RITA Research and Innovative Technology Administration
Intelligent Transportation Systems

Federal Transit Administration (FTA)
Demonstration Project

LYNX & PCTS Rural Intelligent Transportation System (ITS)

Sponsored by the ITS Professional Capacity Building Program, ITS Joint Program Office, Research and Innovative Technology Administration, U.S. Department of Transportation

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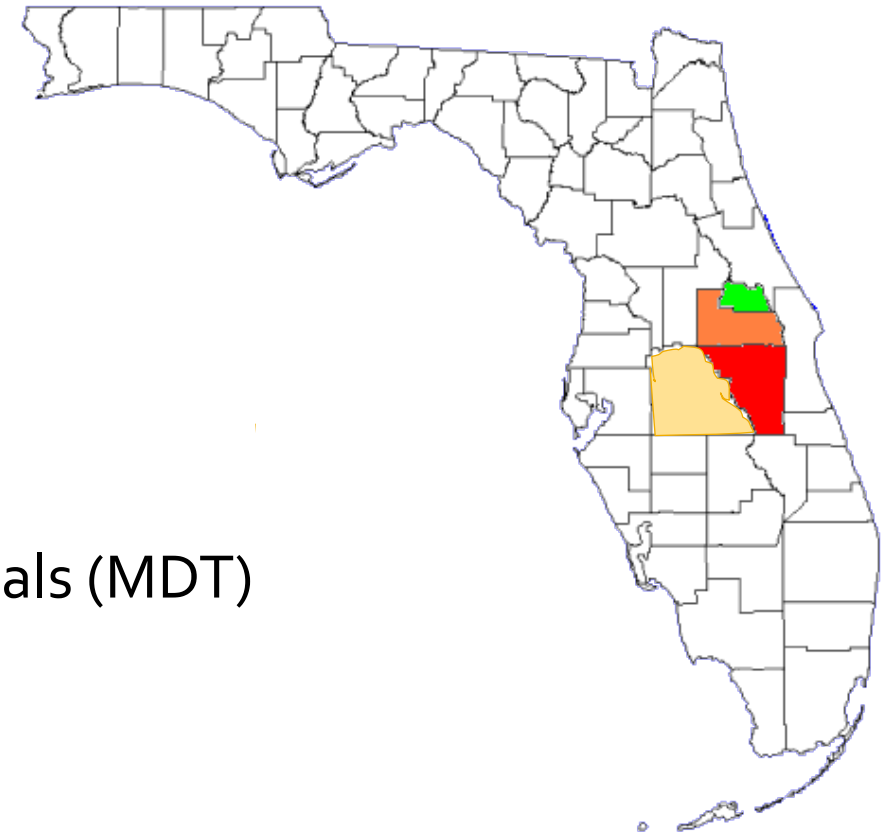
POLK COUNTY

INTRODUCTION

1) Agency background
   - Type of agency
   - Service area
   - Services
2) The project
   - Mobile Data Terminals (MDT)
   - Shared trips
   - Interagency back-office billing



REGIONAL MOBILITY CONCERNS

1) Lack of transit funding;

2) Development barriers that are not conducive to efficient transit operations;

3) Multiple agencies providing services with varying technologies which makes coordination of transportation difficult; and

4) Political boundaries impacting regional decision making.

LOCAL AGENCY ISSUES

1) Both agencies operate paratransit trips to the same area.
   - Can the trips be coordinated?
   - The area is in two counties, does it make sense to delegate residents to one agency?
   - Should county lines limit access?
   - Can the agencies coordinate trips with the existing services and technology?
   - Can the fixed-route system assist in reducing the need for the more costly paratransit service?

