



### 7.1 PROGRAMS OVERVIEW

To advance the Mobility Master Plan's goals and objectives, the City will explore a variety of mobility programs aimed at implementing new mobility options and enhancing existing transportation systems. These programs are designed to enhance overall mobility for all, with particular emphasis on community members living in historically disinvested and underserved areas. Some of these programs, such as transit fare subsidies, are already operational in San Diego and can be expanded to better meet the spectrum of mobility needs community members have identified. Other programs would be new to San Diego but are similar to others that have been successfully implemented in cities across the nation.

### 7.2 PROGRAM FACT SHEETS

following program snapshot pages include a broad overview of each program, key implementation details, best practices from other cities, and relevance to the City of San Diego's plans and priorities.

### How to read the program fact sheets

### **Program Name**

### **Geographical Scale of Program**

Programs may be implemented at the regional, citywide, or community level.

### **Program Category**

Programs are categorized into one of the following typologies: Shared Mobility, 3 Financial Incentives, Digital Infrastructure, System Management, or Community Enhancement.

### Affected Mobility Modes



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The icons indicate the mobility modes that are affected by the program: walking or rolling, biking, bus, rail, car, or a combination of these modes.

### **Program Description**



This section provides a brief description of the program and highlights similar efforts in San Diego, where applicable.

### Program in Action

This section describes similar successful programs in other cities.

### **Program Highlights**

This table summarizes implementation details of the program, including an estimated timeframe to initiate it, potential costs<sup>1</sup> and funding sources, and entities responsible for program implementation.

The table also describes how the program aligns with the goals and policies of this Plan and the CAP, and the mobility needs of the community that were identified during outreach and engagement efforts.

### How to read the program fact sheets **E-Bike Rebate**

An e-bike rebate program can encourage and incentivize individuals to purchase electric bikes by providing them a rebate if they do so. This type of program would offer a partial reimbursement or discount on the electric bike purchase, decreasing the cost burden on the individual. This expanded access to affordable and environmentally friendly mobility options would benefit the City of San Diego in several ways. The use of electric bikes in cities can reduce congestion, decrease reliance on fossil fuels, and contribute to positive public health outcomes. \_\_\_\_\_ **PROGRAM HIGHLIGHTS** 7 **Estimated Initiation Timeframe** 1-3 years **Implementation Cost \$**\$\$\$ **Potential Funding Sources** General Fund » Federal, state, and regional grants Leading Department Sustainability and Mobility **Collaborating Entities** Other City departments, partner agencies, public-private partnerships **Relevance to Mobility Master Plan Goals** Goals 1, 2, 4, 5, 8, 10 **Relevance to Climate Action Plan Policies** Policies 3.1e, 2.2 SA-2, 2.4a, 2.3 SA-4, 3.1 b, 3.1f, 3.1 SA-24 Incorporating Community Engagement The community identified San Diego's topography and size as major mobility challenges. An e-bike rebate program could increase mobility options in the City and help community members navigate the challenging topography. A rebate program could also make these bikes more accessible and affordable to a wider population and incentivize participation in this form of active transportation.













Denver's e-bike rebate

### **PROGRAM IN ACTION**

Denver, CO has been successful in implementing an e-bike rebate program. The Climate Action, Sustainability and Resiliency city department launched this program in 2022 and has seen 5,502 e-bike vouchers redeemed as of May 2023. With a standard rebate voucher, any Denver resident can save \$300 on the purchase of an e-bike. The program also offers vouchers for income-qualified individuals and persons with disabilities, with discounts up to \$1,400. Vouchers are released every two months on a first-come, first-served basis. More information can be found at: https://www.denvergov.org/Government/ Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Climate-Action-Sustainability-Resiliency/Sustainable-Transportation/Electric-Bikes-E-Bikes-Rebates#section-1

<sup>1</sup> Implementation cost symbols reflect the following scale: \$ (\$1.5 million or less); \$\$ (between \$1.5 million and \$5 million); \$\$\$ (between \$5 and \$10 million); \$\$\$\$ (\$10 million or more)

