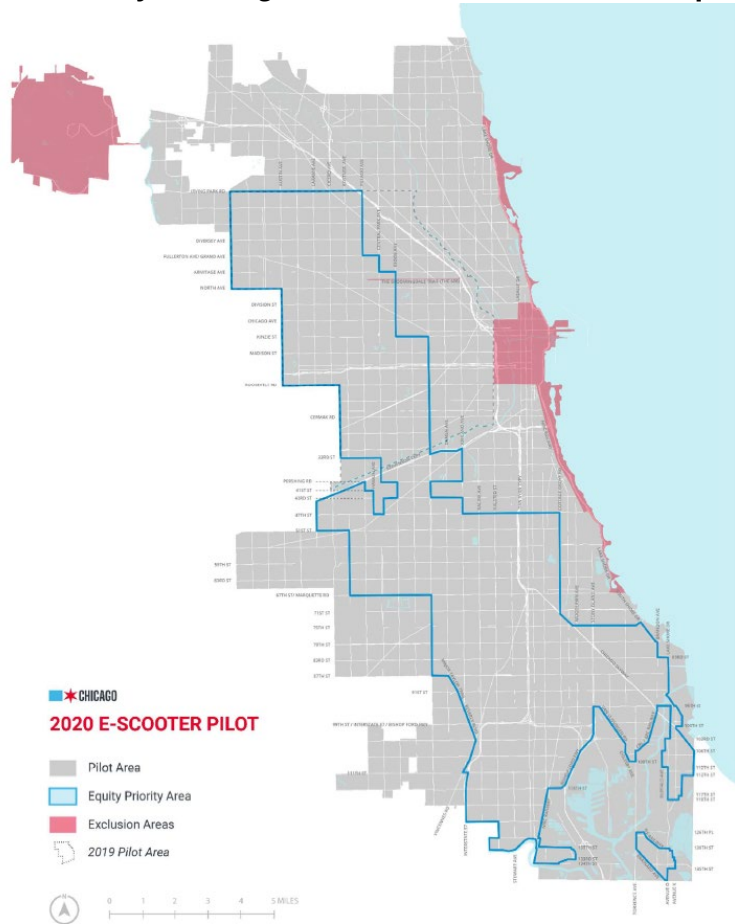
Source: City of Chicago 2020 E-Scooter Pilot FAQ

Lessons Learned

By conducting a two-phase pilot, the City was able to apply important lessons learned during the first phase to the second. One of the major issues they identified in 2019 was that companies and riders could not be reliably counted on to ensure that devices were parked safely, and sidewalk obstructions were a serious cause for concern[19]. Additionally, their efforts to provide equitable access through various program requirements, including geographic distribution and rebalancing, low-income fares, and cash payment options, did not necessarily translate to equity in practice. The demand for e-scooters was highest in denser areas with multiple transportation options, and e-scooter riders tended to be whiter and wealthier according to the survey data collected in 2019. Seventy-seven percent of all trips analyzed started or ended in non-priority areas. The City conducted a thorough analysis of its program and published a robust pilot evaluation report outlining key recommendations for the second phase.

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[19] City of Chicago. Feb. 2020. "E-Scooter Pilot Evaluation Report." Accessed at: https://www.chicago.gov/content/dam/city/depts/cdot/Misc/EScooters/E-Scooter_Pilot_Evaluation_2.17.20.pdf

Measurable Results and Impacts

The City issued a mid-pilot report[20] in October 2020 that highlighted key metrics pertaining to their objectives for the second phase of the pilot. They noted that during the first two months of the pilot they had received 64% fewer 311 reports per day per device compared to 2019. They attribute this largely to the requirement that riders lock devices to a fixed object and found the issue of sidewalk clutter had been noticeably improved. They also found that a larger share of trips originated in the Equity Priority Areas during the first two months of the second phase. This is potentially the result of increased City emphasis and enforcement of deployment rules that led to an increase in the share of devices. Permitted providers, also offered a 50% discount [21]on any trip starting in one of the priority areas, which may also have been a contributing factor to the higher share of trips beginning in the priority areas. (It is important to note that per-minute fares on a standard ride did increase between 2019 and 2020.) All three providers were required by the City to provide a low-income fare, but a discount by area was not a requirement.

Applicability to San José

Chicago, along with Los Angeles and Baltimore, have adopted a pilot/evaluate/iterate process as their approach to e-scooters, which is transferrable to other modes. Having clearly defined checkpoints throughout the process, including the publication of regular evaluation reports, is a way of holding both public and private agencies accountable and ensuring that the goals of a pilot or program are regularly measured against outcomes. This is also a way for the city to communicate to the public about what they're hearing through engagement processes and how they plan to address that feedback. These are all important considerations for San José and support several of the goals and recommendations outlined by the ETF.

