This season’s webinars:

*Social marketing / behavior change*

- **Case studies** (sustainable transportation and energy efficiency)
- **Social marketing instruction / review**
Transportation Webinars

- Stockholm’s Congestion Pricing
- HSBC Clean Air Achievers (April 16, 2014)
Landmark Case Studies

Designation recognizes programs and social marketing approaches considered to be among the most successful worldwide

Landmark Case Studies

Rated by a peer-selection panel based on:

• Impact
• Innovation
• Replicability
• Adaptability
2013 Peer Selection Panel

- Mark Dessauer, Blue Cross Blue Shield of North Carolina Foundation
- Jacky Kennedy, Green Communities Canada
- Ryan Lanyon, City of Toronto
- Nathalie Lapointe, Federation of Canadian Municipalities
- David Levinger from the Mobility Education Foundation
- Patricia Lucy, Translink
- Geoff Noxon, Noxon Associates
- Chuck Wilsker, U.S. Telework Coalition
- Phil Winters from CUTR and the University of South Florida

We gratefully acknowledge these organizations for helping promote the availability of this webinar

Canada Bikes
CUTR, U. of South Florida
Green Communities Canada

National Centre for Bicycling and Walking
Ontario Health Promo ebulletin
Sustainability Network
• Canada’s only ongoing discussion of mobility pricing: road tolls, parking fees, gas taxes & transit fares
• 10 conferences and 6 roundtables since 2008
• 90 North American and European experts, including Gunnar Söderholm from the City of Stockholm
• 2014 Conferences: Solving Gridlock and P3s
• Stay informed by subscribing to our listserv
  www.transportfutures.ca

Stockholm’s Congestion Pricing

Strengths:
• Strong, ongoing impact data
• Great modal shift results
• Shifted public opinion towards congestion pricing
• “The revenue generated is a municipal dream”
Stockholm’s Congestion Pricing

Strengths:

• “A superb example for other cities contemplating congestion pricing”

Stockholm’s Congestion Pricing

The Panel wanted to know more about:

• Measurement studies
• Media campaign
• Replicability elsewhere
This Case Study: *What to Look For*

**Strategic Tools**

- Increasing the disincentive for doing the current behavior (Mckenzie-Mohr)
- “P” for Price (Kotler and Lee)
- Overcoming barriers (public resistance)

**Planning Stages**

- Evaluation and Piloting
  - Strong, ongoing measurement
  - The pilot proved the approach to citizens, not just program management
Stockholm’s Congestion Pricing

The Stockholm congestion charges

Jonas Eliasson
Professor Transport Systems Analysis
Director Centre for Transport Studies
Stockholm

- 2 million people
- Good public transport – but many cars
- Severe road congestion

A brief history of the Stockholm charges

- Discussed since early 1990’s, but no public or political support
- Introduced as a trial January-July 2006 - extremely controversial!
- Referendum September 2006 – majority *in favour* of charges!
- Charges reintroduced permanently August 2007
- Large majority in favour now (>70%)
- Supported by all political parties
The Stockholm charges

- 1-2 € per cordon crossing, depending on time of day, no charge evenings or weekends
- 2€ in AM/PM peak hour; 1€ 6:30-18:30 outside rush hours
- Max 6 €/day

First transponders, now replaced with ANPR

- Free-flow identification
- No driver action necessary
- Invoice each month – can pay either manually or automatically
- Transponder handling expensive
- Automatic number plate recognition very effective
Effects

It worked...

Stockholmare, vart tog ni vägen?
"Stockholmers, where did you go?"

