Challenges in Interagency Transit Services Coordination

August 26, 2014
National Rural ITS Conference
Agenda

• The VTCLI Experience – Chris Zeilinger, CTAA
• Transit Data Interoperability – Larry Harman, Bridgewater State University
• One-Click One-Call Veterans Center – Gary Shepard, Berkshire Regional Transit Authority
TECHNOLOGY CHALLENGES IN INTERAGENCY TRANSIT SERVICES COORDINATION: THE VTCLI EXPERIENCE

National Rural ITS Conference
Tuesday August 26, 2014

Chris Zeilinger
Assistant Director
Community Transportation Association of America
Introductory Background

- What is the Community Transportation Association of America (CTAA)?
- Technology among rural, small-urban and specialized transportation providers: a 30-second refresher course
- CTAA’s role as provider of technical assistance, in general and with regard to the Veterans Transportation and Community Living Initiative (VTCLI)
VTCLI Background

To recap what was presented earlier today...

- FTA has awarded approximately $64 million in competitive capital and research grants for the purpose of helping veterans, military families and others connect to jobs and services in their communities through improved access to local transportation services.
- 86 VTCLI projects across the US, in 38 states, 2 territories
- Two rounds of Section 5309 capital grants, awarded in 2011 and 2012, plus one round of Section 5312 research grants for outreach and marketing initiatives, awarded in 2012.
- Section 5309 grants range from $31,000 to $2.0 million; Section 5312 grants range from $6000 to $50,000.
VTCLI Project Locations

Distribution of VTCLI Awards in 2011 and 2012 for Contintental United States Scaled by Size of Award

Notes:
1. Blue symbols are 2011 awards
2. Red symbols are 2012 awards
3. 2012 awards include S. 5309 capital and S. 5312 planning $
VTCLI: Diverse Grantees

VTCLI projects are being implemented by a diverse array of entities.

- Urban Transit Agencies (36)
- COGs, Planning Agencies, etc. (10)
- Local Human Services Transportation Providers (10)
- Rural Transit Agencies (9)
- “Non-traditional” Partners (8)
- State DOTs (7)
- Local Government (6)

[note: these are subjective categorizations of end recipients]
VTCLI: Diverse Technologies

Strategies being employed by VTCLI grantees include:

- Multi-agency trip planning
- On-line trip scheduling
- Real-time traveler information
- Technology add-ons to existing call centers
- Integration with 211/511, both local and statewide
- On-vehicle technology
- Electronic fare system upgrades
- Smartphone “apps”
- Construction of new one-call/one-click facilities
VTCLI Technology Challenges

Despite focus on established, off-the-shelf, technological approaches, VTCLI grantees have had to address a host of challenges, including:

• Patent assertion entities’ claims on real-time information systems
• Accessibility of web and phone interfaces
• Synchronizing procurements with grantee’s other technology projects, whether for specs or for sole-source
• Designing to accommodate multiple transportation modalities and providers on one platform or interface
• Privacy concerns, e.g., with VA’s electronic health records
• Interfacing multiple providers’ fare systems and technologies with smartcard-based fare payment systems
• Data interoperability across multiple demand-response trip reservation, scheduling and dispatching platforms
Several technical assistance products have been developed, which will have lasting value beyond VTCLI

- “Guide to Serving Your Military Community,” housed on FTA website
- “Route To Community Engagement” on-line toolkit, located on Easter Seals Project ACTION website
- “One-Call Operating Guide,” housed on One-Call Toolkit website
- Technical briefs on data interoperability, patent assertion issues, and financing one-call operations, housed on FTA and CTAA websites
VTCLI: Enduring Benefits

Even after VTCLI projects and their technical assistance have concluded, there are lasting benefits that will accrue to FTA and the transit network.

• There will be demonstrated, documented successes of veterans and military stakeholder participation for transit agencies and planners to follow
• More than a dozen technical assistance documents, toolkits and other resources have been developed that will be available and useful to other transit agencies and their partners
• On account of the needs of many VTCLI grantees, an ongoing effort concerning interoperability and openness of data has been launched that is leading to greater technological efficiency in the provision of demand-response public transportation
For Questions, More Information

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Assistant Director
Community Transportation Association of America
Phone: 202-250-4108
Email: zeilinger@ctaa.org
TRANSIT DATA INTEROPERABILITY

AUGUST 26, 2014
NATIONAL RURAL ITS CONFERENCE

Larry Harman, Co-Director
GeoGraphics Laboratory, Bridgewater State University
Federal Transit Administration – Bridgewater State University Cooperative Agreement to support data interoperability in MSAA projects

• Approach to problem
  – Historical analysis of public transportation initiatives
  – Review current projects supporting MSAA goals
  – Outreach to emerging public and private partnerships
  – Consensus building for data interoperability
Literature Review Results

