



Resource Library: Bikeshare Operations

Overview

This resource library includes guidance on bikeshare system operations. It aims to provide program implementers, regulators, and operators with insights into best practices for launching, operating, and scaling successful bikeshare systems. It includes tables linking to relevant documents and summarizing their key takeaways. The resources cover the following general topics:

1	Glossary of terms <i>Descriptions of common terms associated with different bikeshare models</i>
2	Business and operating models <i>Pros and cons of different models for operating and structuring bikeshare programs</i>
3	Station siting, electrification, and coordination between partners <i>Guidance on where to locate stations, how to electrify fleets, and how to work with utilities, municipalities, states, and other key partners</i>
4	Example Requests for Proposals (RFPs) <i>Links to RFPs for bikeshare services—provided as a general reference</i>

Over the past 15 years, bikeshare systems have been steadily growing in popularity as a component of urban mobility networks. As defined by the [Federal Transit Administration](#), bikeshare is a system that “provides users with on-demand access to bicycles at a variety of pick-up and drop-off locations for one-way (point-to-point) or roundtrip travel.” Bikeshare systems typically deploy a fleet of bikes across a defined service territory. The flexibility, accessibility, and affordability of bikeshare makes the mode popular for many types of users, and since the launch of initial systems in U.S. cities around 2010, the industry has grown and shifted to better respond to user priorities as well as municipal policy goals.



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Key insights on operating a bikeshare system

- **Goal-oriented contract-based systems with one or two operators are increasingly common business models.** Contracts give more certainty to the system, lead to stronger public-private partnerships, and allow for more direct guidance from municipalities. The best contracts use language focused on outcomes rather than prescriptive strategies for how to achieve those outcomes.
- **There isn't a one-size-fits-all way to operate a bikeshare program. Local policy goals will determine which operating model is best.** The first step for launching a new bikeshare program is to clearly identify public-sector goals for the system. Municipalities should structure Requests for Proposals and contracts to align with local priorities.
- **Ideally, stations should be within walking distance of each other, placed in dense and mixed-use areas, and should be connected by safe bike infrastructure, like protected bike lanes or greenways.** Station siting decisions should also factor in equity considerations. Docked systems can be supplemented with dockless services (see glossary below for definitions) to expand access in lower-density areas.
- **Stations located on streets have many benefits.** Putting stations on streets can contribute to traffic calming, especially when placed in bulb-outs at intersections. On-street locations also tend to offer the best visibility. Stations can be installed on sidewalks when they don't interfere with the pedestrian realm. While putting stations on the street may remove a parking space or two, the trade-off for user access and safety can be worth the sacrifice.
- **E-bikes are used for more daily trips than pedal bikes but electrifying a bikeshare system adds costs. Strong partnerships and innovative funding streams can lower barriers.** Coordination between municipalities, bikeshare operators, and utilities can help identify cost-efficient ways to electrify bikeshare stations. In addition, in-dock charging significantly reduces system operating costs compared to manually swapping batteries.
- **Bikeshare systems need public support for operational sustainability.** The bikeshare industry has undergone a lot of change in recent years, but strong public-private partnerships remain essential. Public investment is needed for success, especially for ensuring systems are easy to access for a wide variety of users so that everyone that wants to ride can afford to do so.



Photo Credit: [New York City Department of Transportation via Flickr](#)

Glossary of terms

- **Contract-based:** Bikeshare system is procured with a competitive RFP process that leads to the municipality contracting a private or nonprofit organization to operate the system. Creates a “public-private partnership” with contracts typically covering several years.
- **Permit-based:** Private operators secure a business permit from the municipality to operate in the public right of way. Permits are typically associated with dockless systems. Permit terms outline basic compliance requirements and municipalities often charge operators permit or per-device fees.
- **Single operator:** A single private or nonprofit operating team runs the bikeshare program. Contract terms may grant them exclusive rights to operate bikeshare in the service territory.
- **Multi-operator:** Multiple different operators are either contracted or permitted to run services in a given territory. Often involves the municipality granting permits to multiple companies, but can also describe a system that contracts docked services from one provider and dockless from another.
- **Docked:** Bikes are checked out from and returned to fixed docking stations where they are parked and, in some cases, recharged (i.e., in-dock charging). While in-dock charging is not currently common, newer technologies are making this option more feasible.
- **Dockless:** Bikes can be left anywhere in the service territory within certain parameters (not blocking ADA access, creating safety hazards, etc.). Bikes left at dockless locations have to be moved for recharging at a central location (or batteries must be manually swapped out in the field). Dockless systems also require operators to move bikes for even distribution across the service territory to “rebalance” the system.
- **Hybrid:** Bikes are not left at formal docking stations, but rather must be locked to a bike rack, left in a marked “parking corral,” or parked in another similar designated zone.

