

# Multimodal Value Pricing Pilot for Metered Curbside Parking - Chinatown/Penn Quarter

**parkdc**



November 17, 2014

# Outline

- › Parking issues and opportunities
- › Chinatown/Penn Quarter Pilot project overview
- › How the customer experience will change
- › How DC agency's business process will be affected
- › Next Steps

# PARKING ISSUES AND OPPORTUNITIES

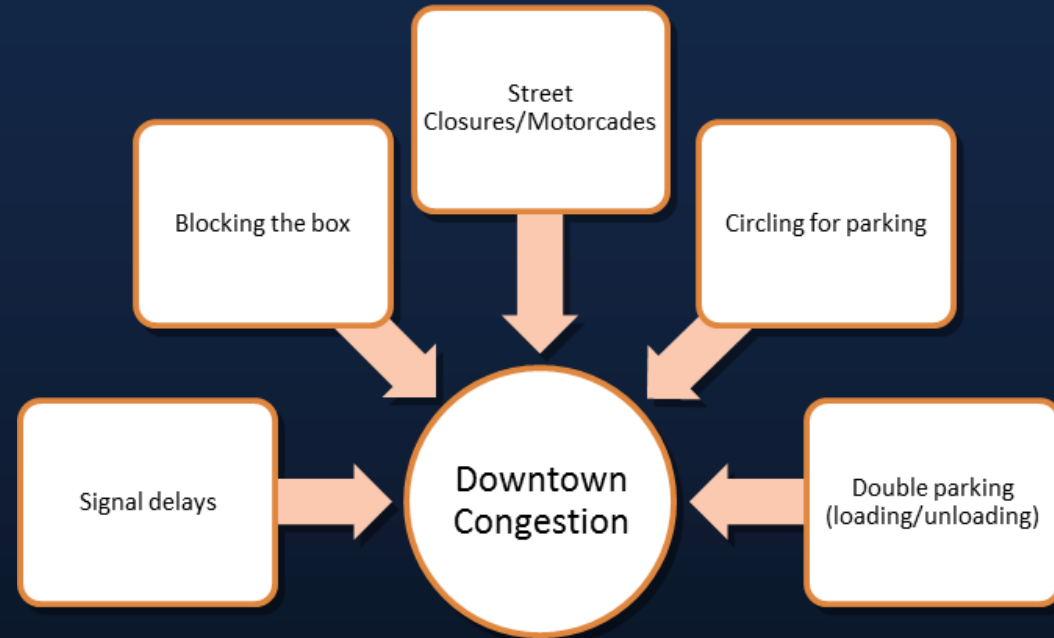
# Video



<http://vimeo.com/97065285>

# The Parking Ecosystem is Unbalanced

- › Curbside parking is “oversubscribed”
- › Lack of available parking contributes to congestion
- › Double parking creates additional issues
- › The “agony” associated with parking has negative effects



# A Smart Approach to Parking

## *Rebalance supply and demand:*

- › Push parkers to underutilized spaces (i.e., on-street & off street lots)
- › Provide better parking information
- › Encourage higher turnover
- › Encourage use of other modes

## *This will be accomplished through:*

- › Demand-based pricing (not a new concept!)
- › Leveraging technological advances
- › Expanding upon a growing knowledge base

# Demand-Based Pricing is Not a New Concept

1954



“[Parking should be kept] at a [price] level so determined as to keep the amount of parking down sufficiently so that there will almost always be space available for those willing to pay the fee ...”

## William Vickrey

Vickrey, W.S., 1954, "The Economizing of Curb Parking Space," Traffic Engineering Magazine, Nov. Reprinted in Journal of Urban Economics 36, (1994), 56-65.