### **Slow Streets**

Slow Streets foster safer, more accessible, and pedestrian-friendly environments and encourage non-motorized transportation on neighborhood local streets. Along retail corridors, the additional seating areas for visitors and patrons of surrounding businesses that can be created when slow streets are implemented foster a bustling pedestrian atmosphere. Under the City's Slow Streets Program, bollards were installed in May 2023 at intersections along Fifth Avenue in the Gaslamp Quarter, restricting through vehicular traffic during business hours and transforming the street into small pedestrian-centered plazas. A feasibility study will be completed by the end of 2023 to evaluate other proposed improvements along Fifth Avenue. Exploring possible conversions of streets in other neighborhoods can promote greater mobility and safety across San Diego.



Cyclist/surfer using the Slow Street in Pacific Beach Source: City of San Diego, 2023

CITYWIDE SYSTEM MANAGEMENT



### **PROGRAM HIGHLIGHTS**





Potential Funding Sources » Federal grants

» Community Parking District funds





Transportation **Collaborating Entities** 

Other City departments

**Relevance to Mobility Master Plan Goals** Goals 3, 4, 7

**Relevance to Climate Action Plan Policies** Policies 3.1SA-13, 3.1SA-22, 3.5SA-2

### Incorporating Community Engagement

The community identified lack of safety for pedestrians and cyclists as a key challenge to their mobility needs. Slow Streets will create safe and comfortable environments for walking or rolling, cycling, and other micromobility modes.

### **PROGRAM IN ACTION**

The City of Oakland, CA, is developing a planning framework and a set of design considerations for the implementation of permanent Slow Streets. Building on the existing Bicycle Plan and Five-Year Paving Plan, in February 2023 the City announced that it planned to identify potential locations along approximately 50 miles of the bicycle boulevard network that were suitable for conversions to Slow Streets. This program would entail installing a combination of pavement markings; guide, warning, and regulatory signs; and barricades to promote non-motorized mobility options. Details of the City's plan can be found at: https://www.oaklandca.gov/projects/oakland-slowstreet



Road Closure in Oakland Source: The Oaklandside, 2020

## Art in the Right-of-Way

Art in the Right-of-Way programs involve integrating artistic installations and other creative elements within public spaces such as sidewalks, streets, plazas, and parks. These programs aim to promote a sense of place within a community, foster public engagement, and promote cultural expression within the public realm. The utilization of cool pavement coatings can also be incorporated to reduce the urban heat island impact by reducing the amount of solar radiation absorbed by the painted surface. A program that enables the design and implementation of public art – created by local artists and community members – in active transportation infrastructure would create more visible and community-centered spaces for users.



Mural on crosswalk at White City Place, London Source: My Modern Met, 2020

#### **PROGRAM IN ACTION**

Mural Arts Philadelphia is the nation's largest public art program, supported by local artists, community organizations and city departments. With its roots in an anti-graffiti program established in 1984, Mural Arts Philadelphia is now an international leader with over 4,400 works of community-based public art. Not only have the art pieces activated unassuming locations in Philadelphia; more importantly, the program has created discourse and dialogue in communities by heavily involving residents in projects from conception to implementation. More information can be found at: https://www.muralarts.org/



Program

CITYWIDE COMMUNITY ENHANCEMENT





### **PROGRAM HIGHLIGHTS**



### **Estimated Initiation Timeframe**

1-3 years



### Implementation Cost **\$**\$\$\$



## Potential Funding Sources

» General Fund

» Public-private partnerships



#### Leading Department Sustainability and Mobility

**Collaborating Entities** Other City departments, partner agencies, public-private partnerships



**Relevance to Mobility Master Plan Goals** Goals 2, 3, 4, 7

**Relevance to Climate Action Plan Policies** Policies 3.5a, 3.5 SA-1, 3.5 SA-3, 3.1 SA-13

**Incorporating Community Engagement** The community identified incorporating locally-made aesthetic elements into projects to make walking or rolling and cycling more attractive as a top mobility need.