Strengths and drawbacks of prevailing bikeshare business and operating models

Bikeshare system assets can be publicly or privately owned, and operations can be contracted to private or nonprofit entities. Public ownership with private or nonprofit operations is historically the predominant arrangement. In some municipalities, a public agency may contract with a single operator for a docked system while permitting a secondary operator for a dockless system to expand coverage of the network. [Pages 23–25 of this Cal-ITP report](#) and [pages 71–74 of this ITDP guide](#) provide detailed discussions of the many possible bikeshare system typologies.

Strengths		Drawbacks
Business model		
Contract-based single-operator	• More public-sector influence and control • Promotes greater political buy-in • Gives long-term continuity to the system and facilitates diverse revenue streams • Provides a smoother user experience	• Multiyear contracts may stifle innovation from operators in a field with evolving technology • Often requires public subsidy for best success • Challenging to implement without political support • Contracting process can extend time it takes to launch
Permit-based multi-operator	• Relatively quick for municipalities to launch • Doesn't require public subsidy (see ITDP guide for examples) • Competition can push private operators to innovate • Gives municipalities insight into how different operators work	• Operations can cease unexpectedly; the public sector has less control and influence • Multiple platforms can be confusing for users to navigate • Over-deployment of bikes in high-demand areas is a risk • For-profit operators may not pursue business in smaller municipalities
Operating model		
Docked	• More permanent infrastructure supports system longevity • Keeps streets and sidewalks organized • Provides advertising space to generate system revenue • Makes the system more legible for users • Can lower operating costs with in-dock e-bike charging	• High upfront capital costs required for station installation (typically \$30,000–\$50,000 for kiosk-based stations that support in-dock charging) • Restricts geographic coverage to areas around stations • Lack of dock availability can lead to negative user experience
Dockless	• Lower capital costs • Can launch quickly and is easier to scale • Can extend coverage of system more broadly within a given service territory • Can be more attractive/convenient for riders	• Improper parking can block accessibility; bikes cluttering public space can contribute to negative public perception • Requires substantial municipal oversight for compliance • Per-trip fees can become expensive for users • Bikes may end up distributed unevenly; high costs to rebalance
Hybrid	• Can offer “best of both worlds” of docked and dockless systems if thoughtfully designed • Promotes system flexibility and adaptability while maintaining sense of permanence	• Can be confusing for users to navigate rules of where bikes can/cannot be parked • Involves higher operating costs than docked systems

Business and operating models

The table below includes links to resources that describe common bikeshare program business models, operating models, and other key topics related to program administration. The summaries highlight relevant topics discussed in each resource. Communities interested in launching or scaling bikeshare programs should consult each full resource for additional detail on these and other important topics.

Resource	Author/Date	Key Topics	Summary
Shared Micromobility Permitting, Process, and Participation resource guide	The National Association of City Transportation Officials (NACTO), 2023	Benefits of different business models (p. 8; p. 12–14) Zone typologies for dockless and hybrid systems (p. 15–17)	This resource describes micromobility system typologies (station-based, dockless, hybrid, lock-to), provides information about the evolution of the industry, and gives specific tips for permitting and operations. NACTO suggests that contract-based or selective-permit systems offer the most benefits, cautioning against allowing more than three operators to serve the same area. This guide recommends that systems operating across municipal boundaries approach contracting as a region. It also describes effective regulations for dockless and hybrid systems.
The Bikeshare Planning Guide	Institute for Transportation and Development Policy (ITDP), 2023	Benefits of docked & hybrid system operating models (p. 32) Contracts (p. 71–72) Service level agreements & system metrics (p. 21 and p. 75)	This comprehensive resource uses global insights to provide guidance on all aspects of planning and operating bikeshare systems. It discusses business and operating models, contract language, preparing for a successful launch, service level agreements, tips for public engagement and equity programs, and much more. This guide recommends cities use 3- to 5-year contract terms with outcomes-oriented language. It also outlines useful program metrics, including targets of 4–8 daily uses/bike, a 2:1 ratio of docks to bikes, and a range of 10–30 bikes per 1,000 residents in a service area.
The Bikeshare Market Sounding Report	The California Integrated Travel Project (Cal-ITP), 2023	Balancing public and private sector needs Asset ownership, governance & operating models (p. 20–24)	This report surveyed private bikeshare operators and public-sector program managers on challenges and successes. The findings highlight how cities need to better understand challenges that operators face and avoid contract language that is overly prescriptive. It emphasizes that most successful programs involve a strong partnership based on a shared vision. This report also includes recommendations for how states can leverage their role to improve outcomes for bikeshare systems in partnership with local communities, outlined on page 15.
Shared micromobility needs public funding to support it	North American Bike and Scooter Share Association (NABSA), 2024	Public funding for bikeshare Examples of public subsidies	This article details how the micromobility industry is shifting and that many systems now need public subsidies to provide affordable, accessible mobility. It cites examples from cities, including Columbus, Cincinnati, Austin, and San Francisco, of how local government agencies are supporting bikeshare. It also cites LB1250, a bill introduced in Nebraska that would provide state-level grant funding for bikeshare.

