

Car Sharing



Purpose

- Evaluate the potential for car sharing for DOT employees traveling for official city business
- Reduce parking footprint of DOT vehicles in Lower Manhattan
- Improve efficiency of vehicle use at DOT
- Improve ease of vehicle use for DOT employees
- Reduce cost of vehicle use at DOT

Outreach

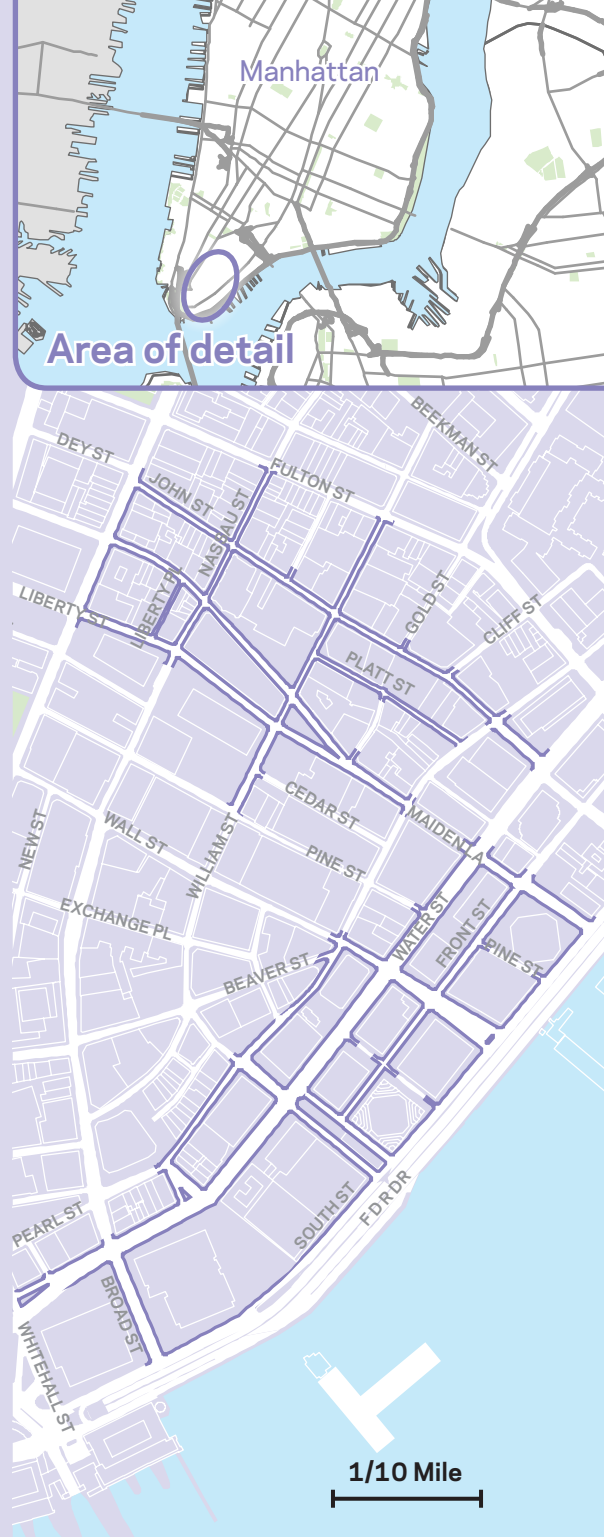
- DOT released a low-bid Request for Proposal to pilot the car share program in October 2009
- DOT selected and trained staff for participation in the pilot in summer 2010
- Surveyed participating DOT staff in June 2010, October 2010 and February 2011

Approach

- Removed 25% of DOT vehicles from the Lower Manhattan fleet
- Trained 350 DOT employees to participate in the car sharing pilot
- Collected before and after data to evaluate the effectiveness of the program

Results

- Reduced DOT parking impact in Lower Manhattan by 14% during weekdays and by 68% during weekends
- Reduced DOT's Vehicle Miles Traveled by 11%
- Improved vehicular reservation process, vehicular availability and ease of finding parking when returning vehicles
- Continued use of program results in cost savings to DOT



The Financial District is located in Lower Manhattan at the southernmost part of the island. While most of the land uses are high-density office-retail, the Financial District has seen considerable growth since 2008 in full-time residents as office spaces convert to apartments and condominiums.

DOT launched a pilot car sharing program in September 2010 to reduce the agency's fleet size while also reducing the department's carbon and parking footprint in Lower Manhattan. Car sharing provides participants access to a fleet of shared vehicles. Unlike car rental services, it is typically intended for shorter duration trips and more frequent use. City agencies in Philadelphia and Washington DC have shown that car sharing can reduce the size of city-owned fleets and decrease costs while maintaining staff access to autos. DOT is the first agency in New York City to implement car sharing to replace city vehicles. Its success could lead to the adoption of car sharing by other agencies and potentially a citywide municipal car sharing system. Implementing a car-share program to reduce the agency's use and size of its fleet is part of DOT's strategic plan, Sustainable Streets.

