

## National Evaluation of *SFpark*

Carol Zimmerman, Ph.D.

Battelle

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Atlanta



Los Angeles



Miami



Minnesota



San Francisco



Seattle

- Good management practice
  - Does the system perform as expected?
  - Were there any unanticipated effects?
  - What have we learned that will help us next time?
- U.S. DOT requires evaluation of major federally funded demonstrations
  - Gauge effectiveness of federal program
  - Communicate findings of the projects to help future deployers

- U.S. DOT awarded significant funds to six sites to demonstrate use of congestion pricing on traffic:
  - HOT lanes: Atlanta, Los Angeles, Miami, Minneapolis/St.Paul
  - Full facility pricing: Seattle
  - Variable parking pricing: San Francisco, Los Angeles
- Package of strategies required by U.S. DOT
  - Pricing plus other projects to enhance travelers' options
- Battelle-led team selected to do independent evaluation of the projects

- *SFpark* relies on pricing to increase parking availability, reduce time to find a space, and thereby lead to less circling
- Evaluation of *SFpark* guided by 4 questions U.S.DOT wanted answered:
  - How much was congestion reduced?
  - What impacts were associated with the congestion reduction strategies?
  - What were the non-technical factors for success of the strategies?
  - What were overall costs and benefits of the strategies?

- Congestion measures of effectiveness (MOEs) before/after *SFpark*:
  - Travel time and travel-time reliability
  - Vehicle and person throughput
  - Travel speeds
- Data sources:
  - Newly installed network of traffic detectors at selected locations
  - Automatic passenger counters on Muni buses for travel times through the *SFpark* districts

- Impacts on parking, traveler behavior and attitudes, equity, environment, goods movement
- Example MOEs include:
  - Parking search time, parking availability
  - Travelers' use of parking information
  - Air quality metrics:  $\text{No}_x$ , PM,  $\text{CO}_2$
- Data sources
  - Before/after field surveys: parking search time, double parking & disabled placard, visitor/shopper survey
  - System data: parking occupancy, duration, turnover, website and phone usage tracking, tax data
  - Modeled air quality using parking search time

- What were the institutional arrangements, political and community environment, and outreach efforts?
  - How did they contribute to the project?
  - What lessons have been learned?
- Data sources;
  - Stakeholder interviews and workshop
  - MOUs and other partnership documents
  - Outreach materials (e.g. marketing plans, events, brochures)
  - Media coverage

- Have *SF park* benefits exceeded costs?
- Cost data
  - Initial capital
  - 10 years of operation, maintenance, and replacement costs
- Benefit data
  - 10-years of estimated benefits using SF CHAMP model
  - Monetization of travel time savings, vehicle operations savings, and air quality improvements



- *SFpark* evaluation is the Cadillac in scope and resources requirements
- Evaluation of Los Angeles ExpressPark is more constrained
  - Budget permitted only collection of system data
- Other sites may want to aim for a middle ground
  - System data: occupancy, duration, price
  - Field observation data: parking search time is key
  - Customer response data: survey to understand behavior and attitudes related to parking and pricing

- SF UPA evaluation plan (2009) available at <http://www.upa.dot.gov/docs/fhwajpo10022/index.htm>
- Ten evaluation data test plans (2011) will soon be available on *SFpark* website and USDOT website
- Post-deployment data collection through July 2012
- Final report on findings in January 2013
  - Limited analysis of early results winter 2012