Mural under viaduct, City of Philadelphia Source: Mural Arts, 2021

CITYWIDE FINANCIAL INCENTIVES

### **E-Bike Rebate**

An e-bike rebate program can encourage and incentivize individuals to purchase electric bikes by providing them a rebate if they do so. This type of program would offer a partial reimbursement or discount on the electric bike purchase, decreasing the cost burden on the individual. This expanded access to affordable and environmentally friendly mobility options would benefit the City of San Diego in several ways. The use of electric bikes in cities can reduce congestion, decrease reliance on fossil fuels, and contribute to positive public health outcomes.

### **PROGRAM HIGHLIGHTS**

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#### **Estimated Initiation Timeframe** 1-3 years

Implementation Cost **\$**\$\$\$

### **Potential Funding Sources**

» General Fund

» Federal, state, and regional grants

Leading Department Sustainability and Mobility

### **Collaborating Entities**

Other City departments, partner agencies, public-private partnerships

**Relevance to Mobility Master Plan Goals** Goals 1, 2, 4, 5, 8, 10

**Relevance to Climate Action Plan Policies** Policies 3.1e, 2.2 SA-2, 2.3 SA-4, 3.1 b, 3.1f, 3.1 SA-24

#### Incorporating Community Engagement

The community identified San Diego's topography and size as major mobility challenges. An e-bike rebate program could increase mobility options in the City and help community members navigate the challenging topography. A rebate program could also make these bikes more accessible and affordable to a wider population and incentivize participation in this form of active transportation.



E-Bike



Denver's e-bike rebate Source: FattE Bikes Blog, 2022

#### **PROGRAM IN ACTION**

Denver, CO has been successful in implementing an e-bike rebate program. The Climate Action, Sustainability and Resiliency city department launched this program in 2022 and has seen 5,502 e-bike vouchers redeemed as of May 2023. With a standard rebate voucher, any Denver resident can save \$300 on the purchase of an e-bike. The program also offers vouchers for income-qualified individuals and persons with disabilities, with discounts up to \$1,400. Vouchers are released every two months on a first-come, firstserved basis. More information can be found at: https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Climate-Action-Sustainability-Resiliency/ Sustainable-Transportation/Electric-Bikes-E-Bikes-Rebates#section-1

### **On-demand Specialized Transportation Services**

On-demand specialized transportation services provide flexible and individualized transportation options to meet the needs of individuals with mobility challenges. Building upon the paratransit service offered by the transit agencies, users can request rides in real time and be offered door-to-door pickups and drop-offs in an accessible vehicle. SANDAG designated Facilitating Access to Coordinated Transportation as the Consolidated Transportation Services Agency for San Diego County which coordinates with multiple transportation service providers to offer users the most affordable and accessible transportation option. An on-demand service program in San Diego would supplement this program and provide more options within the City in addition to the MTS Access Service.



Paratransit Vans





CITYWIDE SHARED MOBILITY



Program



### Implementation Cost **\$\$**\$\$

**PROGRAM HIGHLIGHTS** 



**Potential Funding Sources** » General Fund » Federal, state, and regional grants



Leading Department Sustainability and Mobility



**Collaborating Entities** Other City departments, partner agencies, public-private partnerships



**Relevance to Mobility Master Plan Goals** Goals 1, 5, 9

**Relevance to Climate Action Plan Policies** Policies 3.1f, 3.1 SA-8, 3.1 SA-24



Incorporating Community Engagement The community identified providing more (and affordable) mobility options to facilitate better transportation access for the City's senior populations and persons with disabilities as a major mobility need since these populations may be unable to use active transportation modes and often live on fixed incomes.

