

Downtown Dover Pathways

Micromobility Review



April 2024

What Is Micromobility?

Micromobility systems employ shared-use fleets of bicycles and/or scooters that are rented for short trips and allow users to make point-to-point trips in the public right of way. In just over a decade, micromobility systems have expanded to cities nationwide and become important components of transportation networks. In 2010 just over 300,000 micromobility trips were made nationwide, but in 2021 this number had already grown to over 110 million trips (NACTO, 2022). During this 11-year period, people in the United States took half a billion trips on micromobility vehicles (NACTO, 2022). This rapid growth has magnified the importance of planning for micromobility systems.

What Vehicles are Available?

There are three primary vehicle-types associated with micromobility: bicycles, electric bicycles, and electric scooters. In 2010, the nation's first micromobility program was a station-based bicycle share system. Today, most bike share system fleets are either entirely e-bikes or a combination of bikes and e-bikes. The rapid growth of e-bikes in station-based systems has contributed to a near doubling of e-bike trips since 2018 (NACTO, 2022). E-scooters serve as the third primary vehicle type utilized in micromobility systems. The introduction of dockless e-scooters to many micromobility systems around the country in 2018 more than doubled the total number of micromobility trips taken from just the previous year (35 million trips in 2017 to 84 million trips in 2018) (NACTO, 2022).



Bicycle



Electric Bicycle



Electric Scooter

What are the Benefits of Micromobility?

The success of e-scooter, e-bike, and bike share systems across the country has increased awareness of the benefits of micromobility. One of micromobility's greatest strengths is providing a transportation alternative for short trips. Replacing short motor vehicle trips with micromobility trips can help to reduce emissions, provide first mile/last mile connections to transit, and support healthy communities by reducing barriers to active transportation. Micromobility can also be a mobility alternative during periods of transportation disruption. For example, during COVID-19, micromobility replaced many public transit trips for essential workers and provided a safe outlet for socially distanced recreation.

Station-Based vs Dockless System?

Micromobility systems utilize one of two systems for starting and ending trips: station-based (docked) or dockless.

Station-based systems require riders to begin and end their bicycle or scooter trips at a permanent docking location. Users access and unlock their micromobility vehicle using a kiosk or their mobile device and must end their trip at another designated docking location elsewhere in the community. A subset of station-based systems allows for riders to end their trips in the public right of way outside of a docking location, but these programs typically charge riders an additional fee if not docked at a station.

Dockless micromobility systems allow riders to pick up and drop off their vehicles within the public right of way. These trips might begin and end at permanent stations where micromobility devices must be 'docked'. Other micromobility programs utilize a 'dockless' system where users can pick up and drop off devices in the public right of way. Dockless systems require riders to follow local regulations on where within the public right of way they can end their trip and leave their vehicle. Typically, local regulations prohibit leaving micromobility vehicles in the way of important public infrastructure such as roadways or sidewalks.

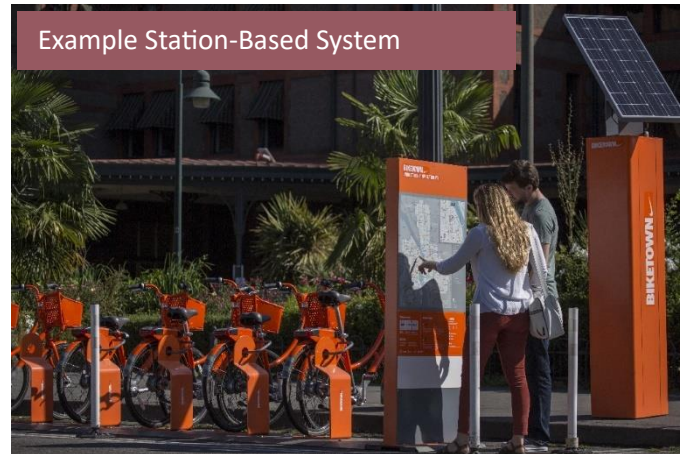


Image Source: Biketown (Portland, Oregon)



Image Source: Curbed Seattle (Seattle, Washington)

Benefits of station-based (docked) systems:

- Ensuring micromobility vehicles do not prohibit the use of public infrastructure
- More equitable distribution of micromobility vehicles throughout the community
- Minimized theft and destruction of vehicles

Benefits of dockless systems:

- Flexibility to pick up and drop off vehicles anywhere
- No cost of maintaining station infrastructure

How do Cities Introduce Micromobility?

Micromobility programs can operate under various public-private partnerships between local governments and micromobility operators. This coordination between the public and private sphere provides an opportunity to introduce these emerging modes of transportation while overseeing an equitable and safe implementation of the program.

