Connecting Transit to Suburban Employment Centers

APA NATIONAL CONFERENCE | APRIL 13, 2013
Problem:
How to provide auto-competitive transit service in the suburbs?
Employment Decentralization

**JOBS >10 MILES OUTSIDE CBD**

**US AVG**  
98 LARGEST METROS  
45%

**CHICAGO REGION**  
69%


**JOBS ACCESSIBLE TO TYPICAL RESIDENT IN <90 MIN BY TRANSIT**

**US AVG**  
98 LARGEST METROS  
30%

**CHICAGO REGION**  
24%

Transit in Northeast Illinois
Shuttle Bug Program
Shuttle Bug Program

• Shuttle Bug bridges gap between:
  – Cluster of corporate campuses
  – Commuter service on nearby rail lines

• 12 Pace routes link 7 Metra stations with 4 suburban employment centers

• 1,300 daily passenger trips

• Public-private partnership between transit agencies and participating firms
TMA of Lake-Cook

• Mission to “improve employees’ commute to work”
• Represents over 40 firms, 42,000 employees
• Advocates for highway and transit service improvements
• Facilitates employer participation in Shuttle Bug program
Metra Commuter Rail

- 703 trains each weekday
- 11 rail lines
- 241 stations
- 488 route miles
- 81 million passenger trips per year
  - 300,000 passenger trips each weekday
- 96% on-time record
- Shuttle Bug program partner
Pace Suburban Bus

- 39.2 million passenger trips per year
  - 134,432 passenger trips each weekday
- 194 fixed routes
- 687 transit buses
- 718 vanpools
- Paratransit, ADA, and Dial-a-Ride services
- Rideshare matching services
- Manages service planning and operation of Shuttle Bug program
Session Outline

• Service initiation and expansion
• Service development and planning
• Funding
• Retention criteria
• Service sustainability
• Marketing
• Benefits
• Challenges
• Future plans
• Q&A
Service Initiation

• **1994**: Service planning initiated to provide “last mile” shuttle connections from major employers in Lake-Cook Corridor to the planned Lake-Cook Road Metra Station in Deerfield, IL

• **1/1996**: Lake-Cook Road Metra Station opened

• **3/1996**: Shuttle service began, utilizing 6 vans; CMAQ funding of $400,000 provided two years of shuttle service plus $250,000 of sidewalk improvements within ½ mile of station for improved pedestrian access

• **10/1997 – 3/1998**: Service was transitioned from vans to 26-passenger buses operated by Pace due to routine overcrowding caused by strong ridership demand
Shuttle Bug Program: Service Initiation
Routes 1 - 6
Lake-Cook Corridor ↔ Metra MD-N Lake-Cook & Deerfield Stations

Contract operation (vans) began 3/18/96
Pace operation (buses) began 10/28/97 - 3/2/98

Not to scale
Shuttle Bug Program: Service Initiation
Route 7
Lake-Cook Corridor ↔ Metra MD-N Lake-Cook Station

Pace operation (buses) began 6/28/99

Not to scale
Shuttle Bug Program: Service Initiation
Routes 8 - 10
Lake-Cook Corridor ↔ Metra UP-N Braeside Station

Pace operation (buses) began 9/13/99
Shuttle Bug Program: Service Initiation

Routes 1 - 10

Lake-Cook Corridor ↔ MD-N Lake-Cook & Deerfield and UP-N Braeside

Start Dates: 3/18/96 (Routes 1-6) • 6/28/99 (Route 7) • 9/13/99 (Routes 8 - 10)
Shuttle Bug Program: Service Expansion
Routes 11 & 12
Half-Day/Waukegan Corridor ↔ MD-N Deerfield and UP-N Highland Park
Start Date: 11/13/00
**Shuttle Bug Program: Service Expansion**

**Routes 623 & 624**

Willow Corridor ↔ MD-N Glen of North Glenview

Start Date: 6/11/01
Shuttle Bug Program: Service Expansion
Routes 574, 625 & 575
Town Line/Conway Park Corridor ↔ UP-N Lake Forest
Start Dates: 3/19/01 (Route 574) • 6/11/01 (Route 625) • 12/10/01 (Route 575)
Shuttle Bug Program: Service Expansion
Route 576
Deerfield/Milwaukee Corridor ↔ MD-N Deerfield
Start Date: 6/10/02
Shuttle Bug Program: Service Expansion
Routes 580, 581 & 582
Lake-Cook, Deerfield/Milwaukee & Town Line Corridors ↔ NCS Vernon Hills & Buffalo Grove
Start Date: 11/20/06
Shuttle Bug Program: Service Expansion
Routes 627 & 630
Lake-Cook Corridor ↔ MD-N Lake-Cook & UP-N Braeside
Start Dates: 10/23/06 (Route 627) • 6/7/10 (Route 630)
Shuttle Bug Program: Service Expansion
Route 619
Willow Corridor ↔ UP-NW Des Plaines
Start Date: 1/3/11
Shuttle Bug Program

