Multimodal Value Pricing Pilot for Metered Curbside Parking -

Chinatown/Penn Quarter

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

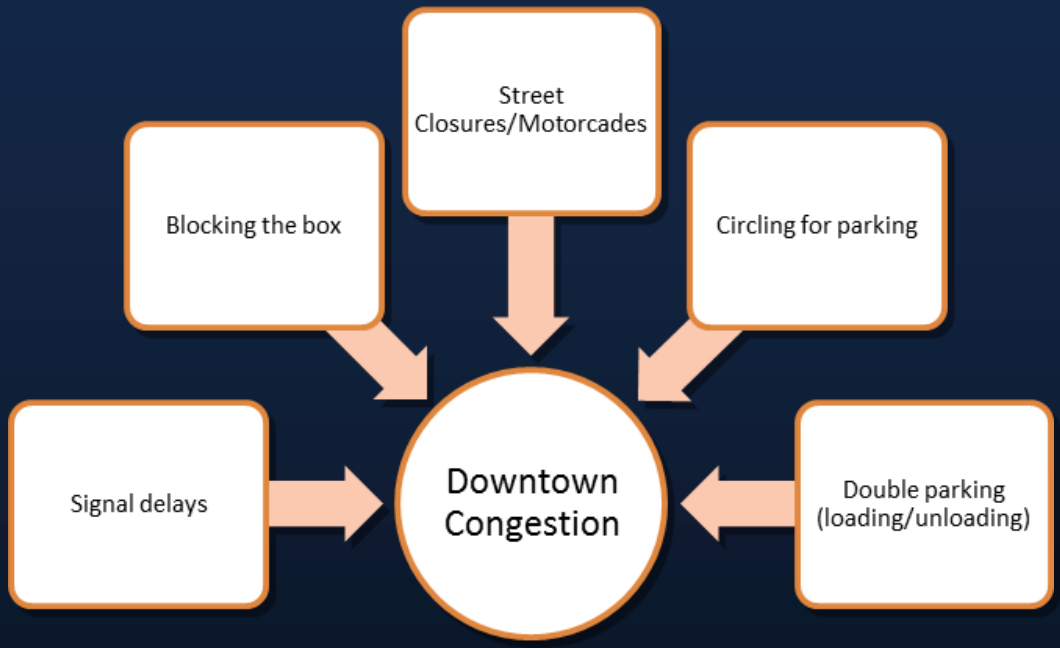
PARKING ISSUES AND OPPORTUNITIES

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:

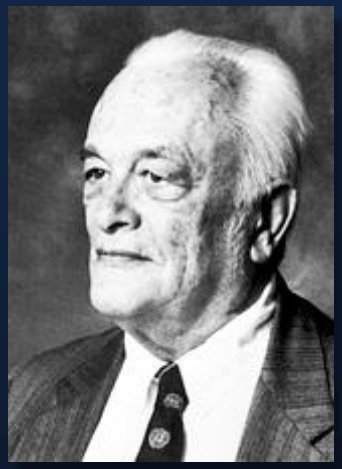
- Push parkers to underutilized spaces (i.e., on-street & off street lots)
- Provide better parking information
- Encourage higher turnover
- Encourage use of other modes

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



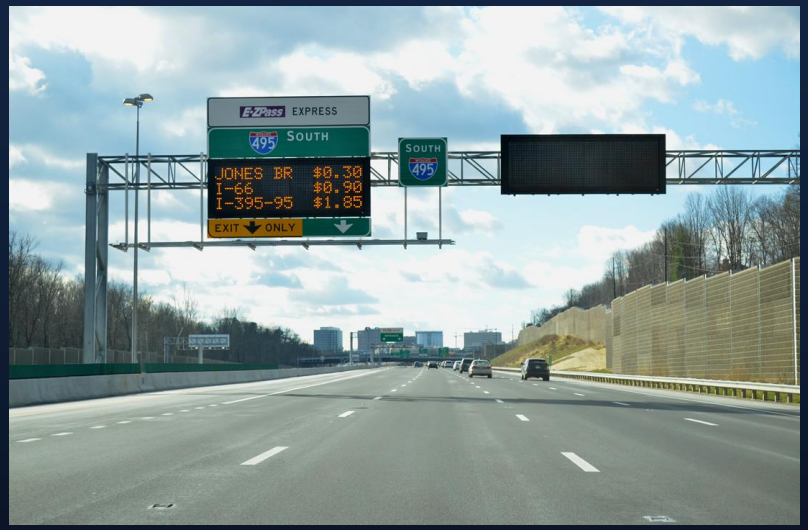
William Vickrey

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

"[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 …"