### **PROGRAM IN ACTION**

The Massachusetts Bay Transportation Authority (MBTA) operates the RIDE Flex program. The paratransit service utilizes a network of accessible vehicles to provide transportation options to its users with personal mobility limitations. More information can be found at: https:// www.mbta.com/accessibility/the-ride/the-ride-flex

Ride Flex Transportation Source: MBTA, 2021

## **Neighborhood Shuttles**



Pacific Beach shuttle Source: City of San Diego, 2023

### **PROGRAM HIGHLIGHTS**

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**Estimated Initiation Timeframe** 3-5 years

**Implementation Cost \$\$**\$\$

#### Potential Funding Sources

- » Community parking districts (or similar
- locally-raised sources)
- » General Fund
- » Federal, state, and regional grants

#### Leading Department

Sustainability and Mobility



### **Collaborating Entities**

SANDAG, other City departments, partner agencies, public-private partnerships

**Relevance to Mobility Master Plan Goals** Goals 1, 2, 5, 9, 10

**Relevance to Climate Action Plan Policies** Policies 3.5 SA-3, 3.1f, 3.1 SA-24, 3.2 SA-1, 3.2 SA-2

#### **Incorporating Community Engagement**



The community identified intra-neighborhood mobility solutions as a top mobility need. Residents want safe and functional access to schools, medical facilities, shopping options, and job centers. A neighborhood shuttle program offers an opportunity to fill this gap in the transportation system.

A neighborhood shuttle program provides shuttle services within a specific community or neighborhood through either a fixed-route or zone-based structure. A fixed-route shuttle follows one specific route within a community while a zonebased shuttle offers riders the opportunity to book door-to-door services within a zone or community. These programs are designed to connect residents to key destinations like shopping centers, schools, medical services, and local attractions. When financed through neighborhood-sourced funding such as community parking district revenue, neighborhood shuttles can be financially selfsustainable. In July 2023, the City of San Diego and SANDAG launched a neighborhood electric vehicle (NEV) shuttle service in Pacific Beach. The Pacific Beach Shuttle provides residents and visitors with a new and sustainable way to travel to beachside destinations. Programs such as this one can be expanded to serve other communities in San Diego and improve mobility options for all residents by bridging gaps in public transportation infrastructure.

COMMUNITY SHARED MOBILITY



1enlo Park shuttle Source: City of Menlo Park, 2019

#### **PROGRAM IN ACTION**

The City of Menlo Park, CA provides a free shuttle service that provides access to local community destinations and job centers. This program consists of three fixed-route shuttles and one door-to-door shuttle, the Shoppers' Shuttle, that must be reserved in advance. All shuttles are wheelchair accessible and operate Monday-Friday, with the exception of the Shoppers' Shuttle that is available seven days a week. More information can be found at: https:// menlopark.gov/Government/Departments/Public-Works/Transportation-Division/Shuttle-services

### **Curbside Management**

As mobility options increase, so does demand for curbside space. With these numerous options, (see Figure 5-1), a program that inventories, allocates, and optimizes use of the curb in the most efficient, safe, and accessible way is important. Strategies to effectively manage demands on the curbside include curbside inventory and evaluation, passenger pick-up/drop-off zones, performance parking pricing, and loading and delivery zones.

#### **PROGRAMIN** ACTION



In 2014, Washington D.C. completed Curbside Management Study that inventoried and curb categorized usage. The City now has several programs in place that manage regulate and curbside usage. programs These

include Pick-up/Drop-off (PUDO) Zones, Motorcoach Parking, Performance Parking Zones, and Off-Sidewalk Parking Corrals. More information on these programs can be found at: https://movedc.dc.gov/ pages/curbside-management



FIGURE 7-1: Curbside Uses Source: National Association of City Transportation Officials (NACTO) Curb Appeal Resource Paper, 2017



Program

### CITYWIDE SYSTEM MANAGEMENT





### **PROGRAM HIGHLIGHTS**

<b>Estimated Initiation Timeframe</b> 1-3 years
Implementation Cost \$\$\$\$
<b>Potential Funding Sources</b> <ul> <li>General Fund</li> <li>Federal, state, regional grants</li> </ul>

## nentation Cost



### ial Funding Sources

- eral Fund
- Federal, state, regional grants
- » Community Parking District funds



#### Leading Department Sustainability and Mobility



### **Collaborating Entities** Other City departments, partner agencies, public-private Partnerships



**Relevance to Mobility Master Plan Goals** Goals 1, 3, 4, 5, 8, 9

**Relevance to Climate Action Plan Policies** Policies 3.4 SA-2, 3.6a



**Incorporating Community Engagement** Enhancing the pedestrian experience by making the sidewalk and curb space safer and more aesthetically pleasing was identified as a major mobility need during community engagements.

