Edmonton Household Travel Survey Pilot
Outcomes and Lessons Learned

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Policy Implementation and Evaluation
Transportation Planning
City of Edmonton
Agenda

• Background
• 2014 “Learning” Pilot outcomes
• 2015 Edmonton Household Travel Survey
Project Team

- Project Manager
- Project Team
- Working Group
  - City stakeholders
  - Alberta Transportation
  - Capital Region Board
- Consultant team:
  - Texas Transportation Institute
  - Advanis
Why a Household Travel Survey

- Largest, comprehensive source of personal travel data for Edmonton region
- Basis for travel forecasting and transportation planning in Edmonton
- Edmonton Region Travel Model used by decision-makers, administration, developers
- Household, individual socio-economic factors & travel data
2005 Edmonton Household Travel Survey

- 24-hour, activity-based survey
- 6,620 households sampled
- 1.7% sampling rate
- Sept-Dec collection period
- Informed:
  - City’s Transportation Master Plan – *The Way We Move*
  - LRT planning and expansion
  - Prioritization and design new road infrastructure in City and Region
2014 Learning Pilot Purpose

1. Understand changes over 10 years
2. Build in-house knowledge
3. Evaluate effort and resources needed
Pilot Study Area

- City and surrounding region 420,000 households
- 1.2 million people
- Large university campus
- Major employment sectors: health, education, public service, construction and manufacturing
Pilot Design Phase

- 2005 Survey used as Base
- Updated data elements, survey questions
- Identified Sample
  - City, region, Insight community, City staff
- Survey design
- Online survey and CATI script programming
• Random address selection using 2014 Municipal Census records
• 2800 selected
Regional Sample
Recruitment

- City/Region random address selection
- Edmonton Insight Community
- City staff
- Total 6,035 households invited
Recruitment

• Online and phone self-recruitment
• Insight Community and City Staff online only

EDMONTON HOUSEHOLD TRAVEL SURVEY

November 21, 2014
Resident of: 
123456 - [Type] [Suburb] [Area] [City] [Province] [Postcode]

Ref No: H2014134 TP
Due: 9/30/2015

Your household has been selected to participate in the Edmonton Household Travel Survey.

The City of Edmonton, in cooperation with the Alberta Transportation and the Capital Region Board, is conducting a household travel survey to understand the travel patterns of households throughout Edmonton and the region. The information you provide to us is very important and will support and inform transportation planning in the Edmonton region.

Participation in the survey involves completing a diary of activities, including travel, by all members of your household for one day during the week of December 3 to 9. The information will then be retrieved from you in one of three ways of your choosing: online, by phone or by mail.

Advantis, a local professional research firm, has been contracted to collect the information for the survey. All information will be held strictly confidential and used only in combination with information provided from other participating households.

Please register your household for the survey online or by phone by December 2. If you have any further questions about this survey, please visit our website, email TravelSurvey@edmonton.ca or call (780) 496-5885 to reach the survey project manager.

Thank you - your input is essential.

Sincerely,

EDMONTON HOUSEHOLD TRAVEL SURVEY

Get started online or by phone
www.edmonton.ca/TravelSurvey
(780) 229-1877
Weekdays 9:00 am - 9:00 pm
Saturday 10:00 am - 6:00 pm

Please be sure to have your Form A and Travel and Activity diaries for all members of your household with you as you complete the survey. These will help you to enter the information into the online form.

Please refer to your Edmonton Household Travel Survey Guide Book for guidance in answering the questions.

You can complete this survey on a computer, most tablets, and many mobile phones.

You stop the survey, you can restart where you left off by using the ID and password assigned to you.

• This survey may take longer than 30 minutes to complete depending on your household size and amount of activity on your travel day. Your patience is greatly appreciated.

Please enter the ID and password that were provided to you in your diary package.

