

What is car sharing?

Car sharing is a service, available in over 1000 cities worldwide, where people rent cars for short periods of time, often by the hour. They are attractive to customers who only need occasional use of a vehicle, or access to a vehicle of a different type than they regularly use. Car sharing is preferable to car rental, as stations are located in city centers and neighborhoods much like bike-sharing stations, making them easily accessible to city residents as a point-to-point form of transit.



Zipcar, the largest car sharing organization, provides cars to serve urban residents

How does car sharing work?

Management of a car share organization (CSO) can be private, non-profit, member-owned (co-op), or peer-to-peer, with individuals sharing their cars within a community. Members usually pay an annual fee, as well as a fee for hours and/or distance traveled. These fees cover insurance and fuel, as well as basic maintenance. The fee structure should be determined by how the cars will be most used. For example, a high hourly rate and low mileage fee will benefit those who make longer trips but do not leave the car parked for long periods, while a low hourly rate and high mileage fee will make shorter-distance, longer-duration trips more cost effective. There are also penalty fees for late returns, cancellations, and parking violations.

The most common system is station-based, which has designated parking spaces for vehicles. Reserved spaces may be on-street parking or in public or private off-street lots. Users are usually required to return the car to the location where it was picked up, but some new models allow one-way trips between stations. Advantages of this

Car Sharing for More Street Space

Bremen, Germany, has been internationally recognized for its private car share organization (CSO), Cambio. The city determined that car sharing is an extremely efficient way to deal with limited street space, as they did not have the funding to build underground garages. The smart solution, then, was to encourage their citizens to use a car instead of owning one. Shared cars and shared parking addressed the city's space constraints by reducing the need for a separate space for each driver. Cambio features a shared access card for public transit vehicles, and coordinates car station locations with the city's bus and bike share system, offering its users complete, seamless integration.



system include the reliability and predictability of car locations and parking, as well as the ability to reserve cars in advance. However, the system allows less freedom of movement and spontaneity for members.

The other option is a free-floating system, where cars have no fixed stations. Members pick up the nearest car and may return it anywhere within an established zone. The system is more financially attractive for short trips and allows greater flexibility, but members cannot always rely on the exact location of cars. However, some free-floating models have websites and apps where users can locate cars.

Parking

A key aspect of any car share system is convenient and accessible parking. Station-based organizations pay for a permanently reserved space for each vehicle. This assures reliable, convenient parking for members. Station-based systems allowing one-way trips generally require more parking spaces, to guarantee available parking at the trip origin and destination. Free-floating models pre-pay the city to allow free parking for their vehicles at any legal parking space, both temporarily while in use and between reservations.

On-street parking has the advantages of being highly accessible to members, and provides greater visibility as a marketing tool for the organization. This may require higher coordination with the municipality, due to zoning regulations, parking laws, and street

Examples of International Car Share Organizations (CSOs)

CSO Name	Location	Management	System	# Cars	Members
ZipCar	USA, UK, Spain, Canada	Private	Station-based	10,000	810,000
Car2Go	USA, Germany, Canada, UK, France, Austria, Netherlands	Private	Free-floating	7,300	375,000
Zazcar	Sao Paulo, Brazil	Private	Station-based	60	2,800
cambio	Germany, Belgium	Private	Station-based	1,500	52,000
City Car Share	San Francisco, USA	Non Profit	Station-based	400	15,000
I-GO	Chicago, USA	Non Profit	Station-based	200	12,000
RelayRides	USA	Peer-to-Peer	-	200	6,000
DriveNow	Germany and San Francisco	Private	Free-floating	1620	60,000
Autolib	France	Private	Station-based	1750	60,000
Modo	Vancouver, Canada	Co-op	Station-based	290	8,000

cleaning schedules. Off-street parking is easier to enforce and maintain and it allows for partnerships with private businesses and developers, but it may also be more difficult for members to find.

Costs

Initial costs for starting a car share organization (CSO) in the United States typically range from \$175,000 - \$250,000. This includes the costs of vehicles, operating costs, fuel, cleaning, parking fees, insurance, staff, technology, and marketing, among other costs.

Specific costs vary considerably, based on membership size and location. While newer, more energy efficient cars reduce fuel costs and are a common selling point, these cars are often more expensive. CSOs should expect to provide one car for roughly 40-45 members. Parking costs can vary based on regional property values, government agreements, and specific space location, but are typically \$250-\$400 per month per vehicle.