# Local Example of Demand-Based Pricing

## I-495 HOT Lanes (Opened Nov 2012)



Dr. Gridlock

Virginia's new HOT lanes could open as early as December



### Sources:

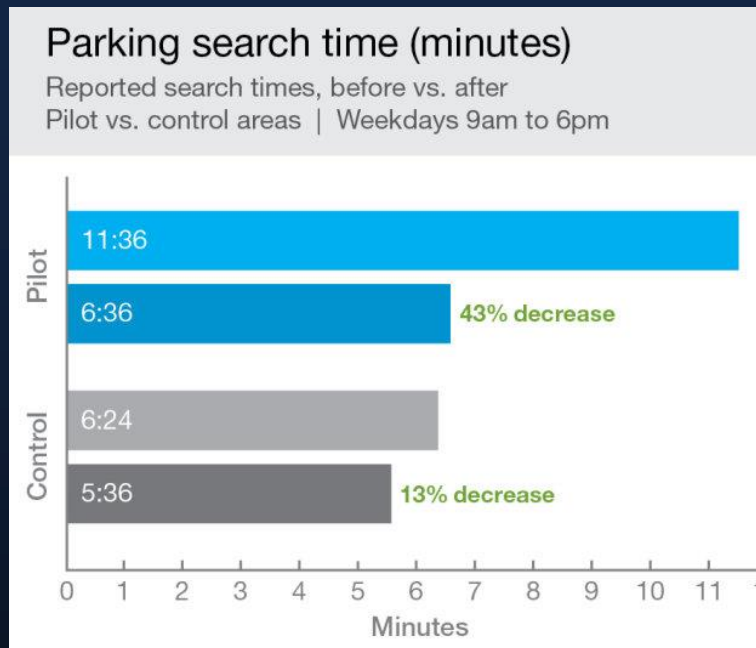
Left: <http://www.aaroads.com/guide.php?page=i0495oava>

Right: : Washington Post Article, October 9, 2014, By Lori Aratani, <http://www.washingtonpost.com/blogs/dr-gridlock/wp/2014/10/09/virginias-new-hot-lanes-could-open-as-early-as-december/>



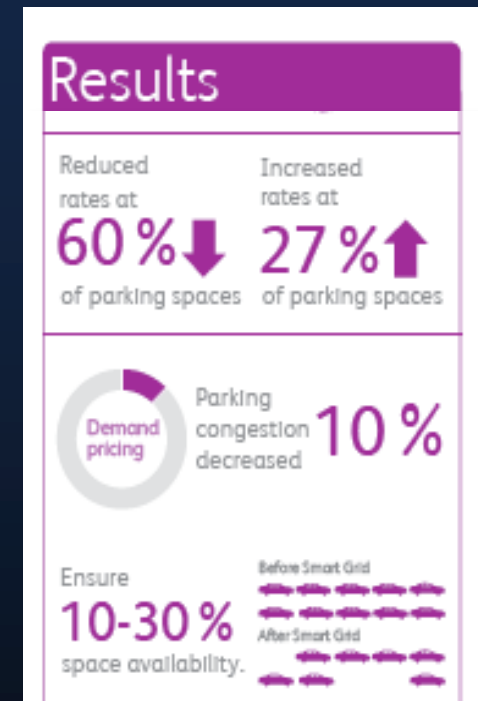
# Smart Parking Debuted in US

## SFpark (2011)



- › Parking search times were significantly reduced

## LA Express Park™ (2012)



- › Prices reduced more often than increased

# Extending Demand Pricing to Loading and Bus Zones

- › Delivery and tour bus operators are important users of curb space
- › Demand-based pricing can increase parking availability and reduce their impacts on congestion



