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

Local Example of Demand-Based Pricing

I-495 HOT Lanes (Opened Nov 2012)

Sources:
Smart Parking Debuted in US

**SFpark (2011)**

- Parking search times were significantly reduced

<table>
<thead>
<tr>
<th></th>
<th>Minutes</th>
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</thead>
<tbody>
<tr>
<td><strong>Pilot</strong></td>
<td><img src="image1.png" alt="Pilot Graph" /></td>
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<tr>
<td>11:36</td>
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<td>6:36</td>
<td>43% decrease</td>
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<td><strong>Control</strong></td>
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<td>6:24</td>
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<tr>
<td>5:36</td>
<td>13% decrease</td>
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**LA Express Park™ (2012)**

- Prices reduced more often than increased

- Reduced rates at 60% of parking spaces
- Increased rates at 27% of parking spaces
- Parking congestion decreased 10%
- Ensure 10-30% space availability
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

Credit: Mr. T in DC
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

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<th>Time Period</th>
<th>M-F</th>
<th>Sat</th>
<th>Sun</th>
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<tbody>
<tr>
<td>7am – 9:30am</td>
<td>No parking</td>
<td>$$$</td>
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<tr>
<td>9:30am – 4pm</td>
<td>$$$</td>
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<tr>
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<td>Free</td>
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### FUTURE Parking Prices

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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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