PROJECT INITIATION

1) Grant application
   - $3 million dollar project scope submitted
   - $300,000 funded by Federal Transit Administration (FTA)
2) Project kick-off
   - Joint agency plan
   - Project assignment

PROJECT INITIATION

1) Advise project team of goals
   - Coordinating the implementation of MDTs on vehicles of two transit agencies;
   - Coordinating billing processes and transportation services between urban and rural areas;
   - Evaluating how innovative ITS technologies can be utilized to enhance options in rural communities; and
   - Providing cost impacts of paratransit service in rural areas and alternative options.

PROJECT PROGRESSION

1) Develop strategy

2) Release RFP for management of technology implementation

3) Release RFP for technology

4) Proposal evaluation

PROJECT PROGRESSION

1) System design
2) Communications infrastructure
3) Installation
4) Integration and testing
5) Training
6) Operations

IMPLEMENTATION OF TECHNOLOGY

1) Mobile Data Terminals (MDTs)

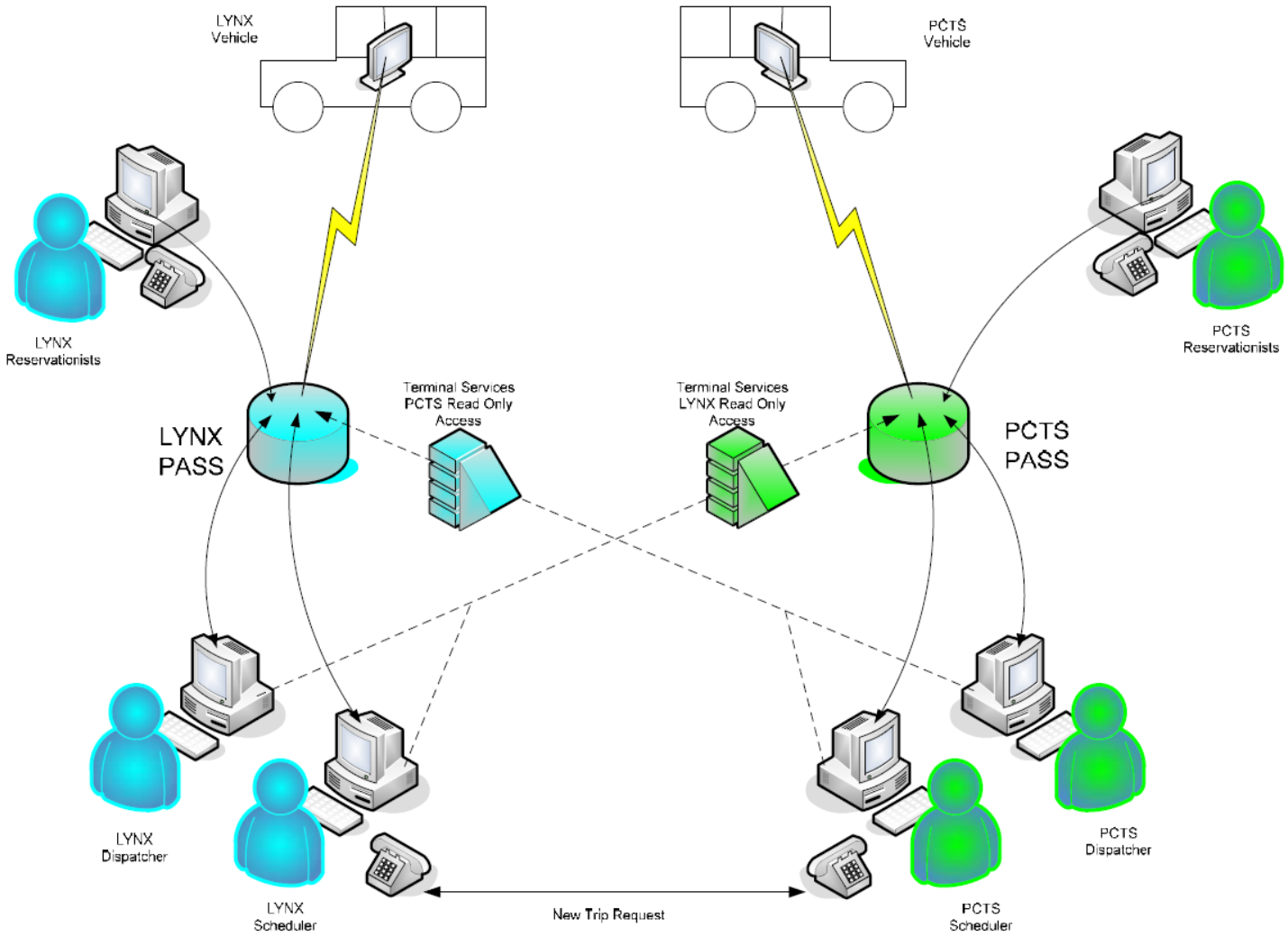
2) Global Positioning Satellite (GPS) / Automatic Vehicle Location (AVL)