# CHINATOWN/PENN QUARTER PILOT PROJECT OVERVIEW

# Project Timeline



# The Chinatown/Penn Quarter Study Area

140 block faces

1300 metered spaces

30 loading zones

10 bus stop locations

4 bikeshare stations

6 car sharing spaces

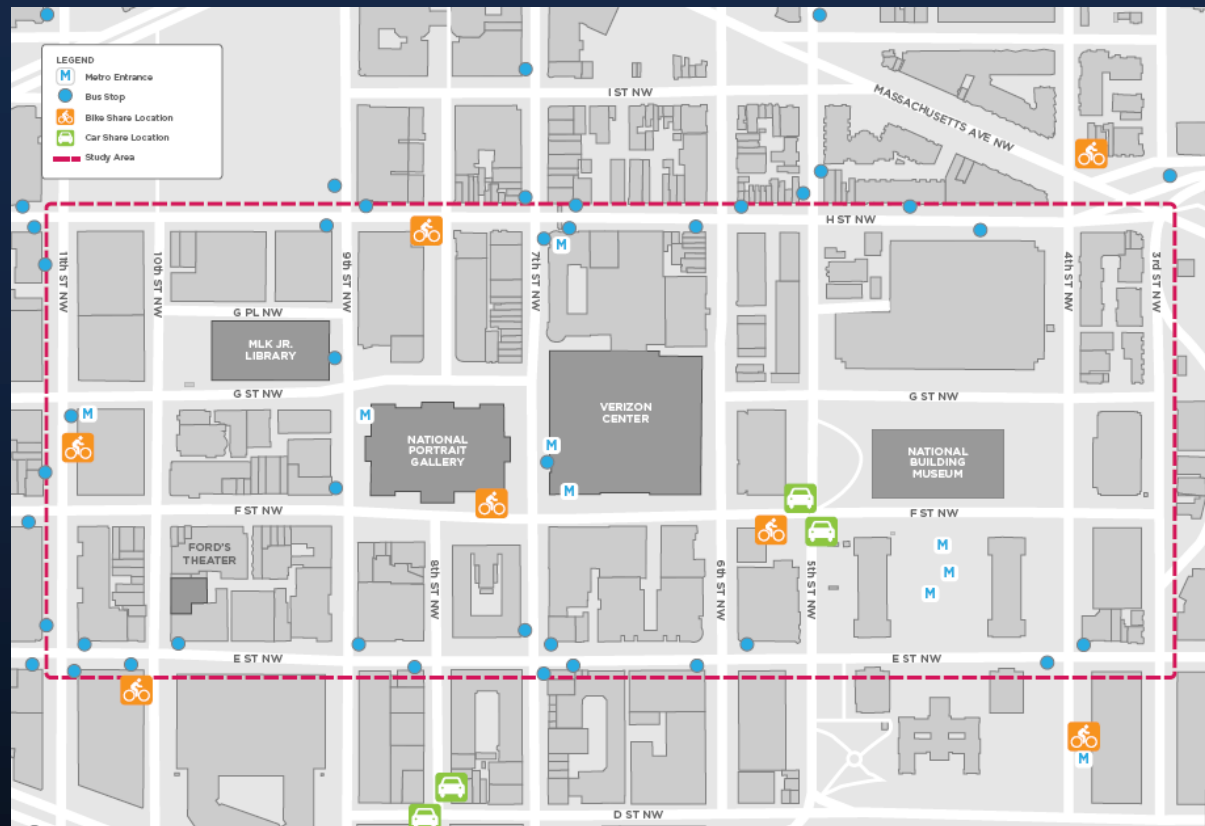
Intercity bus stops

3 major Metro stations

WMATA & Circulator stops

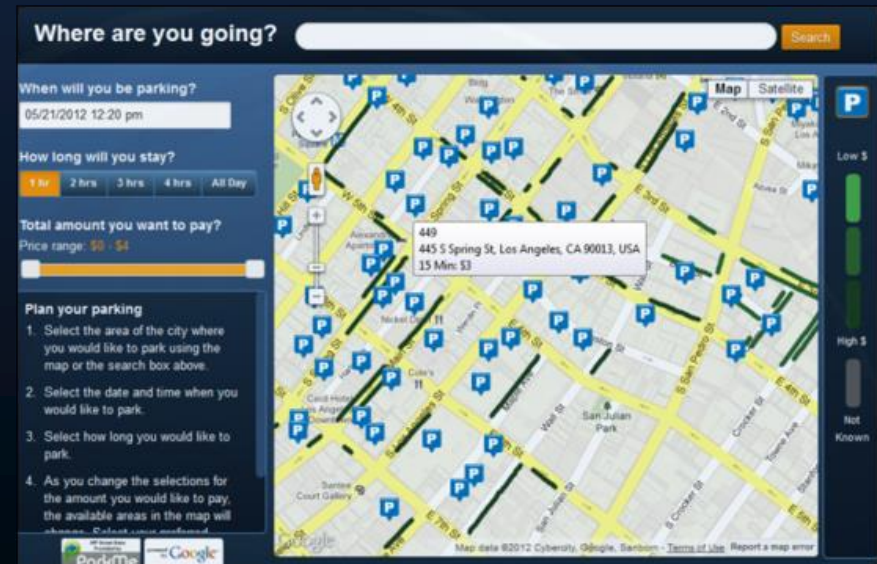
Freeway-Arterial Interaction

Different land uses



# Key Project Activities

1. Transition to pay-by-space parking
2. Install “asset lite” parking occupancy detection
3. Provide new parking communication and signage
4. Implement demand based parking pricing changes
5. Provide real-time parking availability information
6. Conduct surveys and impact assessments