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

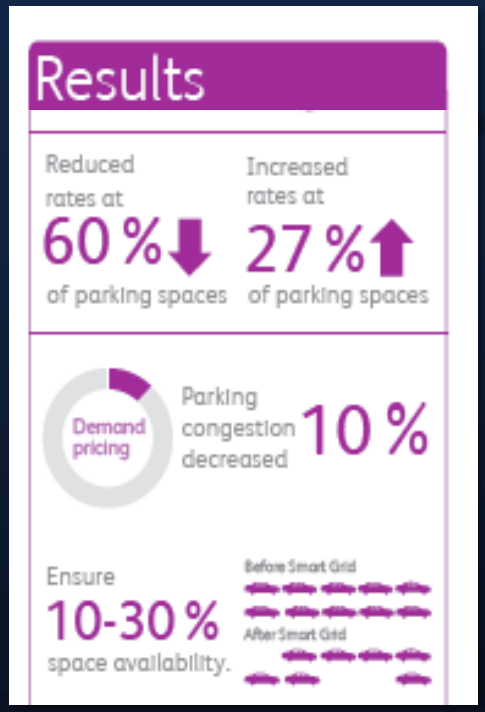
Sources:
Left: http://www.aaroads.com/guide.php?page=i0495oava
Right: : Washington Post Article, October 9, 2014, By Lori Aratani, http://www.washingtonpost.com/blogs/dr-gridlock/wp/2014/10/09/virginias-new-hot-lanes-could-open-as-early-as-december/

Smart Parking Debuted in US

SF*park* (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

2010
Performance-Based Parking Programs - Columbia Heights and Navy Yard

2011
Pay-by-Cell Introduced (ParkMobile)

Jan-May 2015
Test Parking Sensors and Cameras, Transition to Pay by Space

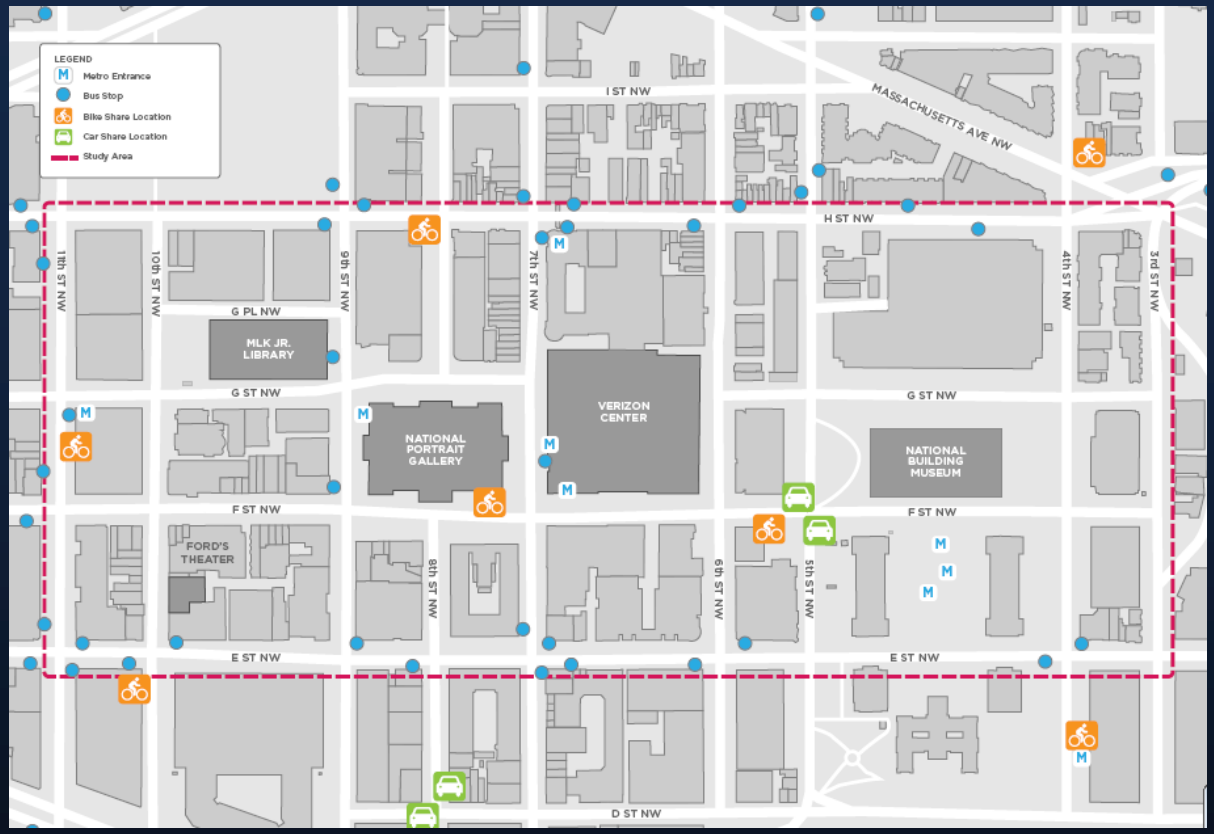
June 2015
Baseline Conditions Assessment