Impact Score

HIGH

Portland New Mobility Snapshot

In July 2018, the Portland Bureau of Transportation (PBOT) launched a four-month e-scooter pilot[22]. The pilot was intended to assess whether e-scooters can help meet four city goals: reduce traffic congestion by shifting trips away from private motor vehicle use, prevent fatalities and serious injuries on Portland streets, expand access to opportunities for underserved Portlanders, and reduce air pollution, including carbon emissions. Following the end of pilot period, PBOT initiated an evaluation process to understand program performance. The evaluation process heavily relied on aggregated trip data to understand utilization, parking compliance, and travel behavior and used this data to inform and consult the broader public on how the agency might improvement its management of the program. PBOT engaged with a range of stakeholders via email, phone, and an online feedback form; a user survey which received over

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[20] City of Chicago. 2020. "Mid-Pilot Report." Accessed at: https://www.chicago.gov/content/dam/city/depts/cdot/Misc/EScooters/2020/2020%20Chicago%20E-scooter%20Pilot%20Mid-Pilot%20Report%20(10-12-20).pdf

21 It should be noted that per-minute fares on a standard ride increased 160% between 2019 and 2020. This suggests less of increased ridership in the Priority Area but an increased share, perhaps because standard rides were driven down by price increases.

22 2019 Portland Bureau of Transportation e-Scooter Pilot Program Report https://www.portland.gov/sites/default/files/2020-09/pbot_escooter_report_final.pdf

2,000 respondents; and three focus groups targeting underserved Portlanders. PBOT also coordinated with City Council offices to capture and respond to constituent concerns.

After documenting findings and examining additional barriers, PBOT launched a second pilot in April 2019 to gather additional data about e-scooter operations, to test management strategies informed by issues from the first pilot, and to gain a better understanding of e-scooter use and operations during winter. The program was extended once more in December 2019 for an additional year, ending in December 2020.

Lessons Learned

From the preliminary evaluation process, PBOT found that while e-scooters may help reduce VMT, can provide a safe way to get around, and can offer more equitable transportation service, issues like sidewalk riding, improper parking, and barriers to access amongst underserved populations remain. Several equitable plans and solutions, which were heavily informed by stakeholder engagement, were proposed for future permitting programs around micromobility:

- Access across the city: Enough e-scooters should be deployed in East Portland and across the city to make them viable and reliable travel options for all Portlanders.
- Pricing: Pricing should be transparent and affordable and subscription models or loyalty programs should encourage affordability.
- Low-income plans: Companies should work with community-based organizations to increase use of low-income pricing plans, cash payment options, and non-smartphone options.
- Increasing use by underserved communities: E-scooters should help community members meet their travel needs.
- Equitable hiring: Historically underserved communities should be able to participate in the new mobility economy.
- Employment: E-scooter companies should provide supportive wages and working conditions for employees.

Measurable Results and Impacts

PBOT used lessons learned from the evaluation process to inform several city-led initiatives. For example, from their audit of low-income, cash, and non-smartphone options, PBOT found that information about these options are generally difficult to find and ease of sign-up varies by company. As a result, PBOT consolidated this information on their website. PBOT also partnered with seven affordable housing providers in summer 2019 to launch a pilot program tailoring its existing Transportation Wallet incentive program to their residents. This pilot offered free and reduced-price transportation options including TriMet passes, BIKETOWN memberships, and credits for e-scooters, car-share, and accessible private for-hire rides, like Uber, Lyft, and taxis. The program reached over 500 low-income residents in ten languages and was the primary source of low-income plan sign-ups for e-scooters. The average percentage of users on low-income plans across all companies was 0.9%, with a range of 0.4 to 1.6%. One company told PBOT that Portland has the highest low-income signup rate in the country—an obvious sign of room for growth locally and nationally.

User survey results from the evaluation process also showed that Portlanders understand how to properly park e-scooters more often than visitors. Eighty-five percent of all question respondents correctly identified a photo showing proper e-scooter parking in the "furnishings" zone of the sidewalk. In response to concerns around parking and sidewalk clutter, PBOT installed 24 designated e-scooter parking corrals and developed a permitting process that allows companies to test e-scooter parking and charging stations in the right-of-way. PBOT also began requiring companies to geofence "no parking" zones defined by the city.

Applicability to San José

PBOT's evaluation process resonates with the ETF goal of "Collaborate, educate, and engage the community to inform options and services, and to ensure emerging mobility is inclusive, accessible, and affordable." San José should consider integrating a community engagement process during program evaluation for emerging mobility pilots. Doing so would allow the City to recalibrate existing policies, practices, and programs based on community priorities before initiating another pilot phase or committing staff, resources, and investments to long-term, more permanent initiatives.