IDEA
Innovations Deserving Exploratory Analysis Programs

Transit IDEA Program

Developing Regional Mobility Management Centers

Final Report for Transit IDEA Project 50

Prepared by:
Joe E. Backlund
WESTAT
Rockville, Maryland

October 2012

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

TCRP
Web-Only Document 62:

Standardizing Data for Mobility Management

Suzanne M. O'Neill
TransitPlus, Inc.
Greenswood, CO

Roger F. Teal
Demand/Trans Solutions
Willimette, IL

Contractor's Final Report for Task 62 of TCRP Project J-06
Submitted November 2013

Federal Transit Administration
Current Related Projects

• Bridgewater State Mobility Management Technology Project Phase III – CCRTA
• VTCLI Technology Cooperative Initiatives (TechCOOP)
  – Portland, OR, Ride Connection – VA data exchange
  – Atlanta Regional Commission
  – VTCLI New England Open Data Exchange
    • Berkshire RTA, MART, MetroWest RTA, Cape Ann TA, and Cape Cod RTA, Vtrans, COAST
MSAA Outreach Initiative

• Outreach to public agencies and private vendors through national conferences.
• Webinars to present findings and initiate discussions leading to consensus on data standards that promote interoperability for mobility services (i.e. public transportation and human services transportation).
• Meeting of public and private stakeholders.
Outreach Through National Conferences - 2014

• TRB Transit GIS Conference, Washington, DC, October 2013
• AASHTO National GIS-T Conference, Burlington, VT, May 2014
• CTAA EXPO 2014, St. Paul, MN, June 2014
• Rural ITS Conference, Branson, MO, August 2014
• MARTA Annual Conference, Berkshire County, Sept 16, 2014 – outreach to New England States for IOP consensus building
VTCLI-MSAA Interoperability (IOP) Initiative in FTA Region One

• FTA TRO1 VTCLI Technical Assistance Initiative supporting VTCLI New England Open Data Exchange (ODE).

• FTA TRO1 is joined by MassDOT Mobility Manager in monitoring VTCLI projects

• Berkshire RTA VTCLI and BSU/GL MSAA projects create prototype for simple ODE using standard reports and .csv output with VA Veterans Transportation Services

• BSU/GL provides secure data hub and software as a service SaaS design to prototype interoperability

• BRTA initiative outreach to MART, MwRTA, and CATA for VTCLI DXE to/from VA through MA VTCLI Call Ctrs
VTCLI NE DXE: *GTFS-DRT* ??

- TCRP J06/Task 82 Core Data Elements for “Transactions” (ref TCRP Web Doc 62 p.44)
  - Trip Data
  - Passenger Data
  - Organization Data
  - Financial Data
  - Vehicle Data
- Export from Vendor A software as a .csv report
- Import into Vendor B software as a .csv intake file
Proposed Webinars Fall- Winter 2014 -2015

• Historical precedents
  – ADART VNTSC Report
  – Cape Cod ITS Feasibility Study
  – TCRP IDEA 50 Report
  – TCRP Task J-06/Task 82 Report
• VTCLI New England Data Exchange (DXE)
  – Lessons Learned
• VTCLI Portland (OR) Data Exchange
  – Lessons Learned
Proposed Webinars Spring 2015

• MSAA Data Interoperability – Lessons Learned
  – VTCLI New England Open Data Exchange
  – VTCLI Northwest Open Data Exchange
  – Atlanta Regional Commission Open Data Exchange

• MSAA Data Interoperability Interim Report
MSAA Stakeholders Meeting

- CTAA TechCOOP5 – Final Day of CTAA EXPO 2015, Tampa, FL, June 2015
  - Public sector panel
  - Private sector panel
  - Consensus building exercise
  - Consensus Results – (video recorded)
MSAA Interoperability Final Report

- Draft Final Report Published -- Summer 2015.
- [Possible Draft HST Interoperability Documentary Video – Fall 2015]
- Revisions completed – December 2015.
Contact Information

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Co-Director, GeoGraphics Laboratory, Rm 460
Conant Center for Science and Mathematics
Bridgewater State University
Bridgewater, MA USA
larry@geographicslab.org
# Berkshire County Population

*(Provided by U.S. Department of Commerce)*

<table>
<thead>
<tr>
<th></th>
<th>Berkshire County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, 2010</td>
<td>131,219</td>
<td>6,547,629</td>
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<tr>
<td>Persons under 5 years (%), 2012</td>
<td>4.4%</td>
<td>5.5%</td>
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<tr>
<td>Persons under 18 years (%), 2012</td>
<td>18.7%</td>
<td>21.1%</td>
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<tr>
<td>Persons 65 years and over (%), 2012</td>
<td>19.7%</td>
<td>14.4%</td>
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<tr>
<td>Veterans, 2007-2011</td>
<td>11,153</td>
<td>412,617</td>
</tr>
<tr>
<td>Mean travel time to work (minutes), 2007-2011</td>
<td>20.1</td>
<td>27.5</td>
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</table>
## Human Service Transportation

