SMART STATIONS IN SMART CITIES

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Integrated Mobility; Thruway Service and Major Station Access

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Session: 1a – Solutions for Integrated Mobility
Topics Covered

- Amtrak Inter City Bus and Rail – Thruways
- Major Stations – Multimodal Access
- Ride Hailing
Amtrak is Part of a “Travel Ecosystem”
What is “Thruway” service?

“Thruway” service is any transportation service sold and ticketed as part of the Amtrak network that is operated by another carrier (over 1,000 schedules), including:

- Intercity buses
- Shuttle buses / vans
- Local transit buses
- Commuter trains
- Ferries
- Taxis
Amtrak has many existing partners
What Amtrak Does

- Maintains Thruway contracts, schedules, fares, connections, station information, and operations coordination
- Through Connecting Transportation staff manages Thruway services throughout United States (except in California)
- California Bus Operations manages Thruway services within California
Thruway Connections Overview

- Amtrak sells 1.5 million Thruway tickets each year for travel on connecting services (primarily buses).

- The combined value of these trips (bus + rail tickets) is over $95 million.

- Thruway connections add over 400 possible destinations to the Amtrak system.
### Thruway Business Volume

<table>
<thead>
<tr>
<th>ROUTE TYPE</th>
<th>RIDERS</th>
<th>TICKET REVENUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEDICATED - STATE FUNDED</td>
<td>1,081,000</td>
<td>$16,357,000</td>
</tr>
<tr>
<td>INTERLINE - STATE FUNDED</td>
<td>25,000</td>
<td>$246,000</td>
</tr>
<tr>
<td>DEDICATED – LONG DISTANCE</td>
<td>145,000</td>
<td>$1,799,000</td>
</tr>
<tr>
<td>INTERLINE - MINIMUM REVENUE GUARANTEE</td>
<td>22,000</td>
<td>$626,000</td>
</tr>
<tr>
<td>INTERLINE – PER TICKET</td>
<td>262,000</td>
<td>$6,805,000</td>
</tr>
<tr>
<td>NJ TRANSIT – ATLANTIC CITY LINE</td>
<td>65,000</td>
<td>Not Booked as Revenue</td>
</tr>
<tr>
<td>CONNECTED RAIL SEGMENTS</td>
<td>1,506,000</td>
<td>$70,000,000</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td></td>
<td>$95,833,000</td>
</tr>
</tbody>
</table>

- **Dedicated** = Bus Company Contract only with Amtrak
- **Interline** = Tickets sold by Amtrak offered by another carrier, which also may sell its own tickets for travel
Amtrak Business Lines - Thruway Ridership and Revenue Statistics

<table>
<thead>
<tr>
<th>Business Line</th>
<th>Passengers with Thruway Tickets</th>
<th>Ticket Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Corridor</td>
<td>26,352</td>
<td>$2,004,334</td>
</tr>
<tr>
<td>Long Distance</td>
<td>352,999</td>
<td>$39,292,068</td>
</tr>
<tr>
<td>State Supported</td>
<td>1,148,599</td>
<td>$28,971,986</td>
</tr>
</tbody>
</table>

- 1.5 Million Amtrak rail tickets are sold with a thruway ticket at same time
- Data is from Last 12 months
Thruway Statistics by Cost Center

<table>
<thead>
<tr>
<th>MOST RECENT 12 MONTHS</th>
<th>CC 6512 (CALIFORNIA)</th>
<th>CC 5001 (NATIONAL)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>THRUWAY RIDERS:</td>
<td>1,124,000</td>
<td>476,000</td>
<td>1.6 Million</td>
</tr>
<tr>
<td>CONNECTED TRAIN RIDERS:</td>
<td>1,132,000</td>
<td>399,000</td>
<td>1.5 Million</td>
</tr>
<tr>
<td>THRUWAY TICKET REVENUE:</td>
<td>$16.2 Million</td>
<td>$9.6 Million</td>
<td>$26 Million</td>
</tr>
<tr>
<td>CONNECTED TRAIN TICKET REVENUE:</td>
<td>$41.1 Million</td>
<td>$29.2 Million</td>
<td>$70 Million</td>
</tr>
<tr>
<td>TOTAL TICKET REVENUE</td>
<td>$57.3 Million</td>
<td>$38.8 million</td>
<td>$96 Million</td>
</tr>
<tr>
<td>THRUWAY OPERATING BUDGETS (APPROX.):</td>
<td>$29 Million</td>
<td>$13 Million</td>
<td>$41 Million</td>
</tr>
</tbody>
</table>

