

ESTABLISH A PROJECT MODEL BASED ON ASSESSMENT RESULTS

The type(s) of service model offered in the community will help to determine the site planning necessary elements, including relevant permitting and partnership agreements. Even for free floating or dockless options (e.g., bikes and scooters that don't rely on locked stalls), agreements with municipalities may be necessary to be allowed to park dockless micromobility vehicles and carshare services on public right-of-way and public parking/street locations.

Service Model

While fixed-route transit can provide access across any number of distances, cost-effective service requires a baseline number of passengers wanting to go the same general direction at the same time. Smaller-scale forms of transportation can offer alternatives in situations where there isn't that kind of demand. As shown in Figure 1, different shared modes are best suitable for different travel distances. Typically, bikeshare and scooter-share are suitable for trips of a few miles, whereas innovative transit services such as on-demand shuttles work best for mid-range trips, about less than 5 miles, and carshare, carpool or vanpool services are more suitable for trips more than 30 miles.

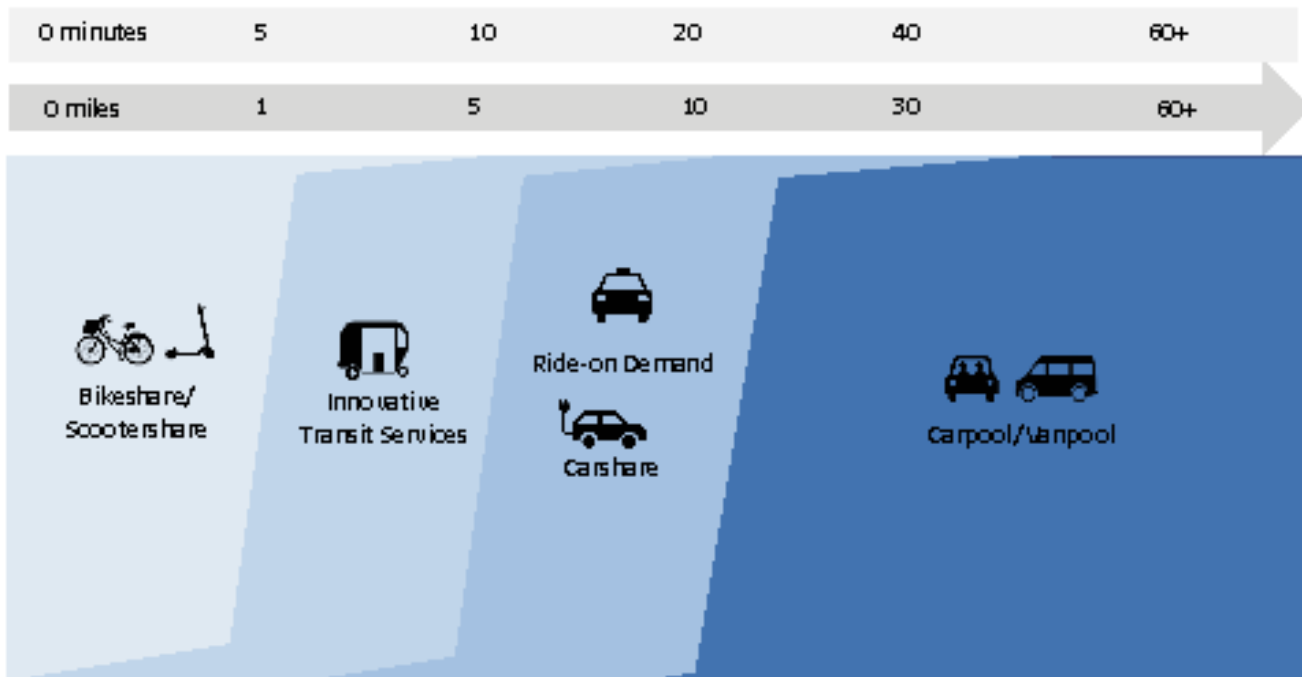


Figure 1: Shared Modes By Travel Distance.

Source: Clean Mobility Options Voucher Pilot Program. 2020. Project Design Guide

There are generally two types of user models in terms of how these services are accessed in a network: **self-service** and **on-demand**.

- 1 **Self-service** options such as carshare and micromobility (bikeshare and scooter-share) offer users the flexibility to operate the vehicles themselves. These options should be easy to get to for first/last mile connections between workplaces, home, and public transit hubs. Carsharing is utilized for longer distance trips greater than five miles, while micromobility is used for trips less than five miles.
 - A For self-service models, consider the need for fixed parking spaces or docks for vehicles, or free floating or dockless access.

- 2 **On-demand** options such as vanpool, microtransit, ride-on-demand, and other innovative mobility services offer flexible connections between residents' homes, transit connections, and key points of interest such as job centers, hospitals, and grocery stores. In addition, on-demand services are flexible in terms of pick-up and drop-off areas, with the ability to be customized to meet the needs of stakeholders who utilize the services for first/last-mile connections.
 - A For on-demand services, consider if the community would benefit from fixed pick-up locations, or if the service is "free-floating" and can be called on-demand to any location.

In addition to the conditions outlined above, another key consideration when refining the site plan is to account for fixed or floating service needs.

- 1 **Fixed or docked service** options require users to borrow and return vehicles at the same location. In regards to micromobility, customers unlock bikes from a fixed dock and return them (either to the same dock or to a different dock) at the end of a trip.
- 2 **Free floating or dockless service** options do not require a docking station. Since the mobility vehicles do not need to be returned to a particular docking station, users end rides by leaving the mobility vehicle anywhere within a defined operating area.

Charging Network

Another component of site design is the charging infrastructure network.

AC Level 1 charging uses the same conventional 120 volt outlet used to charge a phone and can provide up to five miles of range per hour of charging. This is what would be most appropriate for small batteries, like those used on bikes or scooters.

AC Level 2 charging requires a 240 volt power source, like those used for heavy appliances, and uses wall-mounted or freestanding charging stations. On average, these can provide up to 20 miles of range per hour spent charging.

With DC Fast Charging, AC to DC power conversion happens in the station itself, instead of the vehicle. This means the stations are physically larger than Level 2 stations and need to be near a power source capable of delivering 480 volts. While these stations are more expensive and complicated to locate, they can provide over 180 range miles in an hour of charging, depending on the vehicle.

Awardees should ask:

Will fleets be returned by the users to charging locations?

Will fleets be picked up by staff or volunteers to be charged at warehouse locations or a fleet recharging location?

Service Area

For fixed-or-docked options, the service area should encompass most if not all users' origin and destination points. If people cannot use the system to make meaningful connections between destinations, the project mode will be unable to provide convenience and access to its intended user audience.

For dockless or hybrid options, the service area can be the same as the project area. Dockless options give residents the ability to end or start a trip anywhere within the service area, thus, the service area should be clearly communicated to community residents. Unlike fixed or docked options, the service area has less of an impact on usage. Usage will be determined by availability and demand. Because of this, system size is

pertinent to the project's success.

Project Model References

In the Appendix you will find examples of mobility project models established in cities throughout California. These projects serve as good references for entities who are working through system logistics (i.e. system size, site location, type of service model).

Community Demand and Support

Identification of sites should rely on community needs and gaps in transportation services. One should always make sure the site is accessible to the people who would need and want to use it. Oftentimes cities can be well intended in bringing shared mobility services into a community, however the lack of collaboration with community members can result in services being underutilized by the intended audience.

Communities are a significant source of information when trying to figure out where services are needed, and listening and engaging residents in this discussion will provide fruitful results and help identify accessibility locations for infrastructure placement.