Established micromobility programs typically operate under one of two structures: annual permitting or service contracts.

Annual permitting provides flexibility to the locality to introduce new micromobility vehicle types and alter permitting regulations depending on how the community is utilizing the program. An annual permitting structure also allows the locality to evaluate potential operators based on permit requirements and hold a competitive application process. Annual permitting structures are best for communities looking to attract multiple companies where the private operators pay a permitting fee to enter the market.

Service contracts are the best fit for communities that are looking to introduce micromobility for the first time. A trial period for specific operators and vehicle types can be run to understand how the community utilizes micromobility and to develop long-term micromobility programming. Service contracts are best for communities aiming to establish a long-term partnership with a single micromobility or non-profit provider that will operate the program. Communities entering into service contracts provide funding to support the maintenance of their micromobility program.

Case Studies

Cities similar in size to Dover have successfully incorporated micromobility into their transportation systems. Ithaca, New York; Annapolis, Maryland; and Harrisburg, Pennsylvania are examples of cities that have incorporated different micromobility services. These examples demonstrate the different services and operating structures that might be most effective in Dover.

Ithaca Bikeshare

Location: Ithaca, New York (32,000 residents)

Program Start: November 2022

Vehicles: E-bikes

System Type: Dockless

Operator: The Center for Community Transportation (CCT)

Funding: Federal funding, public, private, and philanthropic contributions

Program Overview

Ithaca Bikeshare launched after the micromobility provider Lime left Ithaca. Ithaca decided to launch its own bikeshare system with a nonprofit partner, The Center for Community Transportation (CCT). CCT oversees the program and funded the launch of the bikeshare system.

Ithaca's system is a pedal-assist (no throttle) electric bikeshare network. Users can rent the e-bikes using the system's mobile phone application. The e-bikes are dockless and can be found anywhere, however the system is hub-based. Hub-based means that there are designated parking areas where riders are encouraged to end their trips. Trips that do not end within a hub are subject to a convenience fee.

How does this program support equitable transportation access?

Ithaca Bikeshare has an equity program called Easy Access. Easy Access is free to low-income residents. The program also strives to maintain affordable pricing for all residents. An annual membership costs \$150 per year and includes unlimited hour-long trips.



Image Source: The Ithacan

Annapolis Micromobility Program

Location: Annapolis, Maryland (41,000 residents)

Program Start: May 2022

Vehicles: E-scooters and e-bikes

System Type: Dockless

Operator: Bird

Funding: Annual permitting

Program Overview

In 2022, the City of Annapolis contracted the micromobility provider Bird to bring e-scooters and e-bikes to Annapolis. Annapolis sought an alternative mode of transportation to serve parking-constrained downtown. The closure of a large parking garage downtown spurred the need for the program. Downtown also experiences high influxes of tourists in the spring and summer as Annapolis is the capital of Maryland.

Bird provides dockless electric scooters and electric bikes. The vehicles can be rented through Bird's mobile phone application. The system is dockless. However, the city has designated parking areas where riders are encouraged to end their trips. The designated parking areas help to manage parking and facilitate locating the vehicles.

How does this program support equitable transportation access?

Bird offers low-income pricing through Bird Access. Bird Access offers three, five, or unlimited daily rides of 30 minutes or less for \$5 per month to riders who are enrolled in or eligible for a government assistance program.

The City of Annapolis requires Bird to offer coverage throughout the city, including to traditionally underserved neighborhoods and destinations critical to underserved community members, including locations at Housing Authority sites coordinated with the Housing Authority of the City of Annapolis (HACA). Annapolis also requires 15% of Bird's vehicle fleet to be rebalanced to identified traditionally underserved neighborhoods daily.



Image Source: Annapolis Discovered

SusqueCycle

Location: Harrisburg, PA (50,000 residents)

Program Start: October 2022

Vehicles: Bicycles

System Type: Station-based (docked)

Operator: Tri-County Regional Planning Commission

Funding: Federal funding, public and private sponsorships

Program Overview

Launched in the fall of 2022, SusqueCycle is Harrisburg’s bicycle share program operated by the Tri-County Regional Planning Commission, a metropolitan planning organization. The program was created to provide a convenient, affordable, healthy, and environmentally friendly alternative to driving for Harrisburg residents and workers. The Commission, which oversees regional planning issues for Cumberland, Dauphin, and Perry counties, operates the program internally with financial support from private and public sponsors. SusqueCycle partners with Movatic, a micromobility software platform, to host their system and bikes are provided by Tandem Mobility.