Impact Score

HIGH

APPENDIX: GLOSSARY OF TERMS

WHAT IS EMERGING MOBILITY?

Emerging mobility describes new transportation services, products, and technologies that can connect people to places, goods, and information. Below are common terms used to describe emerging mobility as well as common examples.

Common Terms

Term	Description
On Demand	Allows people to access a service on an as-needed basis and whenever they need it,
Demand Response	Refers to shared transportation services where vehicles change their routes for each trip based on when and where most people want to travel to.
Mobility-as-a-Service (MaaS)	Combines various forms of transportation options (bus, taxis, ridehailing) into a single service that can be accessed on demand through a single digital app. The app allows people to plan, book, and pay for trips.
Docked/Station-Based	People must rent and return their vehicles at a designated station, where vehicles are locked.
Dockless	People do not need to return their vehicle at a designated station. They can pick up and drop off their vehicle anywhere in a given area.
Shared Mobility	The shared use of transportation options that can be accessed on an as-needed basis. Can include carsharing, bikesharing, transportation network companies, and others.
Micromobility	Refers to low-speed, light vehicles that may be shared or personally owned. Can include electric bikes, bikesharing, scooter sharing, or electric skateboards, and others.

Types of Emerging Mobility

Automated and Autonomous Vehicles

Automated and autonomous vehicles (AVs), also known as self-driving vehicles or driverless cars, are capable of sensing and moving through an environment with little or no human input. AVs are equipped with sensors that collect and process information to identify travel routes, obstacles, and roadway signs. There are varying levels of automation, from low levels that are already in many vehicles (such as assisted parking) to fully automated vehicles, known as autonomous. AVs can be used for a variety of emerging mobility services, including TNCs, on-demand delivery services, and long-distance freight.

This image describes the range of automation. When the industry talks about automated vehicles, they are oftentimes referring to Level 5, or full automation.

Connected Vehicles

Connected vehicles use the "internet of things" to digitally communicate between vehicles and infrastructure. Vehicles can "talk" to each other, to roads, buildings, and other infrastructure such as traffic lights. Data is used to provide and direct mobility in real time, such as prolonging the green light for an ambulance or a bus to ensure timely movement.

Bikeshare

Bikeshare provides customers with on-demand access to a fleet of bicycles at various pick-up and drop-off locations. Bikeshare can be offered citywide, within a neighborhood, at employment centers, and on university campuses. Systems may be station-based or dockless. With station-based bikesharing, people access bicycles at stations and return them at any station within the network. In a dockless system, people can access a bicycle and park at any location within a given area. Customers pay a fee either as a membership fee or each time they rent and use a bicycle and trips can be roundtrip (station-based) or one-way (dockless).
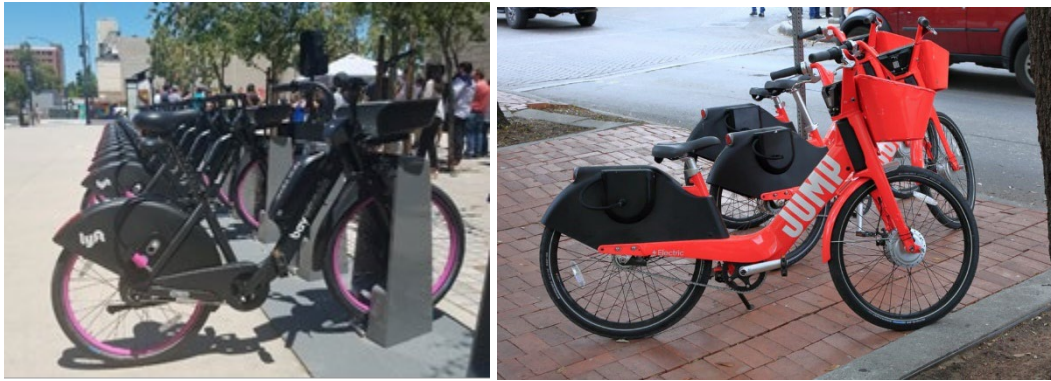
Station-based bikeshare (left) and dockless bikeshare (right).

