

Session 4E: Get Out of Your Car: New Mobility for the 21st Century Moderator: Shruti Vaidyanathan, ACEEE

Cathy Cibor, Alta Planning + Design

Measuring Transportation Behavior Change: Past, Present, and Future

Since the 1970s, transportation planners have attempted to influence travel behavior and encourage sustainable transportation through social marketing programs. But how do we know these programs are effecting change? And how do we measure that change for a habit that is so complex—one that requires individuals to make multiple decisions each day (work, school, store, etc.) for which there are multiple options (carpool, bicycling, staying home, etc.)? While many of the original outreach and intervention strategies are still used in transportation behavior change programs today, how we measure effectiveness has evolved over time. Large budgets and academic rigor have given way to the need for efficiency and rapid results. Having employed detailed phone surveys, mail-based travel diaries, door-to-door interviews, and more—and having explored changes in individuals' awareness, intent, confidence, and one-time, periodic, and daily behavior—program practitioners have tested myriad approaches to quantifying this complex change in behavior. Offering tools and lessons learned that are applicable to the entire behavior change field, this session will cover evaluation trends, innovations, and best practices from the transportation field over time.

Waiyan Leong, Land Transport Authority

Impact of a Daily Season Parking Scheme on Car Park Usage at the Workplace

A daily season parking (DSP) scheme was introduced at the Singapore Land Transport Authority (LTA) from August 2013 as part of efforts to encourage staff to use public transportation to work. The DSP scheme contrasts with the existing monthly season parking (MSP) scheme in that the DSP charges users for every day that the car park is used, while the MSP is effected on a monthly basis via payroll deductions. The idea of making season parking more responsive to usage draws from behavioural insights that upfront irrecoverable costs increase the tendency for people to consume a good or service more than they otherwise would. In other words, a MSP scheme is suspected of inducing a higher rate of car park usage (and car commuting) than a daily-rated one. Supporting this hypothesis, we find that there is a reduction in car park usage of about four days among the MSP holders who opted to convert to DSP, with the reduction in car park use becoming evident very quickly after the decision to convert. We also conducted a field trial at a different location to examine the relative effectiveness of a daily rebate scheme, where every day of non-car park use is rewarded by a rebate off the monthly car park charge, to a more traditional daily charge scheme. It appears that the daily rebate scheme is weakly more effective than the daily charge in discouraging car park use.

Joshua Sperling, New Concepts Incubator, National Renewable Energy Laboratory

Aligning incentives and public-private actors to realize co-benefits for smart urban mobility

The new Denver International Airport-Downtown Union Station RTD light rail line, which has received nearly \$1.5 billion in public and private investment, is projected to open in April 2016, offering a new alternative mode for travellers. This study explores incentives for, as well as enablers and barriers to, traveller adoption (including both business travelers and Denver residents) of this new infrastructure, through integration of ridesharing and light rail services. Results address the feasibility of local businesses and new mobility services implementing travel incentives that aim to increase rider satisfaction while realizing cost savings and promoting sustainable mobility in the Denver area. This study helps answer two key questions: How can companies and cities best incentivize the use of new transit investments, ride-sharing services, and integrated mobility mobile apps?; and what are the potential co-benefits (e.g. energy use, vehicle miles traveled, personal convenience, social)? A randomized case-control study explores different incentives (e.g. information, financial, and cultural capital) provided by companies and randomized groups of their employees travelling for business to use transit and ridesharing services to and from the airport to save and meet sustainability goals. Initial results from this effort and a complementary Denver travel behavior survey provides new information on travel behaviors and preferences that underlie adoption of hybrid use of ridesharing services (e.g. Uber, Lyft, employee shuttles) with light rail. Results inform the future design of public and private autonomous / connected vehicle fleets in ways that may optimize co-benefits among employers, employees, transit agencies, ridesharing services, authorities, and city residents.