VÅR I 16:30
upp sin rena om de rådigt lika
krav på energi och miljöer. 
Några av dessa 

MÅNAD 2 JANUARI
KLARA STRANDSLEDE
Tisdag 3 Januari
KLARA STRANDSLEDE
MÅNAD 9 JANUARI

USHET PÅ KLARA STRANDSLEDSN. Lugnet på lågsträckstrafiken. Ingen anledning att guala med säkerhet vart stockholmarens taget vägen.
“Every fourth car disappeared”

Persistent decrease (≈20% across cordon)
30-50% less time in queues, and less variability

April 2005/2006

Delay time, PM peak

What happened to disappearing traffic?
No one believed the forecasts…

<table>
<thead>
<tr>
<th></th>
<th>Forecast</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic across cordon</td>
<td>-16%</td>
<td>-20%</td>
</tr>
<tr>
<td>Rush hours</td>
<td>-17%</td>
<td>-18%</td>
</tr>
<tr>
<td>Public transport</td>
<td>+6%</td>
<td>+5%</td>
</tr>
<tr>
<td>Congestion reduction within cordon</td>
<td>294</td>
<td>282</td>
</tr>
<tr>
<td>Congestion reduction within cordon</td>
<td>266</td>
<td>201</td>
</tr>
<tr>
<td>Congestion reduction outside cordon</td>
<td>460</td>
<td>-87</td>
</tr>
</tbody>
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Designing charges is difficult
Opinions and institutions

Attitudes change after introduction

"Charges heading for the ditch"
"Bypass threatened by chaos"
"Charging chaos continues"

"Stockholm loves the charges"
"Charges a success"
"Thumbs up for the charges"
Support for congestion charges in Stockholm

Why did the opinion change?

- "Better than you thought": Benefits larger than expected
  - Both personal and social benefits matter
  - Need objective, comprehensive, independent measurement of effects
- "Not as bad as you thought": Negative effects smaller than feared,
  - Adapting easier than anticipated
  - Increased transit crowding negligible
- Honesty: design consistent with goals
- Association to existing strong attitudes
  - Environmental benefits
  - "Polluter pays" fair principle
  - Revenues earmarked for road (!) – signalling "OK to drive, but less in queues"
"Adapting" is easier than most believe

- "Have you decreased your number of car trips across the cordon?"
  - Stated effect: 5-10%
  - Measured effect: ~30%

- "Did you become more positive during the trial?"
  - 2006: 29% yes
  - 2007: 13% yes

People change from day to day

- Habitual (5 trips/week) 29%
- Frequent (4 trips/week) 14%
- Occasional (1-3 trips/week) 32%
- Seldom (< 1 trip/week) 25%

Private cars across cordon
Support for charges in all driver categories

<table>
<thead>
<tr>
<th>Year</th>
<th>Have no car</th>
<th>Pays seldom</th>
<th>Pays</th>
<th>Pays often</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
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<td>2005</td>
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<td>2006</td>
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<td>2011</td>
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Political acceptability

- Power over design and revenues key for political acceptability
- Who gets the credit, who gets the blame?
- How does the new revenue stream affect state/region negotiation over national funding?
- Trials might be a good idea – but expensive
- Emphasize benefits rather than revenues
  - Expensive way to collect taxes!
Summary

- It works – drivers are affected by costs
- There are many ways to adapt (not just public transport)
- Less than half of traffic is work trips
- People change all the time – so will adapt easier than most think
- Getting acceptance is about good design, consistency and associating to "right" existing attitudes
- Politicians care about the institutional setting – maybe even more than about public support

Literature

Cost-benefit analysis

<table>
<thead>
<tr>
<th>€ per year</th>
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</thead>
<tbody>
<tr>
<td>Time gains</td>
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<tr>
<td>Reduced emissions</td>
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<tr>
<td>Increased traffic safety</td>
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<tr>
<td>Operational cost</td>
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<tr>
<td>Increased public transit revenues</td>
</tr>
<tr>
<td>Necessary increase in public transport capacity</td>
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<tr>
<td>Decreased revenues from fuel taxes</td>
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<tr>
<td>Marginal cost of public funds, shadow price of public funds</td>
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<tr>
<td><strong>Total socioeconomic surplus, excl. investment costs</strong></td>
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<tr>
<td>Annualised investment cost (over 20 years)</td>
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