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Services/Program</th>
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<tbody>
<tr>
<td>County Ambulance</td>
<td>Paratransit</td>
</tr>
<tr>
<td></td>
<td>Mass Health</td>
</tr>
<tr>
<td></td>
<td>Early Intervention</td>
</tr>
<tr>
<td>County Rainbow Taxi</td>
<td>MRC</td>
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<tr>
<td></td>
<td>Mass Health</td>
</tr>
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<td></td>
<td>DDS and DayHab</td>
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<tr>
<td>BCAC</td>
<td>DDS and DayHab</td>
</tr>
<tr>
<td>Tunnel City Taxi</td>
<td>Mass Health</td>
</tr>
<tr>
<td></td>
<td>MRC</td>
</tr>
<tr>
<td>Taxico</td>
<td>Mass Health</td>
</tr>
</tbody>
</table>
JOSEPH SCELSI INTERMODAL TRANSPORTATION CENTER
Route 7

Next Bus?
- Stop & Shop
- Paresky Center
- Lanesborough Post Office
- Lanesborough
- Lanesborough Elementary School
- Berkshire Medical Center
- Benaron Mall
- Williams Inn
- Berkshire Medical Center

Call/Tell Several stops along Route 7 feature call/tell capability. Call 413.629.2900 fifteen minutes prior to the next scheduled bus and catch a ride. Or, once you’re on the bus, tell the driver where you need to go.
Executive Order 13330 – Human Service Transportation Coordination

STATEMENT OF SUPPORT

We recognize the tremendous service to our Nation made by the men and women of the Armed Services, our Veterans, and their families.

We commit to making the well-being of our military families one of our highest priorities and to improving their access to services and support.

We will ensure that this priority is communicated aggressively across our organizations, receives the necessary resources, and is assessed and strengthened going forward.

Our commitment is enduring, not just for today’s military families but for future generations.

[Signatures of various departments and agencies]
Proposed Facility Layout
Transportation Coordination: ROI

- **USDOT ROI** study conducted on MSAA (precursor to VTCU)
- Study proves substantial cost savings and ROI when government funded transportation programs are coordinated
- **RouteMatch** technology is platform for this study
- 44% vehicle reduction with 10% productivity improvement.

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>Scenario #1 Non-Coordination (Non Coordinated)</th>
<th>Scenario #2 Semi-Coordination (Medicaid and Aging Separated)</th>
<th>Scenario #3 Full Coordination (All Trips)</th>
<th>% Change from Scenario 1 to Scenario 3</th>
<th>% Change from Scenario 2 to Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Vehicle Hours (hrs.)</td>
<td>554</td>
<td>609</td>
<td>499</td>
<td>-11%</td>
<td>-22%</td>
</tr>
<tr>
<td>Total Revenue Hours (hrs.)</td>
<td>494</td>
<td>538</td>
<td>454</td>
<td>-9%</td>
<td>-18%</td>
</tr>
<tr>
<td>Total Vehicle Distance (mi.)</td>
<td>12,658</td>
<td>13,227</td>
<td>11,939</td>
<td>-6%</td>
<td>-11%</td>
</tr>
<tr>
<td>Total Revenue Distance (mi.)</td>
<td>11,939</td>
<td>10,432</td>
<td>10,257</td>
<td>-16%</td>
<td>-2%</td>
</tr>
<tr>
<td># of Vehicles Used</td>
<td>60</td>
<td>69</td>
<td>48</td>
<td>-25%</td>
<td>-44%</td>
</tr>
<tr>
<td>Passenger per Revenue Hour</td>
<td>1.89</td>
<td>1.74</td>
<td>1.92</td>
<td>+2%</td>
<td>+9%</td>
</tr>
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GOVERNMENT TECHNOLOGY: STATE & LOCAL GOVERNMENT NEWS ARTICLES

Tech and Homeless Vets to Improve County Transportation

The Berkshire Regional Transit Authority in Massachusetts is partnering with a nonprofit organization to put homeless veterans to work in an intermodal transportation center.

BY BRIAN HEATON (HTTP://WWW.GOVTECH.COM/AUTHORS/BRIAN-HEATON.HTML) / NOVEMBER 1, 2013
Closing
Challenges and Opportunities
ITS/VTC LI
Moving Forward
Federal Transit Administration
www.fta.dot.gov