### **Community Parking Districts**

Community Parking Districts (CPDs) are entities established by City Council that oversee a defined area that is adversely impacted by parking. CPDs provide a mechanism whereby communities unable to meet existing parking demands may develop and implement parking management solutions to meet their specific needs and address parking impacts. Parking meter revenue collected in a CPD are reinvested back into the districts to finance neighborhood improvements such as sidewalk gaps, street furniture, and landscaping. The City has 5 CPDs, established in Downtown, Uptown, Mid-City, Pacific Beach, and Old Town. Initiatives supported by CPDs so far include neighborhood shuttles, wayfinding signages, curb ramps, parking meter installations, pedestrian promenades, and various design and planning studies.



Normal Street promenade funded by Uptown CPD revenue Source: City of San Diego, 2019

### **PROGRAM IN ACTION**

The City of Austin passed two ordinances in 2011 and 2014 to create the PBD and the Parking and Transportation Management District (PTMD) Programs. Together, they allow business owners and residential associations to apply to create PBDs and PTMDs. Parking revenue within these districts has since been used to finance sidewalk improvements and upkeep of recreational spaces. More information can be found at: https://www.austintexas.gov/ department/parking-and-transportation-managementdistrict



PBDs and PTMDs, City of Austin Source: Parking Reform, 2022

CITYWIDE SYSTEM MANAGEMENT

**PROGRAM HIGHLIGHTS** 

Ongoing

Not applicable

Goals 3, 4, 5, 9

improvements.

Policies 3.1e, 3.4 SA-2

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**\$**\$\$\$

**Estimated Initiation Timeframe** 

Implementation Cost

Leading Department

Sustainability and Mobility

Other City departments, community planning

groups, City-owned non-profit organizations

**Relevance to Mobility Master Plan Goals** 

**Relevance to Climate Action Plan Policies** 

Incorporating Community Engagement

Several street infrastructure and amenities

were identified by the community as top

improvement projects needed, including

lighting, shelter, shade, and landscaping.

generate revenue to help finance these

Establishing new CPDs in areas in need would

**Collaborating Entities** 

**Potential Funding Sources** 



### Carshare



ZipCar, San Diego Source: ZipCar, 2023

Carsharing offers short-term use of a car, typically on an hourly basis, in a geographically limited area. This shared mobility option provides a more affordable and sustainable alternative to car ownership while maintaining the same level of mobility that one would have owning a car. These programs can provide first- and-last-mile connections to and from destinations on trips made using public transportation. Carsharing can also generate positive environmental benefits such as improved air quality: as the electrification of carsharing fleets continues to expand across the nation, greater reductions in GHG greenhouse gas emissions can be expected. In San Diego, ZipCar, Turo, and Getaround are companies and platforms that provide carsharing services. Carsharing can be expanded to underserved communities to advance transportation equity across throughout the City and help all residents enjoy the same mobility options and benefits.



BlueLA Los Angeles Source: Blink Mobility, 2023

### **PROGRAM IN ACTION**

In 2015 the City of Los Angeles (LA), CA initiated the BlueLA Carsharing Pilot Project with the intention of providing clean and affordable mobility alternatives to LA residents. The program aims to specifically serve disadvantaged communities within LA, including East Hollywood and Boyle Heights, which are within the top 25% of the statewide highest need communities on CalEPA's CalEnviroScreen index. Between February 2021 and September 2022, nearly half of all BlueLA trips were made by low-income community members. The City plans to increase the number of cars and stations from 100 to 300 and 40 to 100 respectively by 2024 to better meet the mobility needs of disadvantaged communities in LA. More information can be found at: https://ladot.lacity.org/bluela

CITYWIDE SHARED MOBILITY





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### **PROGRAM HIGHLIGHTS**



Mobility as a Service (MaaS)

MaaS programs combine various modes of transportation into a single, digital platform, allowing users to move throughout cities and regions with ease. The service enables users to plan, book, and pay for multiple different types of mobility options in one platform. MaaS programs also provide real-time arrival and service information to help users plan their trips. To improve overall mobility equity, MaaS programs can also consider providing subsidies to key user groups. This type of program would benefit San Diego by making the mobility system not only more efficient and user-friendly with the incorporation of innovative technology, but also more equitable and accessible.