Potential Success Rate: 100%

6 Employment Corridors • 4 Metra Lines • 10 Metra Stations • 24 Shuttle Bug Routes
Shuttle Bug Program
Actual Success Rate: 50%

4 Employment Corridors • 3 Metra Lines • 7 Stations • 12 Shuttle Bug Routes
Service Development

- Service development includes adding new companies to existing routes or creating a new route(s) based on funding and equipment availability, employer needs, company relocations or Metra service expansion.

- Employer interest demonstrated by agreeing to provide financial support, cooperating with service evaluation, or having specific needs such as an office relocation.

- Routes need enough “mass”/density to support mass transit:
  - Routes typically average 3-5 employers and 2-3,000 total employees.
Zip Code Analysis

1. Headcounts by zip code provided by company

<table>
<thead>
<tr>
<th>HOME ZIP</th>
<th>COUNT</th>
<th>MUNI</th>
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<tbody>
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</tr>
<tr>
<td>60621</td>
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<td>Chicago</td>
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</table>

2. GIS Mapping illustrates home stations
Surveying

Optional questions:
- Demographic information (position, age, gender, etc.)
- Open-ended comments

### COMMUTER SURVEY

Baxter is working with the Transportation Management Association of Lake Cook to study commuting methods and trends in our community. We’re interested in learning how you get to and from work in order to determine probable interest in a bus shuttle linking service between Metra’s INSERT STATION NAME Station and Baxter. Please take a few minutes to complete this survey and return it to INSERT CONTACT NAME, ADDRESS. Please complete the survey and return it by INSERT DUE DATE.

1. What is your home zip code? ______________________

2. At which BAXTER location do you work? ______________________

3. Which days do you generally commute to your job at BAXTER?

<table>
<thead>
<tr>
<th>Day</th>
<th>Yes</th>
<th>No</th>
<th>Tuesday</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Monday</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Friday</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunday</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. What hours do you typically work?
From __________ a.m. or p.m. Until __________ a.m. or p.m.

5. How long does your current morning commute take?
   - Less than 15 minutes
   - 16-25 minutes
   - 25-35 minutes
   - 36-45 minutes
   - 46-60 minutes
   - Over 60 minutes

6. How long does your current evening commute take?
   - Less than 15 minutes
   - 16-25 minutes
   - 25-35 minutes
   - 36-45 minutes
   - 46-60 minutes
   - Over 60 minutes

7. How do you currently commute to and from work?
   - Drive alone
   - Car/van pool
   - Dropped off
   - Pace Bus
   - Metra
   - CTA Bus
   - CTA “L”
   - Bicycle
   - Walk
   - other

8. Do you use Metra trains for commuting to work?
   - Yes
   - No
Shuttle Bug Passengers

Direction of commute
• 62.6% = Reverse Commute
• 37.2% = Suburb to Suburb
• 00.2% = Unidentified

Participation levels at suburban companies
• 2.5-10% (of 1,000 total population, 25-100 participants)

Reasons for non-use
• 36.6% work schedule doesn’t allow (late, early, midday)
• 27.2% personal schedule doesn’t allow
• 10.8% prefer to drive
• 3.5% cite cost; less costly to drive
• 16.8% other reason

Transit dependent
• 22.4% no car available for this trip
Service Planning: Basic Elements

- Operates weekday rush hour service
- Offers shuttle connection between Metra station and one or more workplaces
- Provides riding passes so employees can ride free
- Serves building entrances at locations where pedestrian infrastructure is missing or incomplete
Service Planning: Route Elements

- Verify safe, efficient site access/egress
- Identify safe, convenient bus stop locations
- Design fast, efficient route segments
Service Planning: Schedule Elements

- Verify train connections
- Conduct timings, adjust schedule segments
- Match workplace start/end times
Service Planning: General Elements

- Determine service start date
- Verify vehicles, drivers are available
- Develop service plan, cost proposal
- Confirm partner commitments to share in service operating costs
Start-up Funding Sources