Station siting, electrification, and coordination between partners

The table below includes links to resources that describe specific bikeshare topics like station siting and fleet electrification. The summaries highlight relevant findings from each resource. Communities interested in launching or scaling bikeshare programs should consult each full resource for additional detail on these and other important topics.

Resource	Author/Date	Key Topics	Summary
<u>Bikeshare station siting guide</u>	NACTO, 2016	Pros and cons of locating stations on streets (p. 20–21) vs. sidewalks (p. 29–30) vs. parks/plazas (p. 36–37) Importance of station density and accessibility	This resource is a comprehensive guide on best practices and technical considerations for station siting. It is most useful for program administrators and city engineers. The guide includes visual examples as well as technical engineering drawings (beginning on page 57) for different station typologies. In general, NACTO supports locating stations on-street for traffic calming and pedestrian safety, but a case study on page 28 shows a creative way to install a station on the sidewalk.
<u>Incorporating Shared Micromobility in Electric Vehicle Charging Projects</u>	NABSA, 2023	Electrification and cost savings Value of a “dig-once” approach Working with utilities	This resource outlines how co-locating micromobility charging stations with EV charging can reduce total costs, use resources more efficiently, and support multimodal integration. NABSA estimates that a “dig once” approach—where EV charging and micromobility stations are installed together—can reduce total costs by 36% compared to installing the infrastructure separately. Systems should electrify 20–30% of stations to meet charging needs, starting with the most heavily used locations.
<u>A guide for budgeting a mobility project</u>	CALSTART, 2022	Typical costs of e-bikes and charging infrastructure	This toolkit provides useful budgeting worksheets for bikeshare program implementers (pages 23–25), as well as worksheets to calculate typical costs for other clean transportation projects.
<u>Large and in charge: Scaling charging stations in shared micromobility systems</u>	NABSA, 2024	Benefits of electrifying stations Case studies	These webinar slides describe methods for electrifying bikeshare stations (trenching/underground connections, overhead connections, above ground conduit, or solar canopy), funding sources to support electrification, and a few case studies.
<u>The Path Ahead for Bikesharing</u>	ITDP, 2023	How cities can support bikeshare success	This article focuses on how cities and the micromobility industry can work together more effectively. It details five areas where cities can better enable bikeshare for success, recognizing the changing dynamics of the industry away from venture-capital backed systems and toward stronger public/private partnerships. Cities can help secure public funding, remove red tape, support system electrification, and coordinate integration of bikeshare with public transit systems.

Example Requests for Proposals

The three links below illustrate different approaches to RFP language for communities with different local priorities, populations, resources, and local staff capacity. **They are not intended to be used as templates** but instead are meant to provide a general example of what bikeshare RFPs may include, including specific metrics and service-level agreements that the awarded organization(s) would need to meet. Municipalities should ultimately structure both RFPs and final contract language to align with their specific local goals and priorities for bikeshare, which may differ from those of the communities listed below. Organizations like [NABSA](#) and [NACTO](#) offer peer-exchange forums where cities and program operators can share insights on launching, operating, and regulating bikeshare. In particular, NABSA’s “[Shared Micromobility 101](#)” webinar offers a step-by-step overview for cities interested in setting up new programs.

RFP Link	Description
<u>City of Denver, CO, 2020</u>	This RFQ is an example of a city using outcomes-oriented language to guide procurement decisions. See pages 7–12, with page 9 noting “[for] this RFQ, the City focused on outlining operating outcomes instead of specific metrics and standards. Proposers should provide a list of service standards that achieve these outcomes in a feasible, effective, and efficient manner.”
<u>Electric Bikeshare Vendor, Redding, CA, 2022</u>	This resource provides an example of RFP language for procuring bikeshare equipment and software that will be used by a local nonprofit organization as the system operator. The scope on pages 6–11 uses flexible language, noting that “proposers are encouraged to be creative in their responses. Should the proposer think an alternative option is a better fit for the community, the Project Team is open to exploring alternative solutions.”
<u>Bicycle Rental Program, Town of Long Beach, NY, 2021</u>	This RFP shows an example of how a small municipality in New York approached procurement for a bicycle rental program, which (as used in this RFP) is another name for a bikeshare program. The RFP outlines the city’s goal to “promote bicycling as an integral part of daily life for Long Beach visitors and residents.” Pages 4-7 outline the required components that each proposal must address. This example shows how a small town with limited resources and capacity may approach the RFP process.

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