ID: [hhid]
Password: [hhpasp]

TRANSPORTATION PLANNING | June 2015
Data Retrieval

- Household instruction guide and individual diaries
- Household information
- Personal & Work/School Location
- Travel and Activity Diary
- Multimodal data retrieval (mail, phone and web)
Pilot Findings
Response Rates

<table>
<thead>
<tr>
<th></th>
<th>City (n=2800)</th>
<th>Region (n=1175)</th>
<th>Total (n=3975)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruited</td>
<td>115</td>
<td>88</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>4.1%</td>
<td>7.5%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Retrieved</td>
<td>71</td>
<td>51</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>62%</td>
<td>58%</td>
<td>60%</td>
</tr>
</tbody>
</table>

- An additional 2,000 Insight Community members and 120 Transportation Planning staff were also invited to participate.
- In total, nearly 6,000 households were invited.
Mode of Retrieval

Of those households that fully completed and submitted their survey:

<table>
<thead>
<tr>
<th></th>
<th>City</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>58%</td>
<td>45%</td>
</tr>
<tr>
<td>Mail</td>
<td>31%</td>
<td>43%</td>
</tr>
<tr>
<td>Phone</td>
<td>11%</td>
<td>12%</td>
</tr>
</tbody>
</table>
### Retrieved vs. Usable

<table>
<thead>
<tr>
<th></th>
<th>City &amp; Region</th>
<th>Edmonton Insight Community and Staff</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieved</td>
<td>164</td>
<td>321</td>
<td>485</td>
</tr>
<tr>
<td>Usable</td>
<td>122</td>
<td>257</td>
<td>379</td>
</tr>
<tr>
<td>% loss</td>
<td>26%</td>
<td>20%</td>
<td>22%</td>
</tr>
</tbody>
</table>

- All of the survey loss occurred from the mailback mode
- Of the 247 received by mail, 106 were not usable (43%)
## Demographics

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Survey % Males</th>
<th>Census % Males</th>
<th>Diff. Males</th>
<th>Survey % Female</th>
<th>Census % Female</th>
<th>Diff. Female</th>
<th>Survey %</th>
<th>Census %</th>
<th>Total Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 9</td>
<td>9.7%</td>
<td>12.2%</td>
<td>-2.5%</td>
<td>6.8%</td>
<td>11.6%</td>
<td>-4.8%</td>
<td>8.2%</td>
<td>11.9%</td>
<td>-3.7%</td>
</tr>
<tr>
<td>10 - 14</td>
<td>3.4%</td>
<td>5.9%</td>
<td>-2.5%</td>
<td>3.5%</td>
<td>5.5%</td>
<td>-2.0%</td>
<td>3.5%</td>
<td>5.7%</td>
<td>-2.2%</td>
</tr>
<tr>
<td>15 - 19</td>
<td>2.9%</td>
<td>6.5%</td>
<td>-3.6%</td>
<td>4.7%</td>
<td>6.3%</td>
<td>-1.6%</td>
<td>3.8%</td>
<td>6.4%</td>
<td>-2.5%</td>
</tr>
<tr>
<td>20 - 24</td>
<td>6.1%</td>
<td>7.9%</td>
<td>-1.8%</td>
<td>4.0%</td>
<td>7.6%</td>
<td>-3.6%</td>
<td>5.0%</td>
<td>7.7%</td>
<td>-2.8%</td>
</tr>
<tr>
<td>25 - 34</td>
<td>17.1%</td>
<td>16.3%</td>
<td>0.8%</td>
<td>20.4%</td>
<td>15.6%</td>
<td>4.8%</td>
<td>18.9%</td>
<td>16.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>35 - 44</td>
<td>16.3%</td>
<td>14.1%</td>
<td>2.2%</td>
<td>13.8%</td>
<td>13.9%</td>
<td>0.0%</td>
<td>15.0%</td>
<td>14.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>45 - 54</td>
<td>12.9%</td>
<td>15.3%</td>
<td>-2.4%</td>
<td>17.1%</td>
<td>15.2%</td>
<td>1.9%</td>
<td>15.1%</td>
<td>15.3%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>55 - 64</td>
<td>19.5%</td>
<td>11.6%</td>
<td>7.9%</td>
<td>17.4%</td>
<td>11.6%</td>
<td>5.8%</td>
<td>18.4%</td>
<td>11.6%</td>
<td>6.8%</td>
</tr>
<tr>
<td>65 - 74</td>
<td>9.2%</td>
<td>5.9%</td>
<td>3.3%</td>
<td>10.1%</td>
<td>6.4%</td>
<td>3.7%</td>
<td>9.7%</td>
<td>6.1%</td>
<td>3.5%</td>
</tr>
<tr>
<td>75 - 84</td>
<td>2.1%</td>
<td>3.3%</td>
<td>-1.2%</td>
<td>2.1%</td>
<td>4.3%</td>
<td>-2.2%</td>
<td>2.1%</td>
<td>3.8%</td>
<td>-1.7%</td>
</tr>
<tr>
<td>85+</td>
<td>0.8%</td>
<td>1.0%</td>
<td>-0.2%</td>
<td>0.0%</td>
<td>2.0%</td>
<td>-2.0%</td>
<td>0.4%</td>
<td>1.5%</td>
<td>-1.1%</td>
</tr>
</tbody>
</table>
## Dwelling Type