3) Computer Aided Dispatch (CAD) / Scheduling software

4) Local Area Network (LAN) / High-speed internet / Cellular

5) CITRIX

IMPLEMENTATION OF TECHNOLOGY



RESULTS FROM TECHNOLOGY

1) Easy to use

2) Directional mistakes reduced

3) Excellent "late" and "no show" documentation

4) Radio traffic reduced approximately 70 to 75 percent

5) Map updates required

6) Trip performance fluctuates

AFTER TECHNOLOGY IMPLEMENTATION

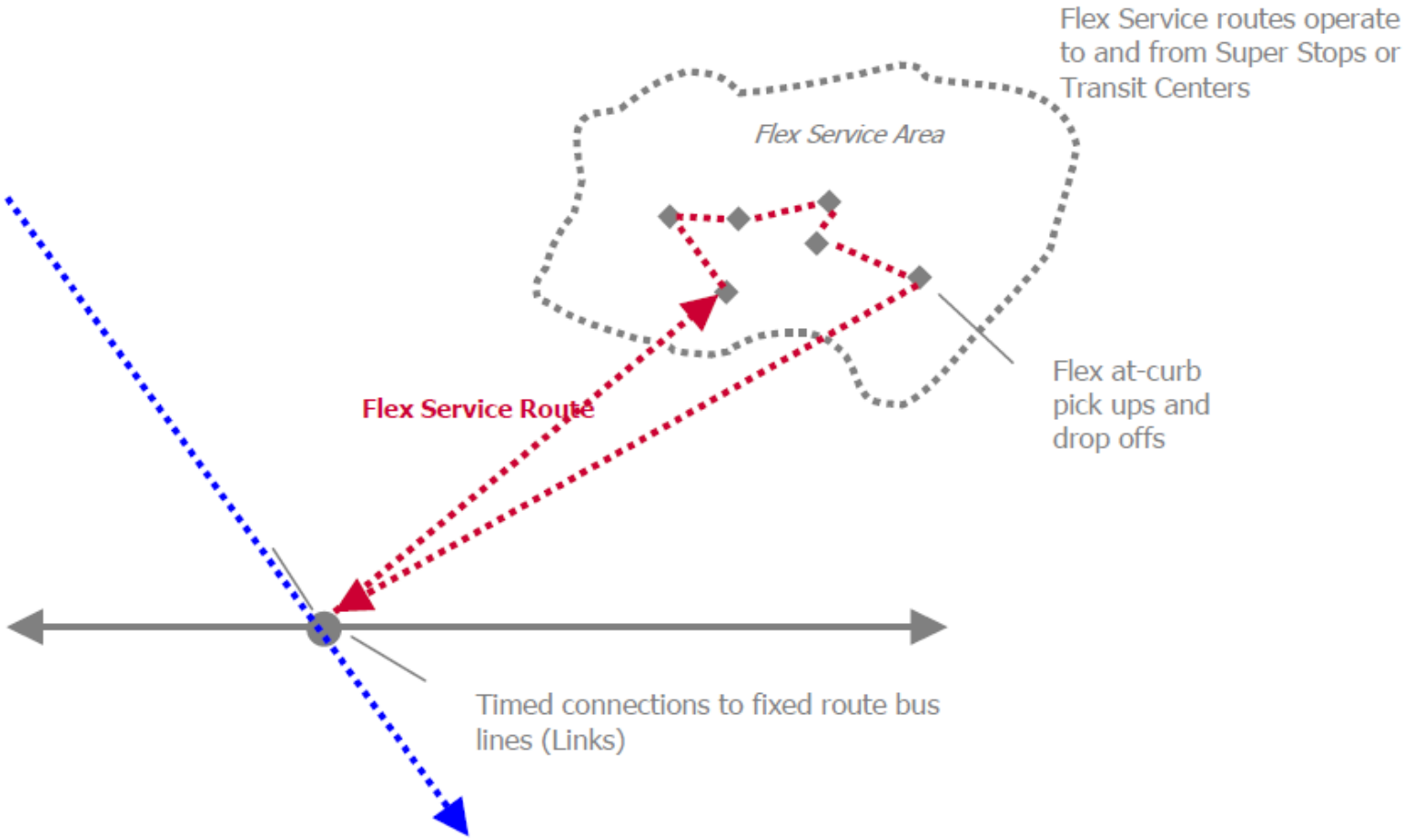
1) Coordination of shared paratransit trips