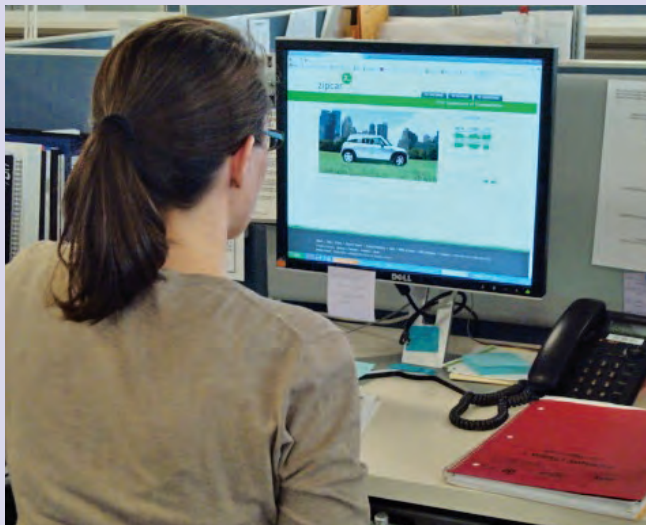
In the pilot, DOT removed 50 vehicles from its Lower Manhattan fleet and provided 350 employees with access to car share vehicles located in Lower Manhattan. Zipcar was awarded the low-bid contract and launched the agency's car sharing pilot program in September 2010. 350 DOT employees from divisions based in Lower Manhattan were selected to participate in the car sharing pilot based on their job responsibilities and need for vehicle access. The program allows these employees to reserve Zipcar vehicles through the company's website for a set hourly rate that is billed to DOT. The Zipcars may be used for agency business that is not accessible or feasible to reach using public transportation, including field visits, community meetings and activities that require equipment or materials to be transported. The vehicles are parked in off-street garages and accessible to participating employees using a key-card activation system. Employees are able to reserve parking placards for city business through a separate internal system of reservations and returns.

The evaluation period for the pilot program ran from program launch through December 2010. The program evaluation focused on four main areas: on-street parking near DOT offices in Lower Manhattan measured through parking surveys conducted in June and October 2010; utilization of DOT fleet vehicles based in Lower Manhattan and of car sharing vehicles; employee feedback using survey tools; and cost incurred by DOT based on the Zipcar contract and actual costs incurred by the agency for gas, maintenance, tolls and depreciation.

DOT surveyed on-street parking on weekdays and weekends before and after the program was in place for more than one month. The total number of hours that DOT vehicles occupied on-street parking spaces during the week was reduced by 14% on weekdays and by 68% on weekends. It should be noted that DOT vehicles from outside Lower Manhattan were likely included in the observations in addition to vehicles based in Lower Manhattan.

Zipcar-use reports and a sample of fleet logbooks were analyzed to understand vehicle usage patterns both before and during the pilot. The results, including both reduced usage of vehicles in the DOT fleet and use of car share vehicles, showed decreases of 21% in miles traveled and 17% for vehicle hours. Thus, combined use of car sharing and DOT fleet showed an overall vehicle utilization decline across all metrics. It should be noted that the evaluation period occurred in late fall and early winter, which could contribute to fewer trips in general.

Being able to maintain agency operations while reducing vehicle use and costs was a critical aspect in evaluating the effectiveness of the car sharing pilot. To evaluate these impacts, employees were surveyed before, during and after the pilot evaluation period using an online



Reservations for car sharing vehicles can be made on-line at any time.



Once a reservation is made, DOT employees access car share vehicles by tapping the bar code on the car with their Zipcar key-card.

Reduced DOT parking impact in Lower Manhattan by 14% during weekdays and by 68% during weekends after implementation of a car sharing program at DOT in Lower Manhattan.

tool to evaluate how the system impacted employees and whether their behavior changed due to the introduction of car sharing. Specific topics included reservation process, typical time required for reservations, typical availability of vehicles, frequency of changes to reservations, and occurrences of correct and incorrect reservations. Employees reported that the car sharing system made it easier to reserve vehicles including reducing the time to confirm a reservation; increased the availability of vehicles while reducing occurrences of reservations being changed by others; and made it easier to find a parking space at the end of the reservation. Employees reported that it was easier to report a damaged vehicle in the fleet system than in the car sharing program. This may be attributable to personal

relationships between employees who drive and employees responsible for vehicle maintenance, compared to contacting an anonymous representative.

A cost analysis was performed and showed that continued use of the program results in cost savings to DOT, taking into account vehicle fleet reduction and not needing to purchase new vehicles. Results show the car sharing pilot program was a success in the measures of reduced utilization and parking demand. The results of the evaluation led to the renewal of the contract for an additional year.

**Vehicle Fleet & Car Sharing Utilization
Before and During the Pilot**

Average Vehicle Utilization	Fleet Pre-Pilot (196)	Fleet Pilot (146)	Change in Fleet Use	Car Sharing Pilot	Overall Reduction
Average Vehicle Sessions Per Week	518	408	-21%	49	-12%
Average Vehicle Miles per Week	17,072	13,736	-20%	1,420	-11%
Average Vehicle Hours per Week	3,428	2,661	-22%	296	-14%

Pre-Pilot data collected in May - August 2010. Pilot data collected in September - December 2010.

Intensity of Use DOT Fleet Vehicles

Vehicle Utilization/ Week	Fleet Pre-Pilot (196)	Fleet Pilot (146)	Change in Fleet Use
Average Miles per Week per Vehicle	124.6	150.9	21%
Average Hours per Week per Vehicle	25.0	29.2	17%

Pre-Pilot data collected in May - August 2010. Pilot data collected in September - December 2010.