Insights from CTA's 2007 Origin Destination Survey

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Introduction

- Driven by FTA’s requirement for New Starts projects
- Administered between April 2007-June 2007
- 84,664 surveys distributed onboard CTA vehicles
- Survey questionnaire in English and Spanish
- Telephone completion option in Polish and Chinese
- Unique password provided on every questionnaire for online survey completion
Survey Instrument Structure

- **Start of Trip**
  - Origin location, trip purpose, access mode and time, parking cost and CTA boarding location

- **Middle of Trip**
  - CTA transfer information - station and line/bus route

- **End of Trip**
  - CTA alighting location, egress mode and time, destination location, trip frequency, fare media, number of transit vehicles

- **Demographic Questions**
  - Household size, employment, number of drivers, number of vehicles, household income, sex, age, ethnicity
Sampling Plan & Survey Response

<table>
<thead>
<tr>
<th></th>
<th>Rail</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes</td>
<td>8</td>
<td>154</td>
</tr>
<tr>
<td>Total trips</td>
<td>382</td>
<td>2190</td>
</tr>
</tbody>
</table>

- Survey Response Rate 40%
  - Onboard 34%
  - Business reply Mail 5%
  - Online 1%
## Weighting Criteria

- Total Records – 34,102
- General Weight Records – 28,084
- Model Weight Records – 18,269

<table>
<thead>
<tr>
<th>Weighting Criteria</th>
<th>General Weight</th>
<th>Model Weight</th>
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</thead>
<tbody>
<tr>
<td>OD Zip codes</td>
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</tr>
<tr>
<td>Trip Purpose</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Access-Egress Mode</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Route Name</td>
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<td>✓</td>
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<tr>
<td>Boarding Station Name</td>
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<td>✓</td>
</tr>
<tr>
<td>Trip Time Period</td>
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<td>✓</td>
</tr>
</tbody>
</table>
Trip Purpose

- Work/Commute: 67%
- Company/Personal Business: 12%
- School: 11%
- Shopping: 12%
- Recreation & Social Visits: 11%
- Other: 6%

Customer Satisfaction Survey:
- Commute to work – 50%
- Commute to school – 10%
Trip Purpose by Time of Travel

- **Work**
- **Company/Personal Business**
- **School**
- **Shopping**

**Time intervals**:
- **AM (12AM-10AM)**
- **Midday (10AM-4PM)**
- **PM (4PM-12AM)**
Access & Egress Mode

- 85% and 89% riders reported accessing and egressing CTA by walking
- Weighted average of reported access and egress walk time is 9 minutes (assuming responses > 30 minutes and unweighted records as invalid)
- Unweighted mode and median is 5 minutes
Inferred Access Distance – CC Analysis

- **Rail**: Distance > 1 mile: 10,750 (34.4%)  
  Distance > 2 mile: 7,967 (25.5%)

- **Bus**: Distance > 1 mile: 2,530 (9.8%)  
  Distance ≥ 2 mile: 1,783 (6.9%)
Reverse Trip

- 81% riders reported that they’ll make a reverse trip (take the same train or bus on their next trip as in the last leg of reporting trip).
  - Same Train: 48%
  - Same Bus: 33%
- Some of the rest 19% probably represents trip chaining.
- 85% of riders who had a train link in their trip reported that they’ll make a reverse trip. This compares well with 79% estimate from CTA’s OD model.
Customer Satisfaction Survey: 47% customers ride CTA 5 or more days per week.
Fare Media Usage

- Passes and CC/CC+ together capture 60% of CTA’s market share.

![Pie chart showing fare media usage]

- Cash: 31%
- Transit Card: 29%
- CC/CC+: 29%
- Passes: 18%
- U Pass: 10%
- Red Fare: 7%
- Other: 3%
Fare Media Usage by Income Group

- <15,000
- 15,000-24,999
- 25,000-34,999
- 35,000-49,999
- 50,000-74,999
- 75,000-99,999
- >100,000

- Upass
- Other
- Red Fare Cash
- Passes
- CC/CC+
- Transit Card
- Cash
61% of CTA customers have shortage of vehicles. 66% reported in the survey having no car available for that trip.
Age and Sex

Survey
ACS 2007

Males 43%
Females 57%

Males 49%
Females 51%
Origins and Destinations for AM Peak Work Trips on Red Line
Origins and Destinations for Trips with Ridership Greater than 1500
Origin of CTA Trips Ending at O’hare Terminal
Survey Purpose and Other Uses

- Update the New Starts model
- Validate CTA’s OD model in conjunction with another survey, which is a requirement for NTD reporting
- Use OD data for in house sketch models and planning
- Inform rider’s characteristics and ridership patterns in the proposed BRT routes
- Inform CTA about its customers and market
THANK YOU!