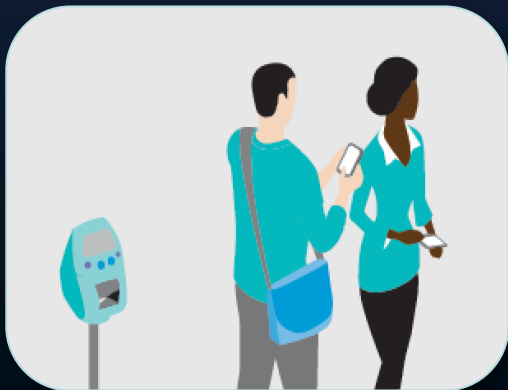


# Asset Lite Approach

Using meter and phone payments as an occupancy proxy



Determined .982 coefficient of correlation for NE client



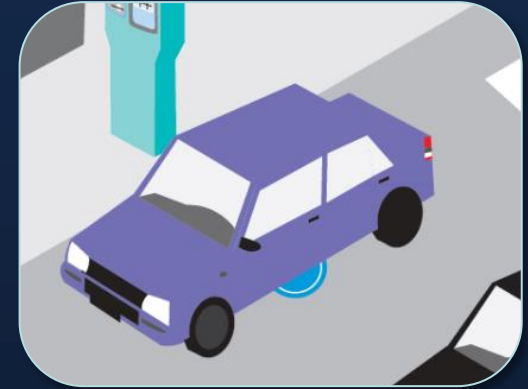
Portable CCTV cameras can capture and predict occupancy



97% accurate and provides valuable data about vehicle sizes



Reduced sensor coverage (nearly as effective)



Spatial smart parking reduces sensor expenditures



# “Asset Lite” Solutions

## Meters

- › As pay by cell penetration rates increase to around 50%, remove meters from one side of the street
- › Assess impacts

## Occupancy Sensing

- › Alternative hardware
- › Fixed vs. movable
- › Fuse data from other parts of parking eco-system
- › Real-time - meters, pay by cell
- › Historical – citation, revenue