2) Flex-Service

3) Operator & Customer Survey

4) Back-office billing

AFTER TECHNOLOGY IMPLEMENTATION

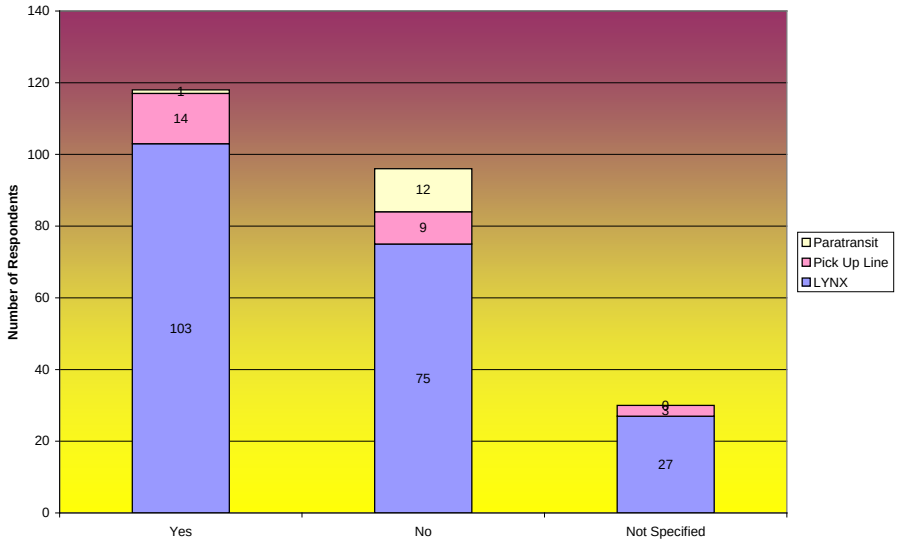


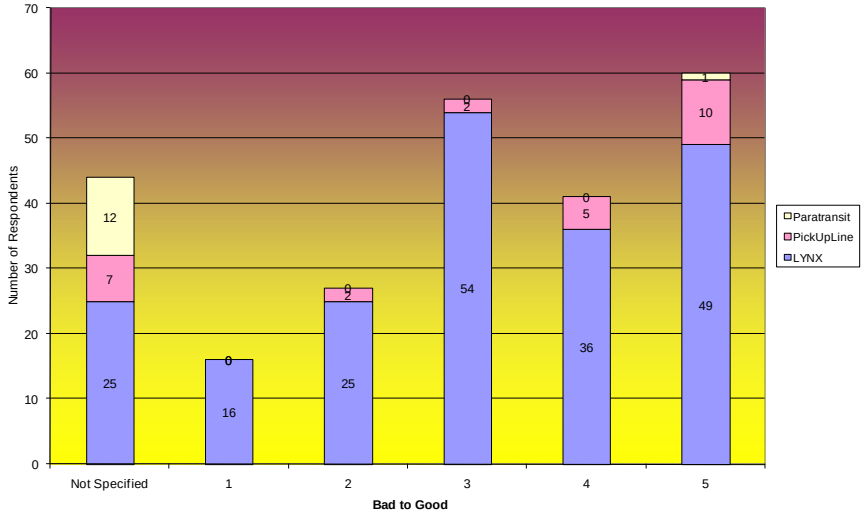
AFTER TECHNOLOGY IMPLEMENTATION

1) Do you use more than one mode to complete a single trip?

2) Are you satisfied with transfers between modes?

3) *Has your job changed as a result of this project?*
   - MV1 – *Yes, increased knowledge*
   - *MV2 – Yes, can monitor service delivery better*





LESSONS LEARNED

1) Procurement
   - Who is in charge?
   - Technology specifications
2) Implementation
   - Antenna location
   - Vehicle odometer wiring harness
   - Ranger MDT location

LESSONS LEARNED

3) Operational
   - Base maps
   - Training

4) Communication
   - Internal
   - External

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LESSONS LEARNED