<table>
<thead>
<tr>
<th>Housing Structure Type</th>
<th>Survey Count</th>
<th>Survey %</th>
<th>Census %</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Detached</td>
<td>90</td>
<td>75.0%</td>
<td>59.2%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Semi-Detached/Row/Duplex</td>
<td>8</td>
<td>6.7%</td>
<td>14.4%</td>
<td>-7.7%</td>
</tr>
<tr>
<td>Apartment</td>
<td>22</td>
<td>18.3%</td>
<td>24.7%</td>
<td>-6.3%</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>8.3%</td>
<td>1.7%</td>
<td>6.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
</tr>
</tbody>
</table>
Comparison to Census Results

- Slight oversampling on seniors
- Good alignment with Journey to Work 2014 census results
- Over-sampling on single family dwelling type
- Under-sampling on multi-family dwellings
Respondent feedback

• 94% were adequately aware of what participating meant
• 81% were motivated by invitation materials
• 72% were motivated by their interest in local/regional transportation/issues
How helpful was the guidebook?

- Very helpful: 68%
- Somewhat helpful: 22%
- Not helpful at all: 1%
- I did not use the guidebook: 8%
- Don't Know / Refuse: 1%
Respondent feedback

• Some seniors did not see value in participating since they don’t travel much
• The word “survey” has a negative connotation
• Mentioning City of Edmonton adds validity
Respondent feedback – Outbound Calling

- “I don’t travel much”
- “I don’t have time to do surveys”

<table>
<thead>
<tr>
<th>What would change your mind?</th>
<th>0.0</th>
<th>1.0</th>
<th>2.0</th>
<th>3.0</th>
<th>4.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50 incentive</td>
<td></td>
<td></td>
<td></td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>$20 incentive</td>
<td></td>
<td></td>
<td></td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Shorter survey</td>
<td></td>
<td></td>
<td></td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>More reminders</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More information</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you plan on participating?
- No: 36%
- Yes: 24%
- Undecided: 39%
Learnings
Design Phase

- HTS survey programming is complex & specialized
- Call centre services are costly to set up
- Call centre staff training needed is extensive
- Survey materials development is time consuming
Recruitment Phase

Mail recruitment
• 2005 vs. 2014 pilot: 7.8% vs. 5.1%
• Outbound recruitment improves participation

Web
• 4 times more likely to web recruit vs. phone
• 1.5 times more likely to web retrieve vs. mail and 4.5x more likely than phone
Respondent Feedback

- FAQs common questions and helpful tips
- Examples of use of 2005 survey data
- Clarify what it means to participate
- Multimodal submission options
- Web incentives
- Mailback is prone to error, intimidating and seen as burdensome relative to web
- Simplify travel diary
Next Steps: 2015 Household Travel Survey

- Ruled out mail back survey
- Interactive, easy to use web tool
- Data quality control and database
- Data expansion and scaling methodology
- Booster sample of transit users
- Potential study of active mode use
• Awarded to Malatest
• Team includes HDR, Prof. Jeff Casello, David Kriger, Vision Creative
Questions

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