Summer 2015
First Pricing Adjustment Implemented (to be Updated Quarterly)

Fall 2016
Comprehensive Impact Assessment

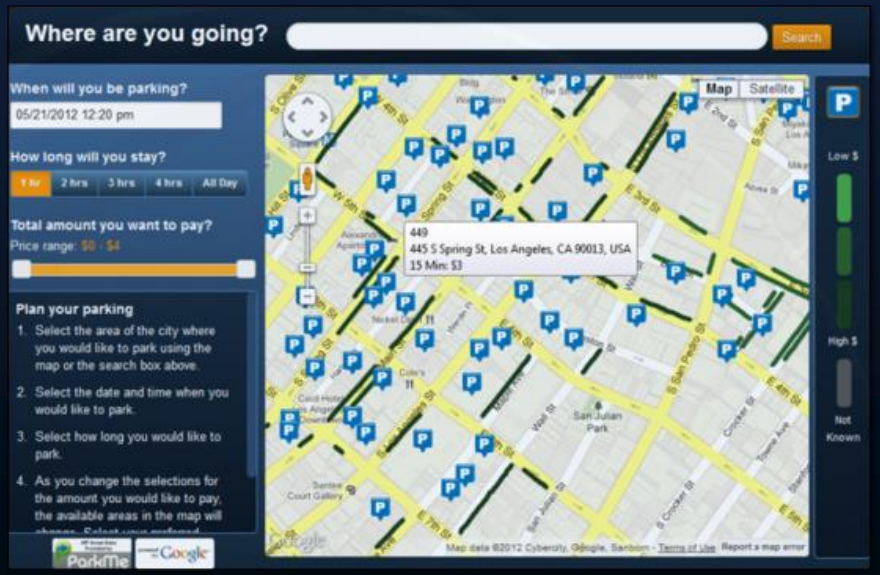
The Chinatown/Penn Quarter Study Area

- 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

Portable CCTV cameras can capture and predict occupancy

Reduced sensor coverage (nearly as effective)

