SFpark system in San Francisco

The SFpark is a system for managing on-street parking, managed by the San Francisco Municipal Transportation Agency. It involves smart parking meters that change prices according to location, time of day, and day of the week.

Objectives

Parking usage is monitored via sensors placed in the asphalt, and users can check the availability of parking and prices via the internet and on mobile apps. Prices are designed with the objective of keeping an average occupancy rate between 60 and 80% in any given block. The idea is to eliminate mileage spent in searching parking by ensuring that drivers are always able to find a parking spot.

Description

SFpark was a demonstration project funded through the Department of Transportation's Urban Partnership Program in 2011 and evaluated in 2014. For the SFpark pilot project, the SFMTA used several strategies to make it easier to find a space and improve the parking experience, including:

• Demand-responsive pricing.

• Making it easier to pay at meters.

• Longer time limits.

• Improved user interface and product design for touch points with the parking system.

• Improved information for drivers, including static directional signs to garages and real-time information about where parking is available on- and off-street.

• Highly transparent, rules-based, and data-driven approach to making changes to parking prices.

SFpark piloted and/or cultivated several emerging technologies, including smart meters, parking sensors, and a sophisticated data management tool. At the heart of the SFpark approach is anyway demand-responsive pricing, whereby the parking management gradually and periodically adjusted rates at meters and in garages up or down. The goal was to ensure a minimum level of availability so that it was easy to find a parking space most of the time on every block and that garages always have some open spaces available. Furthermore, meeting target availability also meant improving utilization of parking so that spaces—on-street or off—would not sit unused.

Impact & outcomes

Ex-post evaluations of the programme not only indicate that parking tariffs marginally decreased on average, but also that travel mileage declined by about 50% in the first two years of implementation. This means that, overall, drivers are better off thanks to the

introduction of the system. About the most important results, it is worthwhile to stress the following ones:

- Parking availability at meters improved by 16% in pilot areas, while falling 50% in control areas, making it easier to find parking.

- Achievement of the target occupancy rate increased by 31% in pilot areas, compared to a 6% increase in control areas, improving parking utilization significantly.

- Parking availability and utilization improved even more on blocks in pilot areas that had high payment compliance (i.e., where most occupied spaces were paid): parking availability increased 45% and there was a 100% increase in achievement of target occupancy rate.

- SFpark maintained consistent parking availability while increasing utilization of SFpark garages. Utilization grew by 11%, far exceeding non-SFpark garages. The greatest increase (14%) occurred during off-peak periods. This improved the utilization of these city assets, and helped to reduce parking demand on the street.

- SFpark decreased the number of daily commuters parking in SFMTA garages and increased the number of short-term hourly parkers, supporting the goals of reducing commuting by car and improving economic vitality.

In general, the evaluation has shown how demand responsive pricing improved both parking availability and parking utilization. Prices decreased on blocks that were underused, which increased use, and prices increased on blocks that were too full, which tended to lower occupancy into the target range.

Barriers / constraints and how they have been overcome

Payment compliance was a challenge. While demand-responsive pricing delivers the benefits expected, those benefits were more pronounced where most people paid at the meter. Data from pilot evaluation confirmed that many blocks consistently had low payment compliance, which is when cars are parked without paying the meter.

From the technological point of view, without effective smart meters, SFpark would not have been possible. After developing new processes to overcome these issues, the meters successfully worked with the SFMTA's system and enabled SFpark to meet the goals of making it easier to pay for parking and reducing meter citations. The ability to quickly change meter rates and accommodate complex rates that vary by time of day and day of week was indeed essential for a project of this scope and ambition.

Good Practise

Time for planning and implementation

Three years for planning and implementation 2010-2013

Rough costs and resources

Automated data feeds, storage, and analysis, training of personnel, Parking sensors, Marketing and communications, Variable message parking signs, Manual data collection and analysis, Roadway sensors and Parking garages amounted to 46,236,000

Further information available at / from

SFpark

http://sfpark.org/how-it-works/pricing/