# HOW THE CUSTOMER EXPERIENCE WILL CHANGE

# New Infrastructure

## New parking meters



Credit: Mr. T in DC

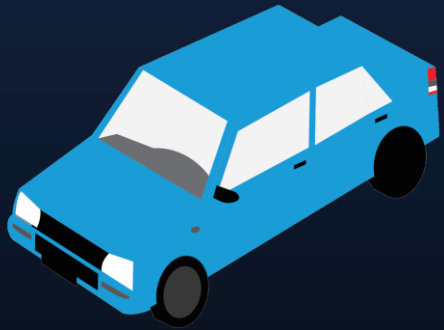


## Pay-by-space configuration



# Current Pay-and-Display Parking

*Park vehicle. Spaces are unmarked*



*Walk to multi-space meter to pay*



*Return to vehicle to display the receipt on the dashboard*



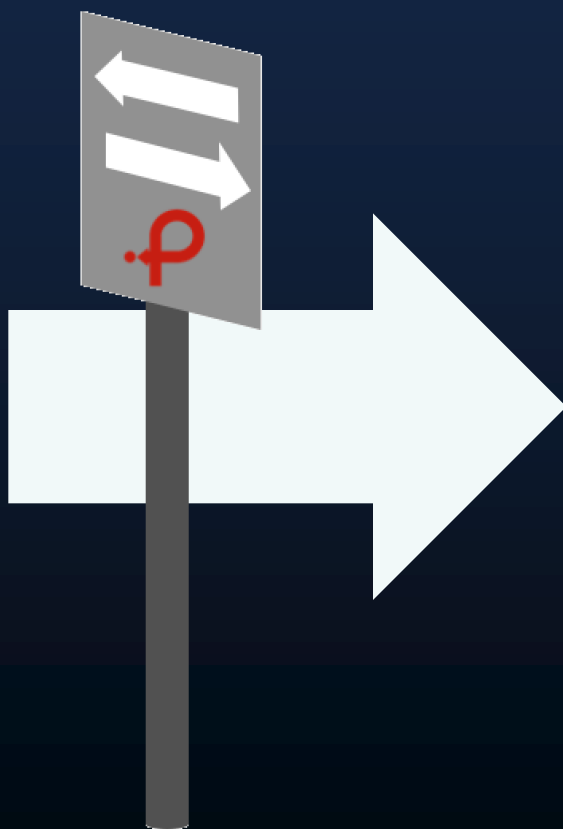
*Make way to destination*



# ParkDC's Planned Pay-by-Space Approach

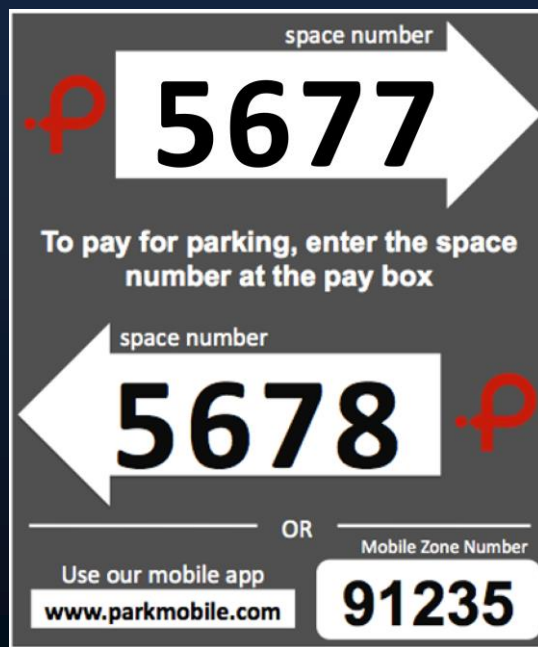
## Step 1: Park

Spaces are indicated with meters or space markers.



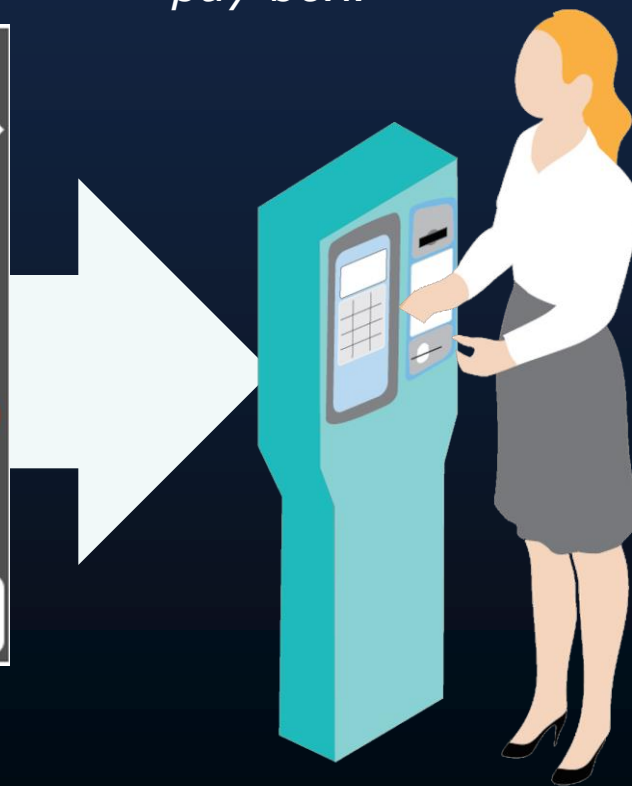
## Step 2: Enter Space #

If parked at a space marker, remember the 3- or 4-digit number.



## Step 3: Pay

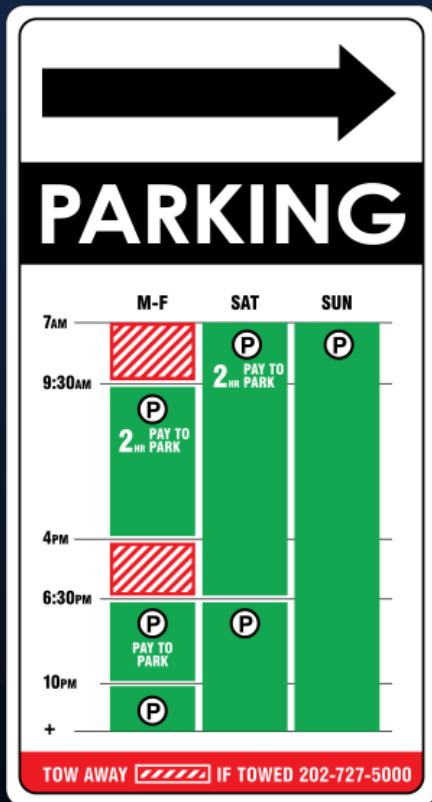
Pay the meter or pay after entering the space number at the pay box.