Mobility as a Service

**REGIONAL** DIGITAL INFRASTRUCTURE

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### **PROGRAM HIGHLIGHTS**



5+ years

### Implementation Cost **\$**\$\$\$

#### Potential Funding Sources

General Fund

» Federal, state, regional grants

#### Leading Department

Sustainability and Mobility

### **Collaborating Entities**

Other City departments, partner agencies, public-private partnerships

**Relevance to Mobility Master Plan Goals** 



Goals 1, 3, 4, 5, 8, 10 **Relevance to Climate Action Plan Policies** 

Policy 3.1 SA-1

#### Incorporating Community Engagement

The community identified needing more connections to regional resources such as the coastline and job centers as a major mobility need. An MaaS program would make these regional connections more seamless.



### **PROGRAM IN ACTION**

Portland, OR has made significant efforts to use new technologies that provide seamless mobility options to its residents and visitors. The City implemented TriMet Tickets, a single platform that allows users to plan, book, and pay for multiple modes of transportation including buses, light rail, streetcar, and bikeshare. More information can be found at https://trimet.org/imi/about.htm

Portland's TriMet Rail

### **Transit Fare Subsidies**

Transit fare subsidies encourage the switch from cars to public transportation modes by providing free or reduced fares on mass transit. As youth and senior community members are often more likely to have low or no incomes, they are often more reliant on public transportation. Fare subsidies can help improve equitable access to affordable transportation options. In May 2022, SANDAG and its collaborating partners launched the Youth Opportunity Pass Program, offering free public transit to anyone age 18 and under. This program is funded by SANDAG as part of its Transit Equity Pilot and aims to connect youth to more educational, vocational, social, and errand-based opportunities throughout San Diego. While the pilot program has been extended through June 2024, making it permanent and expanding it to other vulnerable community members would further advance transportation equity across San Diego.

#### **PROGRAM IN ACTION**

Los Angeles Metro (Metro) has a series of programs aimed at reducing the transportation cost burden for low-income residents, students, elderly individuals, and people with disabilities. The GoPass fareless pilot program, launched in 2021, provides unlimited free rides on Metro's bus and rail as well as other partner transit agencies to all K-14 students. Metro also offers fare discounts on transit passes for Metro and other participating transit agencies to low-income riders under the Low-Income Fare is Easy (LIFE) program. Seniors, college students, and people with disabilities are also eligible for reduced fares. More information can be found at: https://www.metro.net/riding/fares/



GoPass Source: LA Metro



Programs

### **REGIONAL** FINANCIAL INCENTIVES



### SANDAG

BREAKING: SANDAG Extends Free Transit for Youth 18 and Under in the San Diego Region through June 2024



Extension of Youth Opportunity Pass Source: SANDAG, 2023

### **PROGRAM HIGHLIGHTS**



### **Estimated Initiation Timeframe**

### 1-3 years



### Implementation Cost

**\$\$**\$\$

### **Potential Funding Sources**

- General Fund
- » Regional funds



#### Leading Department SANDAG



### **Collaborating Entities**

MTS, NCTD, Transportation Department, partner agencies



### **Relevance to Mobility Master Plan Goals** Goals 1, 2, 5, 6

**Relevance to Climate Action Plan Policies** Policies 3.2a, 3.2 SA-1, 3.2 SA-2

Incorporating Community Engagement



The community highlighted affordability as a key challenge to their mobility, especially for those below 24 years of age. Transit fare subsidies advance transportation equity by providing greater access to a wider range of affordable mobility options for low-income community members.