Benefits

Environmental: Most car shares reduce the environmental impact of driving and transportation. They typically offer newer, low emission vehicles. Members report driving less, using public transit more, and opting out of private car ownership. Each car share vehicle replaces from 4 to 15 personal vehicles on the road. Car sharing also leads to reduced congestion and less time looking for a parking space, further reducing emissions.

Economic: Car share members report a net savings of \$2,000 to \$8,000 annually, compared with owning a personal vehicle. Furthermore, by paying for each trip, car share better captures the economic and environmental impact of driving, allowing members to evaluate the best mode of transportation for the journey.

Off-street Parking and Zoning Laws

In Portland, Oregon, a 2013 zoning amendment allowed developers to reduce the number of required parking spaces in new buildings by designating certain spaces for off-street car share parking. For every car share parking space provided, the vehicle parking requirement is reduced by two spaces, up to a maximum of 25 percent of the required parking spaces. Other municipalities, including San Francisco and the Vancouver Metro Area have experimented with similar policies offering between a two and five space reduction in required parking per car share space provided. Fewer required parking spaces means more area that can be developed for other uses, such as offices and affordable housing.

Municipalities can also offer tax breaks to developers for including car share parking in lieu of private car parking, or rezone residential districts to allow parking for car share use (a commercial activity). All these policies give developers more flexibility, promote a dense, mixed use urban form, and encourage sustainable transit.

Zazcar

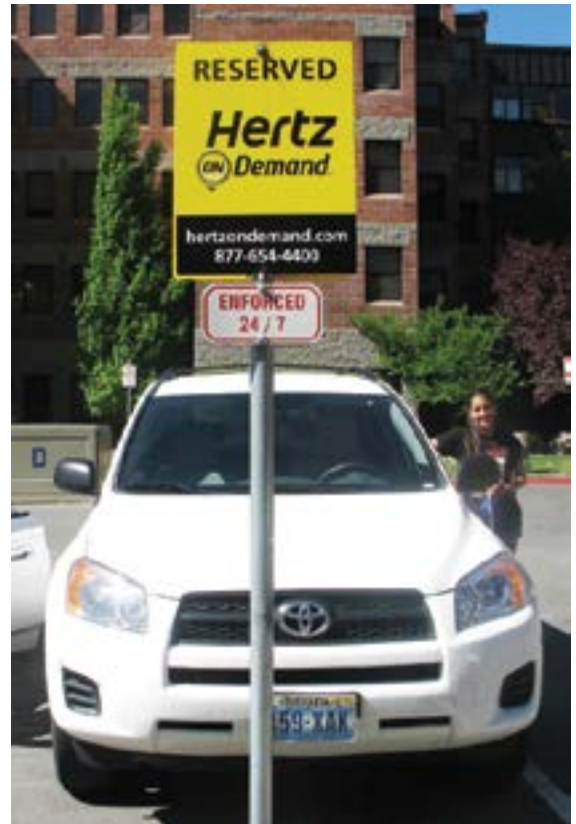
Inspired by Zipcar, Zazcar is a private, station-based car share organization with 45 stations in downtown São Paulo. Zazcar offers a variety of vehicle models, ranging from a compact smart car to a larger SUV, allowing users to choose the appropriate vehicle for their trip. Fees are charged both by the hour (\$5.40 for the cheapest car) and per km traveled (\$0.30), providing incentive for efficient use of the carshare vehicle.



Government Support

Cooperation between local government and CSOs provides mutual benefits, often by incorporating car sharing into regional transportation and long term planning documents. The strategic placement of car share stations in downtown areas, or in low-income areas, can provide alternatives to private cars, improve mobility, and reduce congestion.

Governments can aid CSOs in several ways. The city can serve as an anchor client by using car share vehicles. This creates a network of users for the organization and can result in savings for the city. Cities often subsidize the program up to a certain revenue point during its startup phase. Government can also provide grants or startup loans, using funds related to transportation and environment. Municipalities often work with car shares to provide free or reduced cost parking, and to provide incentives for developers to host car share parking. The city can also promote car sharing through advertising on public transit and other government owned outlets.



Savings for Cities, Mobility for Residents

In 2010 the City of San Antonio, Texas received a \$78,000 grant from the US Department of Energy to conduct a feasibility study of a local car sharing program. The study recommended contracting with an existing car sharing organization to expand into San Antonio using the local government as an anchor client. In April 2012, Hertz on Demand launched in San Antonio, after the city awarded it a contract worth \$60,000, provided \$5,000 for station installation, and rented 21 parking spaces to Hertz on Demand at \$100/mo. The program will reduce the city's fleet costs by \$160,000 over a five-year period.