Carshare

Carshare offers on-demand access to a fleet of vehicles that are maintained by a carshare organization. Vehicles are often located within neighborhoods, near transit stations, employment and shopping centers, or universities. The carshare organization can provide insurance, gasoline, parking, and vehicle maintenance. Customers who use this service may pay a fee each time they use the service or may pay a membership for regular access to the service.
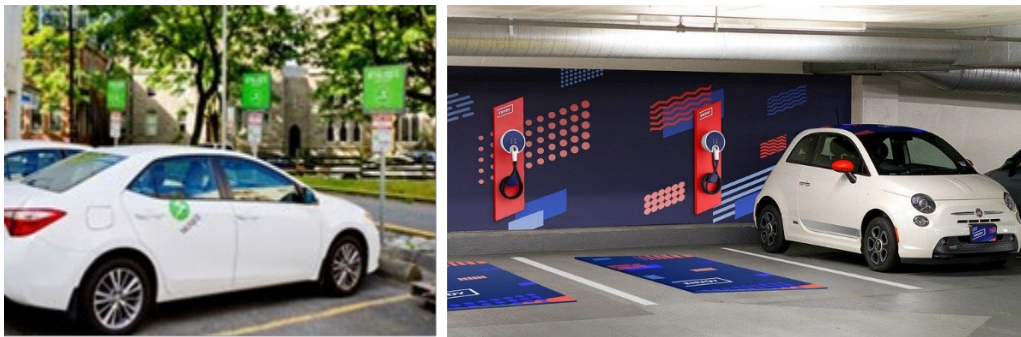
Courier Network Services

Courier Network Services are on-demand delivery services where drivers deliver goods to customers who place their order via an online app or platform. Drivers typically use their own personal vehicles, bicycles, or scooters to make deliveries within a short time period. Goods that may be delivered include prepared meals, groceries, and essential household items. Customers pay for the goods and the delivery service.

From left to right: Autonomous sidewalk delivery robots, DoorDash bike courier, UberEats delivery

Electric Vehicles

Electric vehicles (EVs) use one or more electric motors for propulsion. Vehicles can be charged via self-contained special batteries or through off-vehicle sources such as at-home or public EV charging stations. Electric vehicles can be used as part of TNC and carshare services.

Microtransit

Microtransit is on-demand transportation that provides curb-to-curb service. Microtransit is similar to transit except passengers have the ability to determine their pick-up and drop-off location or select from a list of locations for their trip. Trip routes and schedules are flexible and often on demand (not schedule based, but arriving when 'called'. Vehicles are often shared with other passengers traveling to and from similar pick-up and drop-off locations.


Scooter Share

Scooter Share allows individuals to access a fleet of scooters at various locations. Companies managing the service charge and maintain scooters and provide the digital app for renting vehicles and paying for rides. Customers pay a fee each time they use a scooter and trips can be roundtrip or one-way. Scooters come in two forms:

- Standing electric scooters including a handlebar, a standing deck, and wheels that are propelled by an electric motor.
- Moped-style scooters include the use of shared scooters with a seated design. Moped scooters can be gas-powered or electric.

Transportation Network Companies (TNCs)

Transportation network companies (TNCs), also known as ridesourcing and ridehailing, are on-demand transportation services where drivers and passengers connect via a digital app. Drivers typically use their own vehicles to pick up and drop off passengers, who pay the driver for the trip. The digital app connecting drivers and passengers is used for booking, electronic payment, and navigation.
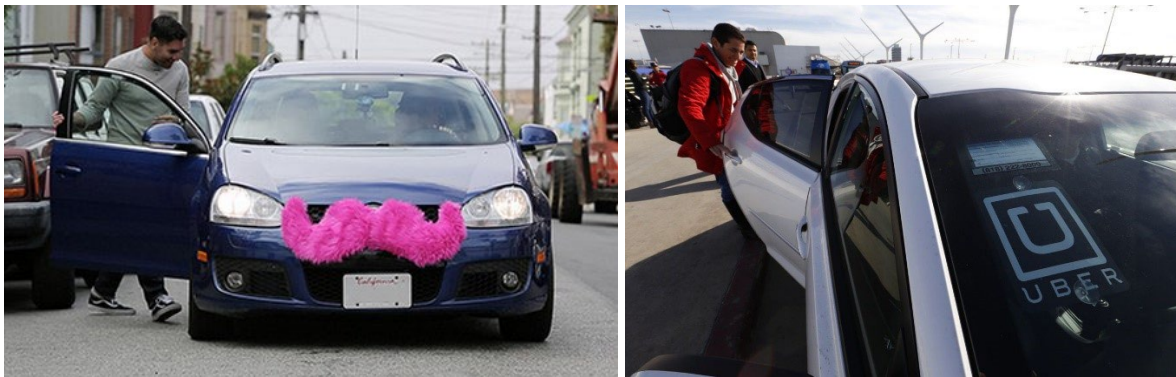
Left to right: Lyft and Uber

Urban Aerial Mobility

Urban Aerial Mobility includes on-demand personal air vehicles that customers can book for trips. Common examples include air taxi services or the use of drones to deliver packages.