• Congestion Mitigation Air Quality (CMAQ)
  – EPA
  – 80% grant requiring 20% local match
  – 2-year term

• Job Access Reverse Commute (JARC)
  – Competitive grant program under SAFETEA-LU, JARC provided 80/20% (capital) or 50/50% (operating)
  – Under MAP-21, JARC is now included in 5707 formula funds. Individual transit providers can make determination of use, but generally speaking other operational routes would have higher priority

• Local municipal funding
• State funding
• Foundation funding
• Private corporate funding—private service
Cost Allocation to Employers

• Develop a fair, reasonable cost allocation formula
  – Shuttle Bug formula includes employer costs split 50/50 between usage/ridership and company headcount

• Need to know corporate and public agency budget cycles to plan for funding approvals for new start up and/or annual shuttle service

• After federal funds are used up, routes with good ridership and productivity transition to the established partnership funding split
  – TMA/companies cover 50%, Metra & Pace each cover 25%
  – Negotiated costs
Retention Criteria

• Relevance of route
  – Company continues to participate in program
  – Employment levels and ridership strong
  – Attractive alternative to private auto (time and cost)

• Funding assured
  – Company renews commitment of financial support
  – Other sources are identified (i.e., transit partners, municipalities)

• Pace performance standards
  – Productivity (the number of passengers per revenue hour) is the primary standard for Shuttle Bugs
  – Farebox Recovery and Subsidy per Rider are generally impacted only when companies withdraw their funding support
Service Sustainability

• Evolving Service Needs
  – Service changes due to employer relocations, changes in corporate support, employment increases or decreases, highway construction
  – Changes may require route/schedule changes, route consolidation, and adding new/larger equipment
  – Service contractions
    • Transit funding crisis resulted in some employer losses
    • Shuttle routes to new Metra line (North Central) were not sustainable; service terminated after two years of operation
Marketing: Internal Strategies

• Messaging/target audience
  – Geographic target audience
  – Survey responses drive messaging

• First line champions
  – Human Resource managers
    • Work/life Balance and/or Benefits Managers
    • Recruiting Managers
  – Facility managers/planners
  – Sustainability Officers
Marketing: Internal Strategies

- On site marketing
  - On site outreach is important to recruit new riders, help address passenger concerns, and provide personal connection to companies and riders.
  - Coordinate with designated Transportation Coordinator and try to tie into benefits fair with other vendors or special event (Earth Day) for greater coverage.
Marketing: Internal Strategies

- Provide schedules, information pieces, etc.
  - Brochures
  - Timetables
  - Maps
  - Posters and more!
Marketing: Other Allies

- Civic groups
- Chambers
- Trade organizations
- Economic Development
- Municipalities
- Individual passengers—word of mouth
Benefits: Communities

- Helps economic development climate by providing communities with transit options to access area business
- Mitigates traffic congestion, especially if shuttle operation is at a larger scale
  - 1,300 daily trips from shuttles in program
- Air quality benefits for reduced emissions supports community and transit green initiatives
Benefits: Riders and Employers

• Important to sell and re-sell benefits to both riders/companies

• For riders:
  – Free shuttle (employers pay shuttle assessment)
  – Reduces travel costs
    • High gas prices = increased ridership
    • Avoid auto purchase and ownership costs
  – Predictable, stress-free commute
  – Coordinated Guaranteed Ride Home program

• For employers:
  – Attracts/retains diverse workforce from a wide area
  – Environmentally beneficial
    • Helps LEED designation; Green commute for employers
  – Helps reduce facility costs/expanded parking
Benefits: Transit & Planning Agencies

- Achieving long range planning goals
  - Pace’s Vision 20/20 Strategic Plan (2002)
    - Improved coverage to growing suburban job centers
    - Serve the all important “last mile”
    - Target resources to serve higher demand locations
  - CMAP’s GO TO 2040 (2010)
    - “transportation...indispensable to region’s future prosperity...”
    - “Reducing congestion is imperative”
    - “World class transportation”
  - Metra’s Strategic Plan (forthcoming, 2013)
    - Continuing goal to increase non-traditional markets
    - Facilitating economic vitality throughout the region
Benefits: Transit Agencies

• Increases ridership
  – Introduces new riders with the potential to increase not only commuting trips, but also recreational rides

• For Metra:
  – “Deadhead” trains become revenue trains
  – Shuttle support is an investment, generating a 4-fold ROI
Benefits: Pace

Partnership with TMA and participating companies leverages Pace’s ability to offer public transit service to all destinations in the target corridor.

