Session T1

How Small Communities are Implementing Transit

Rural Transit & Paratransit Coordination

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Agenda

- Transportation Coordination Technology Issues
  - Coordinated transportation models
    - Consolidated approach
    - Integrated approach
  - Questions & Answers
Challenges

- Provide great customer service
- How to harness technology to increase customer service
- Empower passengers to help increase their satisfaction
- Create efficient and flexible routing to better service passengers
Opportunities

- Find ways where both passenger and agency can benefit
- Create efficiencies through effective use of technology
- Give passengers more power to create a better experience
Coordination Technology Issues

- What are the goals of the agencies?
- State, Regional, or local coordination?
- Things to think about when agencies want to coordinate service:
  - GIS Engine/Mapping
  - Politics
  - Data Exchange
  - Data Control
  - Security
  - Internet Connectivity
  - Operational
Agenda

- Transportation Coordination Technology Issues

  - Coordinated transportation models
    - Consolidated approach
    - Integrated approach

- Questions & Answers
Coordinated Transportation

- Consolidated Approach
  - Everyone utilizes the same system

- Integrated Approach
  - Everyone maintains identity and can still use their system
Consolidated Approach

Server Cluster - Controlled by Lead Agency

All agency data is kept on a central server controlled by the lead agency
Consolidated Approach

- How to deal with technology issues for this model
  - GIS Engine – All agencies share same map data on single database.
    - What data sources are being used
    - How often will the maps be updated? At the same time?
    - Who is going to merge new map data with old?
    - Who will be allowed to make map data changes?
    - Who determines and controls polygons?
  
  - Data Exchange – Occurs using a single database
    - What interfaces are needed?
    - Rider eligibility systems?
Consolidated Approach

- How to deal with technology issues for this model
  - Data Control
    - Who can make changes to data?
    - What about common data?
    - What if there are conflicts between agencies? (i.e. ADA eligibility level)
  - Security – Who do you want to see the data?
    - Can agencies see each others routes, trips, etc?
    - What about sensitive client data?
  - Internet Connectivity – Need fast internet to connect to database housed by lead agency
    - What will bandwidth issues be fore each agency?
    - What will bandwidth cost? – operations expense/budget
    - What of future bandwidth needs?
- Contingency Plans
  - Data Backup needs
  - Redundancy
  - Disaster Recovery Plans
Consolidated Approach

- How to deal with technology issues for this model
  - Politics
    - Different operational requirements
    - Data control issues
    - Operational Liabilities (i.e. accidents, missed transfers, driver training)
    - Revenue/cost sharing
    - Faring Differences
  - Reporting Needs
    - How do they differ?
    - Billing Needs
    - Statistic Calculation
Integrated
Coordinated Transportation
Integrated Approach

- Transportation Management Control Center (TMCC)

- Also known by many different names:
  - United We Ride
  - Trapedia
  - Coordinated Transportation

- Offers an “Integrated” approach to Coordinated Transportation
Integrated Approach

▪ What?
  ▪ Real-Time interface that supports true coordinated transportation among transportation entities

▪ Who?
  ▪ PARTA & Trapeze

▪ Where?
  ▪ Ohio
  ▪ Rural & urban mix

▪ When?
  ▪ Completed Design Specification Phase

▪ Why?
  ▪ Provide an alternative to Consolidated Coordinated Transportation
Integrated Approach

- Trapeze Provides an Open Architecture Communication Interface that supports:
  - Client Registration
  - Trip Booking & Scheduling
  - Dispatching
  - Reporting
  - Funding & Money Collection

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Client Registration Example
Client Registration Example
Client Registration Example
Client Registration Example

TMCC
Centralized Client Registration Database

TMCC Partner Site (A)

TMCC Partner Site (B)

TMCC Partner Site (C)
Client Registration Example

TMCC
Centralized Client Registration Database

TMCC Partner Site (C)
TMCC Partner Site (B)
TMCC Partner Site (A)
Client Registration Example

TMCC
Centralized Client Registration Database

TMCC Partner Site (A)

TMCC Partner Site (B)

TMCC Partner Site (C)
Client Registration Example

TMCC
Centralized Client Registration Database

TMCC Partner Site (A)

TMCC Partner Site (B)

TMCC Partner Site (C)
Integrated Approach

- Generic interface is published
  - Client Administration
  - Trip Booking & Scheduling
  - Fixed & Flex Route Trip Planning
  - Funding Sources
  - Dispatching Updates
Integrated Approach

- **Very Scalable**

  - If everything is localized (consolidated) under one system, performance could be affected as the service expands geographically and/or by service demands
  - If one site has a problem, the system is still running
  - Easily add partner sites
Consolidation v.s. Integration

- Consolidation is easy, but comes with a heavy price
  - You must conform
  - Everyone must bend their current policies and procedures

- Integration
  - You can maintain your current policies and procedures
  - Best way to describe this… like expedia… but better (you will be able to create transfers between sites)

- What does Trapeze currently support?
  - Currently supports consolidated approach
  - Will be able to support integrated approach
Open Discussion

Questions?