Determined .982 coefficient of correlation for NE client

97% accurate and provides valuable data about vehicle sizes

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

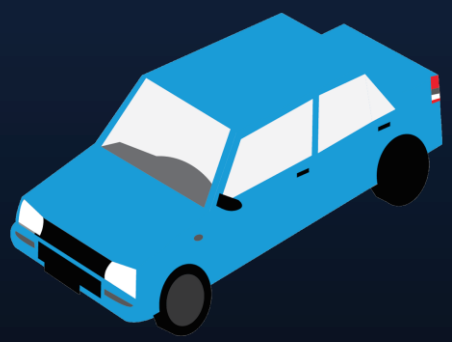
New Infrastructure

New parking meters

Pay-by-space configuration

Current Pay-and-Display Parking

Park vehicle. Spaces are unmarked



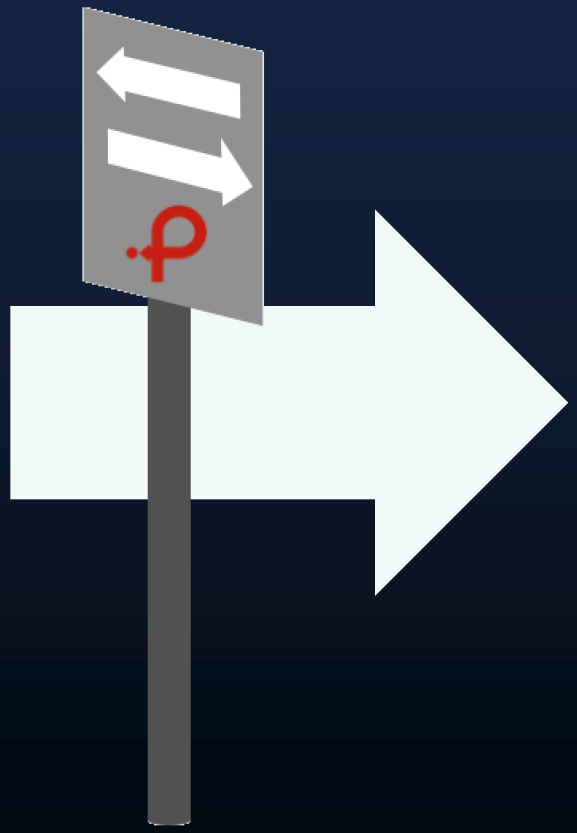
Walk to multi-space meter to pay

Return to vehicle to display the receipt on the dashboard

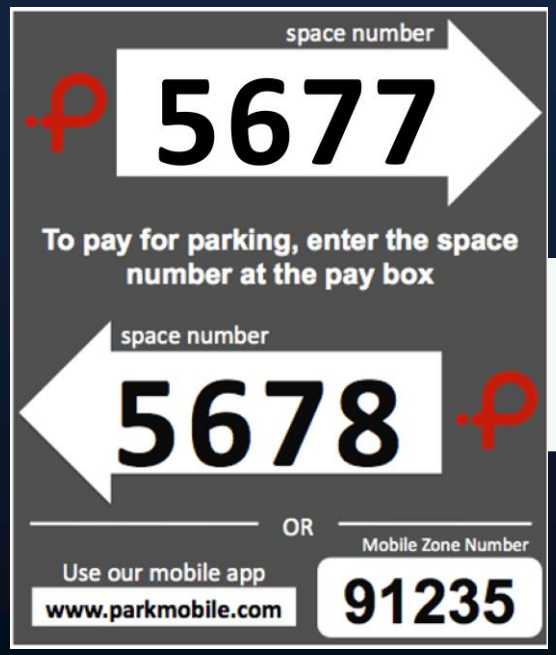
Make way to destination

ParkDC's Planned Pay-by-Space Approach

Step 1: Park
Spaces are indicated with meters or space markers.



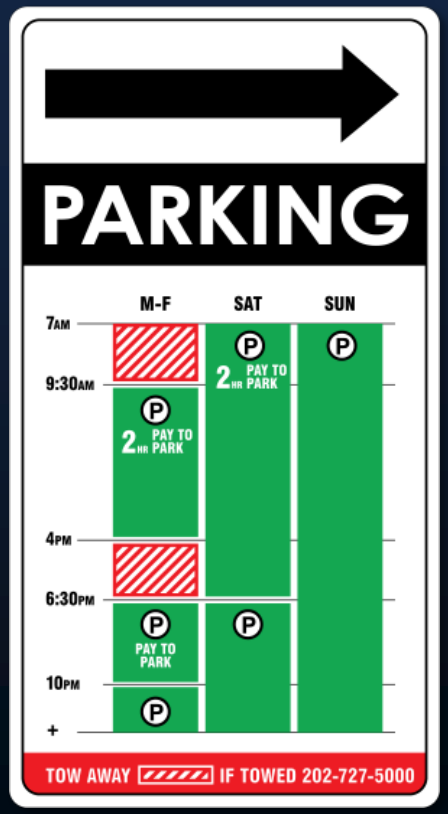
Step 2: Enter Space #
If parked at a space marker, remember the 3- or 4-digit number.



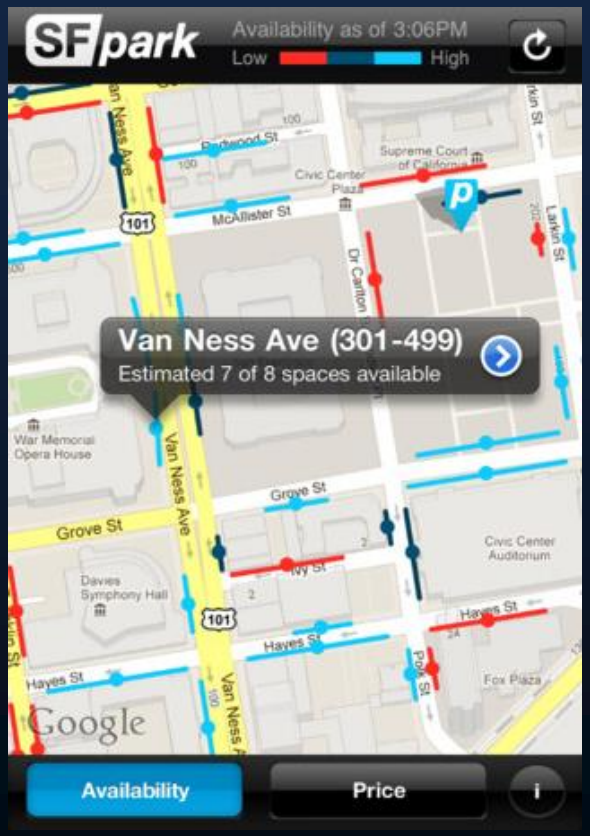
Step 3: Pay
Pay the meter or pay after entering the space number at the pay box.

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

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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