- California has over double the Thruway Riders of the rest of the U.S. National Network
- Thruway connections generate cash contributions – primarily by attracting additional passengers to ride Amtrak trains.
Connected Rail Riders per Year by Route

- California Rail Routes dominate in the Thruway Market
Opportunities

• Door to Door Mobility Solutions
• Commuter Rail Thruway Ticketing
• New Thruway Routes
• Pilot Projects of New Service Types (e.g. Deluxe Bus)
• Station Agency Agreements
# Needed Technology Improvements

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Benefits</th>
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</thead>
<tbody>
<tr>
<td><strong>Upgrading Arrow</strong> to allow for using native schedule numbers of interline carriers. At present, Amtrak uses its own defined schedule numbers for interline schedules, regardless of the schedule number a carrier may use for its own service.</td>
<td>Using native schedule numbers would be less confusing for customers and employees. A greater number of schedule numbers would be available for use.</td>
</tr>
<tr>
<td><strong>Travel document</strong> improvements to better describe interline connections, including operating carrier information.</td>
<td>Customers would more easily locate connecting services. Drivers and field staff would more easily inspect tickets.</td>
</tr>
<tr>
<td><strong>Interline Capacity Management</strong>: Real-time availability calls and capacity synchronization with interline carriers.</td>
<td>Capacity levels would be synchronized among interline carriers to avoid oversold conditions and allow for real-time selling from availability.</td>
</tr>
<tr>
<td><strong>Interoperable ticket scanning</strong> among carriers whereby Amtrak receives ticket lift scan data from interline carriers.</td>
<td>Real time ticket lift data would allow for improved operations management.</td>
</tr>
<tr>
<td><strong>Online interline revenue clearing</strong> processes for interline payments.</td>
<td>Invoicing processes would be simpler, faster, and more efficient for business partners.</td>
</tr>
<tr>
<td><strong>A routing algorithm</strong> to build and display connected itineraries (all connecting routes are hand-coded in Arrow by CNOC and Connectivity staff – over 20,000 routes).</td>
<td>More city pair combinations would be created and available to customers.</td>
</tr>
<tr>
<td><strong>Multi-ride ticket lift revenue</strong> should accrue to Thruway services, not just trains.</td>
<td>Multi-ride ticket revenue could be accurately assigned to buses.</td>
</tr>
<tr>
<td><strong>USA Rail Pass</strong> Thruway segments would be assigned ticket revenue.</td>
<td>Financial settlement with interline carriers would be improved.</td>
</tr>
<tr>
<td><strong>Isolate interline ticket revenue from Amtrak ticket revenue.</strong></td>
<td>Interline payments would no longer show as an operating cost on the P&amp;L, replaced with net commission profit.</td>
</tr>
</tbody>
</table>

**Originating**
- Intercity Bus: 1%
- Public Transit: 35%
- Taxi/Limo: 23%
- Dropped Off: 18%
- Walk: 4%
- Other: 8%

**Destination**
- Intercity Bus: 1%
- Taxi/Limo: 32%
- Public Transit: 33%
- Picked Up: 18%
- Drove: 5%
- Walk: 10%
- Other: 3%

People going to another city on Amtrak trains

People coming from another city on Amtrak trains
Station Access: Philadelphia (2016)

**Originating**
- Intercity Bus: 2%
- Public Transit: 33%
- Taxi/Limo: 17%
- Dropped Off: 26%
- Drove: 13%
- Walk: 5%
- Other: 5%