*Shuttle Bug Ridership by Passenger Type*

- 35.8% Passengers Using "Easy Rider" Passes
- 64.2% Passengers Using Cash and Transit Passes

Prepared 3/28/13 by Pace Service Analysis
Data range: 1/1/13 - 3/22/13
Benefits: Pace

Partnership with TMA and participating companies extends Pace’s ability to promote all Pace services

- Shuttle Bugs
- Other Fixed Routes
- Rideshare/Vanpool

### Pace Vanpools at Lake-Cook TMA Companies

<table>
<thead>
<tr>
<th>Company</th>
<th># of Vehicles</th>
<th># of Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discover</td>
<td>18</td>
<td>76</td>
</tr>
<tr>
<td>Underwriters Laboratories</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>Allstate</td>
<td>9</td>
<td>37</td>
</tr>
<tr>
<td>Baxter</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Walgreens</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td><strong>195</strong></td>
</tr>
</tbody>
</table>

Source: Pace Community Relations Department March, 2013
Program Challenges: Employers

- Economic conditions impact employers and transit agency budgets, and hence may impact level of company participation and transit support
- Shuttle ridership varies by economic conditions
- Employers very cost conscious, and value of their support for employee transit must be demonstrated
Program Challenges: Network Issues

• Constraints in offering earlier morning outbound trains
  – Reverse is only 7% of daily commuter market
  – NCS limited to 1 morning outbound and 1 evening inbound during peak commuting hours
  – MDN has 3 hour service gap during evening rush north of Lake-Cook Road
  – UPN service offers early morning “Sunrise Express”

• Potential duplication/parallel service
  – All lines serving downtown Chicago
  – Adjacent/co-existing Pace routes
    • Route 626
    • Competing private services
Program Challenges: Suburban Density Issues

Employment Density: Downtown Chicago
*(Jobs per Square Mile)*

- 5 - 22,291 Jobs/Sq.Mile
- 22,292 - 89,150 Jobs/Sq.Mile
- 89,151 - 200,581 Jobs/Sq.Mile
- 200,582 - 356,586 Jobs/Sq.Mile
- 356,587 - 557,163 Jobs/Sq.Mile

Source:
US Census Bureau (2010)
Longitudinal Employer-Household Dynamics (LEHD)
http://lehd.did.census.gov/led/
Retrieved March 2013 by Pace GIS/Service Analysis

Both maps are scaled at 1” = 3 miles

Employment Density: Shuttle Bug Service Area
*(Jobs per Square Mile)*

- 5 - 1,280 Jobs/Sq.Mile
- 1,281 - 5,106 Jobs/Sq.Mile
- 5,107 - 11,482 Jobs/Sq.Mile
- 11,483 - 20,410 Jobs/Sq.Mile
- 20,411 - 31,888 Jobs/Sq.Mile

Source:
US Census Bureau (2010)
Longitudinal Employer-Household Dynamics (LEHD)
http://lehd.did.census.gov/led/
Retrieved March 2013 by Pace GIS/Service Analysis
Program Challenges: Suburban Land Use Issues

- Traffic speed/volume of arterial roads complicate transit/pedestrian access
- Site designs require buses to follow convoluted, time-consuming paths
Program Challenges:
Suburban Site Design Issues

• Suburban developments don’t prioritize transit-friendliness in target design criteria
• Frequent transit service is rarely expected
Future Plans: Transit Supportive Guidelines

- Promote denser development
- Outline best practices for developing suburban landscapes to improve accommodations for many transit modes
- Encourage transit supportive land use in downtown areas and along arterials

Summer 2013: Pace unveils revised Pace Transit Supportive Guidelines
Help make the suburbs transit-friendly!
Visit PaceBus.com for more details
Future Plans: Ongoing Pace Service Reviews

- Continuing evaluation of ideas to improve Pace routes
  - TMA/Company service requests
  - Customer Relations calls
  - Shuttle Bug Rider survey comments
  - Staff input
Future Plans: New Willow Road Shuttle Bug

- Start-up funding from JARC (2012 grant)
- Serves Allstate (local match partner), and possibly other nearby companies
- Complements service on Routes 619 & 623
- Connects with CTA Rapid Transit Yellow Line to expand access for Chicago north side & North Shore suburban residents
- Expected service start: August 2013
Thank you!

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