1) Coordination
   - Staff
   - Policies
2) Back-office billing
   - Approval process
   - Accounting policies
   - Billing units

OVERVIEW

1) Highlights
   - Knowledgeable consultant staff involved in process from beginning to end of implementation
   - Scheduling the vehicles for installation of MDT units

2) Items of concern
   - Document the process throughout project
   - Ensuring in-house staff knowledgeable about equipment
   - Back-up staff for all aspects of project

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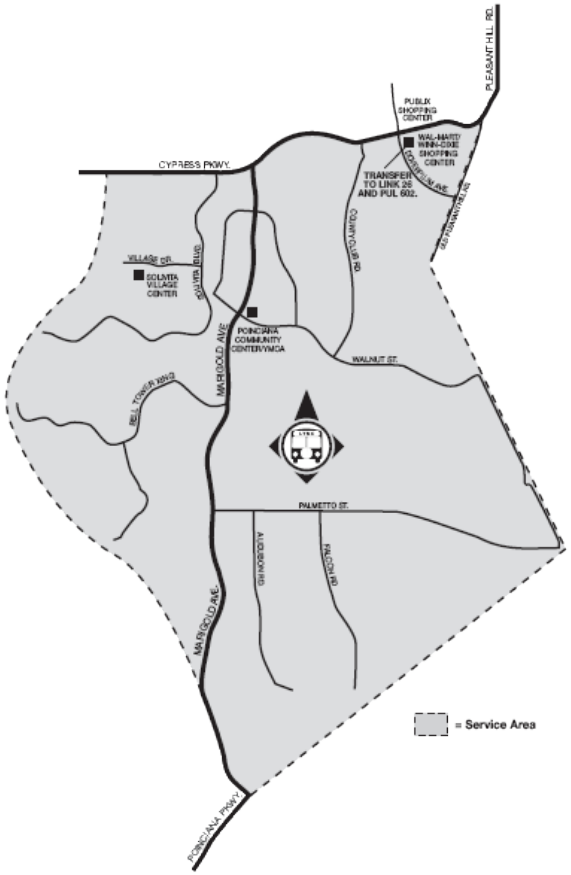
NEXT STEPS

1) Transfer of assets
2) Grant close-out
3) Additional flex-service
4) CAD-MDT for fixed-route (LYNX)
5) Equip additional vehicles (PCTS)



QUESTIONS

THANK YOU!

For Additional Information Contact:

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