Purpose of Study

- What is known about airport employee commute patterns/modes?
- Existing airport employee commute options programs
  - Elements
  - Effectiveness
  - Challenges
- Other potentially applicable ECOs
Report Elements

- Introduction/background/methodology
- Case studies
- ECO Strategies – application/potential application at airports
- Challenges in providing effective ECO Programs at airports
- Conclusions/further research

Focus of Presentation

- The Airport as Special Trip Generator
- Airport Employer/Employee Population
- Challenges to Providing Effective Airport ECO Programs
- Final Remarks
Case Studies

- Commercial Airports or TMAs that Offer Comprehensive Airport ECO Programs
  - Boston Logan International Airport (BOS)
  - Los Angeles International Airport (LAX)
  - Portland International Airport (PDX)
  - San Francisco International Airport (SFO)
  - London Stansted Airport (STN)

- Interviews/Data Collection in 2nd Half 2011

The Airport as a Special Trip Generator
The Airport as a Special Trip Generator

- Primary Driver is Flight Schedule
  - 365 days
  - Early a.m. - late p.m.; up to 24 hours
  - Air passenger trips
    - 1-3 hours before first flight
    - Potentially an hour or more after last flight
  - Employee staffing/hours accommodate air passengers, flights, ancillary services

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Example Seat Distribution:
Large U.S. Airport (Top 20)

Peak Airport Employee Commute Times are Different than for a CBD or an Office Park
Airport Employee/Employer Population

- **Multiple Employers**
  - Airport Owner/Operator
    - Typically employs <10% of total airport employees
  - All Other Employers
    - Employ >90% total airport employees
    - Airlines, concessions, rental cars, flight support services, cargo, FAA, TSA, law enforcement, etc.
Characteristics of Employee Population, U.S. Case Study Airports

<table>
<thead>
<tr>
<th>Employees</th>
<th>BOS</th>
<th>LAX</th>
<th>PDX</th>
<th>SFO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>13,950</td>
<td>47,000</td>
<td>10,000</td>
<td>19,300</td>
</tr>
<tr>
<td>Airport Operator</td>
<td>825</td>
<td>3,500</td>
<td>759</td>
<td>1,500</td>
</tr>
<tr>
<td>Percentage of Total Employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airport Operator</td>
<td>5.9%</td>
<td>7.5%</td>
<td>5.4%</td>
<td>7.8%</td>
</tr>
<tr>
<td>10 Largest Employers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Largest Employer</td>
<td>44.2%</td>
<td>Unavailable</td>
<td>50.5%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Largest Employer</td>
<td>9.5%</td>
<td>Unavailable</td>
<td>18.6%</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

1Employees with security badges
2Excluding Airport operator

Airport Employee Population

- Different Commute Patterns by Segment
  - Flight Crews
    - Multi-day trips + work rules
    - One-way commute trips per week < 10
  - Shift Workers
    - Scheduled & Unscheduled Overtime
  - Traditional Office Workers
  - Employees with > 1 job

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Challenges to Providing Effective Airport ECO Programs

- High Occupancy Vehicle Modes
- Employee Parking Supply
- Airport Employer Participation
- Availability of Data
- Funding
Airport Work Schedule

- Personnel Coverage
  - Airport Operating Hours
  - Weekdays, Weekends, Holidays
    - A subset of airport employees commute Monday through Friday during traditional commuting hours

HOV Modes
Public Transportation

- What is Availability for Airport Employees?
  - Service Hours versus Work Start & End Time
  - Geographic Coverage
    - Airport
      - Terminal area
    - Other airport work locations (cargo, rental car center, etc.)
    - Airport Employee Residences
HOV Modes
Public Transportation

- Commute Times Versus Private Auto
  - Frequency
    - Peak Service Typically Serves “Traditional” Commute Times
      - Approximately 7 a.m. – 9 a.m.; 5 p.m. – 7 p.m
  - #Transfers to Airport

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Airport Scheduled HOV Modes (Buses and Vans)

- Accommodate Air Passenger Origins
  - Typically in Higher Income Areas
- Employee Resident Distribution
  - Higher Concentrations Closer to the Airport than Air Passenger Origins

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Employee Parking Supply

- Often Low Cost or Free of Charge
  - Cost comparison by employers located at multiple airports
  - Employee recruitment and retention
    - Lack of alternatives to driving
- Monthly Parking Fee Often Less than Out-of-Pocket Monthly Transit Cost

Airport Employer Participation

- Airport Operator Typically Employs < 10% of employee population
- Lack of Information on Other Employer Programs
  - Case study airports unaware of number of employers offering programs and program elements
Availability of Data

• Data Needed for ECO Program Development and Monitoring
  • Number of Airport Employees by Employer
  • Total Airport Employees: Demographics and Commute Characteristics
  • Number of Employee Vehicle Trips

Funding

• Airport Operator/Other Employers
  • Insufficient funds
  • Low priority
  • Airport operator funding restrictions (revenue diversion)
Overcoming Challenges: Development of an Airport ECO Program

- Total Airport Employee Population
  - Pooled Resources Among Airport Employers
  - Data Collection
  - Incentives for Ridesharing and HOV Use
  - Incentives/Disincentives to Switch from SOV
  - HOV Schedule Improvements
  - Develop Airport Employee-Specific Options
  - Employee Awareness of Options
BOS, STN, LAX, PDX, SFO

- Comprehensive ECO Programs
- Common Program Elements – Page 11, Table 6
- Distinguishing Program Elements – Page 3

Acknowledgements

- Airport Cooperative Research Program
  - Senior Program Officer: Gail Staba
  - ACRP Synthesis 36 Topic Panel Members
  - Airport Staff at BOS, STN, LAX, PDX and SFO who provided information for and Review of the Case Studies.
- Transportation Research Board of the National Academies
- Federal Aviation Administration