Urban connectivity refers to the collective set of technologies that can collect data and provide communication to infrastructure, mobility devices, and people. Data collected can be used to analyze performance on mobility-related metrics such as traffic speed, curbside usage, and air quality. By gathering data on how pedestrians, cyclists, and motorists move, San Diego can better understand what is happening on local roads which can then help the City improve infrastructure and operations practices. This information can inform policies and plans that aim to improve the overall experience for everyone in the City. A network of connected technology that ensures personal privacy protection, can further help to advance the City's goals related to enhancing mobility options for all, increasing efficient and safe circulation, and reducing greenhouse gas emissions.



Futuristic Urban Connectivity Concept Source: Geospatial Commission

# **PROGRAM HIGHLIGHTS**

CITYWIDE DIGITAL INFRASTRUCTURE





Potential Funding Sources

General Fund

» Federal, state, and regional grants

#### Leading Department

Transportation Department **Collaborating Entities** 

Other City departments, partner agencies, public-private partnerships

**Relevance to Mobility Master Plan Goals** Goals 1, 3, 4, 5, 8, 9

**Relevance to Climate Action Plan Policies** 

Policies 3.4b, 3.4 SA-1, 3.4 SA-2, 3.6a

#### Incorporating Community Engagement The community identified sidewalk and bikeway improvements and traffic calming measures as priorities to improve safety. Urban connectivity provides information about traffic and infrastructure conditions that can inform policies and plans to address safety challenges.

### **PROGRAM IN ACTION**

In 2016 the City of Chicago, IL launched the Array of Things (AoT) initiative, an urban connectivity project that installed a network of interactive, modular sensor boxes across the city to collect real-time data on the environment, infrastructure, and activity for research and public use. AoT builds privacy protection into the design of the sensors to minimize collection of personal data. Since these sensors were installed, data has been used to assess the safety of at-grade rail crossings, assess pedestrian crosswalk usage, and detect flooding along the Chicago River. More information can be found at: https://arrayofthings.github.io/



Installing AoT sensors, Chicago Source: University of Chicago, 2016

### **Micromobility Charging** and Services



Micromobility Infrastructure in Denver

Micromobility public charging stations provide a place for e-bikes and scooters to charge within mobility hubs and around activity centers. This infrastructure addresses the needs of all micromobility users and encourages sustainable mobility options. Charging stations will allow both fleet users and people with personally-owned devices to have confidence that their devices will be charged when needed.

Bikeshare programs are included in the broader suite of micromobility solutions, which includes existing scootershare in San Diego. A bikeshare program allows users to access short-term bike rentals (electric or pedaled) throughout the City. These bikes can either be docked at stations or dockless and accessed through an app. Ensuring these programs include adaptive devices (e.g., tricycles and hand-powered bicycles) provides all users with the opportunity to utilize such a program.

### **PROGRAM IN ACTION**

The New York City Housing Authority is investing approximately \$25 million in e-bike charging infrastructure at 53 sites. The charging hubs are expected to be installed by 2025 and will provide a reliable charging source to riders within the City. The investment will provide micromobility users with a safe outdoor place to charge and store their devices while reducing the burden of in-home storage and reducing the risk of fires that may be caused by lithium ion batteries.



CITYWIDE

SHARED MOBILITY



**PROGRAM HIGHLIGHTS Estimated Initiation Timeframe** 3-5 years Implementation Cost **\$\$\$**\$ **Potential Funding Sources** General Fund Federal, state, and regional grants » Public-private partnerships Leading Department Sustainability and Mobility **Collaborating Entities** Other City departments, partner agencies, public-private partnerships **Relevance to Mobility Master Plan Goals** Goals, 1, 4, 5, 8, 9, 10 ίΞ **Relevance to Climate Action Plan Policies** Policies 2.2 SA-2, 2.3a, 2.3 SA-4, 3.1b, 3.1f, 3.1g, 3.1 SA-6, 3.5 SA-7 Incorporating Community Engagement The community identified intra-neighborhood solutions as a top mobility need to provide individuals with safe and convenient access to schools, jobs, medical care, social support, and food. Expanding micromobility options and implementing battery charging infrastructure would encourage use of these sustainable mobility options.



Citibike Station in New York City Source: Jeff Greenbery /Getty Images