**Destination**
- Intercity Bus: 0%
- Taxi/Limo: 33%
- Picked Up: 24%
- Drove: 6%
- Walk: 11%
- Other: 5%

People going to another city on Amtrak trains
People coming from another city on Amtrak trains

New York “Home” Station Travelers

- Subway: 43%
- Bus: 5%
- Commuter Rail: 20%
- Taxi: 19%
- Auto: 9%
- Walk: 4%

Travelers to New York

- Subway: 29%
- Bus: 2%
- Commuter Rail: 5%
- Taxi: 39%
- Auto: 6%
- Walk: 19%
Ride Hailing Trends
Amtrak is Part of a “Travel Ecosystem”
The First and Last Mile

- Trains take passengers “door to door.”
- First / last mile can be one of the most difficult to plan and expensive to purchase.
- Intercity train riders depend on:
  - Auto access
  - Local public transport
  - Taxis
  - Pedestrian/bicycle
- In the U.S., taxi service is shifting to “ride-hailing” services such as Uber and Lyft, especially for business travelers.
- To what extent will ride-hailing change the transportation mix?
Competing Options for Travel Solutions

- Third party provide integrated trip planning – google Maps, Moovel, etc
- Amtrak currently has few partnerships with local transport authorities.
- Amtrak is pursuing “door to door” mobility solutions for customers through partnerships with providers, technology firms, and in-house solutions development.
How Do Passengers Access Stations?

Transit Cities...

...are also Taxi/Uber Cities

Many Auto-Dependent Stations
## Amtrak First/Last Mile Statistics

<table>
<thead>
<tr>
<th>Top ways to access Amtrak stations</th>
<th>Percentage of customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropped off/picked up by another auto driver</td>
<td>32%</td>
</tr>
<tr>
<td>Local public transit</td>
<td>16%</td>
</tr>
<tr>
<td>Taxi/Limousine</td>
<td>15%</td>
</tr>
<tr>
<td>Drove and parked</td>
<td>11%</td>
</tr>
</tbody>
</table>
Ride-Hailing: Business Traveler Usage

- Uber and Lyft are primary ride-hailing services in U.S. (and Uber is much larger)

- In Q4 of 2016, Uber accounted for 52% of automobile business travel transactions (Certify, Inc., a business expense reporting service)

The price to purchase a New York City taxi medallion is falling:
- 2014: $1,300,000
- 2016: $250,000

Source: Certify
Uber/Lyft Issues for Amtrak

- **Congestion:** Drivers are parking at stations waiting for fares. Diverting trips from mass transit will increase congestion at stations.

- **Station Design:** To prevent conflicts, ride-hailing services and taxi services are sometimes designated in different locations. Where and how should customers and drivers connect?

- **Facility Revenue Streams:** Should station access fees be collected, and if so, what is the best method for collection?

- **Bundling:** Can Amtrak sell combined rail + car travel? What would be the best method?

- **Alternate Transportation:** Using car services to protect missed connections.

- **Marketing Partnerships:** What is the best practice for marketing partnerships with car services?
Uber and Lyft can provide “last mile” and “off peak” connections for transit, increasing station access (especially for suburban commuter systems). Nevertheless:

- In 2016, public transit ridership declined in 24 out of 30 major U.S. cities.
- Research on New York travel data suggest that Uber is taking riders from mass transit and increasing vehicles on city streets.
- Ridership declines could create a negative feedback loop.
Summary: Potential Strategies

✓ Pursue Thruway eTicketing with local transport authorities to improve convenience and attractiveness of transit service.
✓ Work with transit agencies to improve the competitive position of mass transit with through-ticketing and improved technology.
✓ Design stations to accommodate car services and consider access fees at congested urban stations.
✓ Seek marketing partnerships and bundled ticketing with ride-hailing services.
✓ Use ride-hailing to improve operations for missed connections, delayed baggage, and potentially package express services.