SusqueCycle is a station-based system that requires its riders to access and park their bicycles at docking stations. Cyclists are allowed to ride wherever they like, but trips won’t end unless the user has locked their bicycle at a station. There are currently eight bike rack locations in Harrisburg, plus one in Hummelstown that is connected to Hershey’s bike share program. SusqueCycle members can also utilize their membership with the Hershey Bikes and Bike It Lancaster programs.

How does this program support equitable transportation access?

SusqueCycle does not currently offer any reduced cost program for memberships or pay-as-you-go rides. Despite the lack of a targeted equity program, SusqueCycle was created with affordability in mind and does not operate as a for-profit venture. The support from public and private sponsors allows SusqueCycle to maintain very low pricing relative to private micromobility operators. Pay-as-you-go pricing is \$1.50 per 30 minutes. Memberships are \$25 annually and include unlimited 30-minute trips; each additional 30 minutes for members costs \$1.50.



Image Source: Tri-County Regional Planning Commission

Micromobility Recommendations for Dover

Recommendations

- 1) *Determine the managing body and designate a point person to champion the micromobility program.*
- 2) *Coordinate early and often with key partners to determine their level of interest in supporting a micromobility program.*
- 3) *Gather information on Dover residents' appetite for a micromobility program.*
- 4) *Clarify the service area extent and docking system type before releasing a Request for Proposal (RFP) for service providers.*
- 5) *Reference previously completed micromobility pilot programs for guidance on management, community engagement, provider requirements, and stakeholder support.*

Example Pilot Program – Baltimore City Dockless Vehicle Pilot Program

From August 2018 to January 2019, the Baltimore City Department of Transportation (DOT) managed a pilot micromobility program to evaluate the safety, equity, and impacts of introducing dockless vehicles to Baltimore streets. Baltimore City DOT drafted a pilot agreement for a dockless system of scooters and bicycles to be “deployed in the public right of way and available for rent from private providers.” Over the course of six months, 723,252 rides were taken by 191,218 individual riders (Baltimore City Department of Transportation, 2019).

While Baltimore City DOT initiated the program, a Dockless Vehicle Committee (DVC) was created to “advise DOT on broader perspectives of the pilot program’s impacts.” The committee was comprised of elected officials, municipal departments, local bicycle advocacy organizations, business partnerships, and more. DVC helped to plan and execute the pilot program by defining regulatory needs and providing operations recommendations to DOT (Baltimore City Department of Transportation, 2019).

The pilot program provided an opportunity for the City of Baltimore to evaluate the interest and feasibility of implementing a permanent program. A set of evaluation questions were developed related to safety, ridership, equity, roadway impacts, and potential structures to support a successful program. Each of these questions were answered utilizing provider ridership data as well as feedback from community engagement activities (Baltimore City Department of Transportation, 2019).

Baltimore City DOT utilized the pilot program to develop a set of recommendations for implementing its permanent micromobility program. These recommendations included:

- An RFP procurement method for a pilot program allows the City to evaluate various micromobility providers and choose the best fit for the community. If the pilot program is a success, establishing a permit with the provider means the City will no longer directly manage and operate the program, but allows DOT the authority to set specific rules and regulations that will mandate management and operation by the providers.
- DOT support is crucial to administering a successful program. DOT can help to facilitate a successful program by
 - 1) investing in micromobility infrastructure – including designated parking spots.
 - 2) utilizing permit funds to launch a community education campaign.

- 3) assisting in establishing a Resident Mobility Advisors (RMA) program. RMAs engage with DOT on mobility needs and insights gathered from neighbors and other community members.
- 4) devoting dedicated staffing to support the program. Nationally, municipalities with dockless programs average 2.5 staff positions to run their programs.

Dover can integrate lessons learned from Baltimore City’s Dockless Vehicle Pilot Program when considering the deployment of its own pilot program.

Delaware Electric Micromobility Laws

Although electric scooters are a popular travel option in many communities in the U.S., Delaware state law does not currently permit a person to operate an e-scooter on public streets or highways. If the City of Dover wishes to implement a micromobility program using e-scooters, a legislative change would be required.

There are no laws prohibiting the use of electric bicycles. They can be operated anywhere bicycles are typically allowed.

Further Reading on Micromobility

The National Association of City Transportation Officials (NACTO) has several helpful resources for cities seeking to add micromobility services. The resources include:

- [NACTO Shared Micromobility Snapshot](#)
- [NACTO Guidelines for Regulating Shared Micromobility](#)
- [NACTO Urban Bikeway Design Guide Working Paper: Shared Micromobility Permitting, Process, and Participation](#)

The University of Oregon also maintains a [database](#) of all the micromobility programs in the United States including detailed information about seven different equity requirements: reduced fares, geographical distribution, adaptive vehicles, cash payment options, smartphone alternatives, targeted marketing and outreach, and multilingual services.