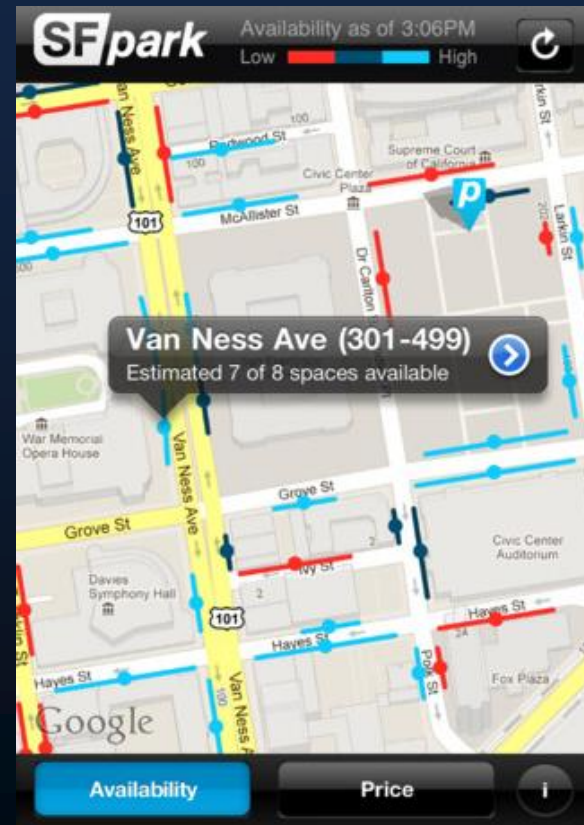


# Better Communication and Information

Better signage - including testing new designs



Real-time parking availability information (example from SF)



# Variable Pricing Concept

- › Price adjustments quarterly
- › Different pricing by time of day

CURRENT Parking Prices Per Hour (same price throughout)			
	M-F	Sat	Sun
7am – 9:30am	No parking	\$\$\$	Free
9:30am – 4pm	\$\$\$	\$\$\$	
4pm – 6:30pm	No parking	\$\$\$	
6:30pm – 10pm	\$\$\$	\$\$\$	
Overnight	Free	Free	

FUTURE Parking Prices Per Hour (different rates based on congestion; adjusted periodically)			
	M-F	Sat	Sun
7am – 9:30am	No parking	\$	Free
9:30am – 4pm	\$\$	\$\$\$\$	
4pm – 6:30pm	No parking	\$\$\$	
6:30pm – 10pm	\$\$	\$\$\$	
Overnight	Free	Free	

SAMPLE ONLY

# PROJECT ENGAGEMENT AND OUTREACH ACTIVITIES

# Multiple Touch Points Planned

- › Meetings with business, commerce and neighborhood groups
- › Social media
- › Press releases
- › Technology demonstrations
- › ParkDC website updates
- › Mobile applications

Did you remember to pay your parking meter?



A collage of promotional materials for new parking meters. It includes a flyer with the title "New Parking Meters Coming Soon!" and text about the implementation in Spring 2011. The flyer also features two maps of downtown areas. Another part of the collage shows a sign for "New Parking Meters... Coming soon to Indianapolis" with the parkindynet logo.

# Upcoming Activities

- › Media briefing
- › Reach out to Downtown BID and other area stakeholders
- › “Prepare the Ground”
  - Pay by space conversion – Early 2015
  - Detector and camera testing
- › Test “asset lite” and data fusion algorithm
- › Develop dynamic pricing engine
- › Continue coordination with partner agencies
  - Enforcement business process
  - Other
- › Price changes – Summer 2015 & quarterly thereafter
- › Pilot ends - Fall 2016

# More information

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