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RTAP: A Rural Transit Assistance Program of the Federal Transit Administration

DEVELOPING, DESIGNING & DELIVERING COMMUNITY TRANSPORTATION SERVICES



INTRODUCTION

This publication is a companion to the technical assistance brief “Getting Started: Creating a Vision and Strategy for Community Transportation.” That preliminary document describes the process for building a foundation of values, needs, vision, strategy and community commitment for transit, one that ensures that the transit system’s mission and goals are clearly stated and understood by all.

Once that foundation is in place, your agency is ready to move forward. The information in this brief outlines the important next steps: how the transit organization develops, designs and delivers its services.

Developing Transit Leadership

Obviously, every organization needs an effective leader. But how do you make this critical selection for your transit agency? Professional training and experience are important qualities. Yet, what factors turn that trained and experienced person into a leader? What are the present community transit leadership dilemmas? What are the principles that must drive transit leaders as they undertake developing the transit organization and its services, expanding efforts to provide new services or revamping existing services to meet new challenges?

Principles that can resolve rural transit dilemmas and create organizational success are to be found inside each transit leader who is truly dedicated to action and success. They include:

Deep Commitment to Service

A commitment to others, both inside and outside the organization, is a mandatory prerequisite. Without such a commitment, the leader will inevitably make decisions based on personal need instead of the greater good, and will ultimately select a path that offers the least risk.

Sincere Belief in Empowerment

Do front-line staff feel ownership in the organization and participate fully in the development and implementation of the

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change process? Without empowerment, service expansion and redesign will fall short of its potential because those who must carry it out to the best of their ability won't. They will have no vested interest in the success of the venture.

Firm Belief in the Right to Mobility

This is an imperative in operating community transit services. Strong communities are built with full citizen participation, and participation requires mobility options for all individuals. Enabling inclusive and united communities should be a transit leader's primary objective.

Desire to Try New Opportunities

Real leadership is characterized by dynamism and innovation. It is important to think outside the box, to be willing to take risks.

Ethical Character; Comfort in a Visible Role

Advocacy with passion is a necessary component in transit success. Whether it is about selling coordination in a human service environment or putting transit at the economic development table or convincing political leaders that they should support the effort, the process is a high-profile one. Ethics, of course, breed trust both inside and outside the organization. Success is unlikely without trust.

Service Design

Having set the tone of your agency's leadership, you will need to consider, then select, the service design your agency will use to serve its customers. Service design should be based on a needs analysis that includes: demographic information; trip generators (locations where riders would get on and off the vehicle in large numbers); service-area geography; size and extent of existing transportation services; trips requiring reservations and documentation; requirements for schedulers and dispatchers; and communication and scheduling equipment.

Demand-Response Service

Sometimes considered a higher quality of service, demand-responsive fares are usually higher than comparable fixed-route fares. Also, demand-responsive service can be less dependable than fixed-route service, since there are more opportunities for vehicles to be delayed during their runs. Pickup times are usually given to riders in windows of 15, 20 or 30 minutes. Generally, a demand-responsive service is appropriate for less densely populated areas that cannot support fixed routes because they do not have enough regular riders living in a set area needing to go in similar directions (population density and trip generators) .

As your agency's ridership increases, certain usage patterns may become established. If vehicles are traveling the same roads every day at the same time, those segments of runs

might be designated as fixed routes and marketed to nearby residents and employers. Regular riders can also subscribe to a demand-responsive system by establishing a standing reservation. Human service agency passengers are often subscription riders. Subscription riders or sponsoring agencies do not need to call the system unless there is a change in the standing reservation.

Route-Deviation Service

A route-deviation system is a hybrid service in which traditional fixed-route service is provided, but vehicles deviate from the designated route to pick up or drop off passengers who need door-to-door or curb-to-curb service. Vehicles will still travel the established route according to the established schedule, but some additional time will be built into the schedule for deviations. Advance reservations must be made for deviations from the route. To ensure reasonable schedule compliance, deviations are limited in terms of absolute number during a specific period of time and distance from the route.

Checkpoint Service

Checkpoint is another type of hybrid service in which vehicles serve designated stops at scheduled times but operate in demand-responsive mode between stops. Spontaneous travelers can use the service by simply boarding and disembarking from buses at the designated checkpoint stops, without advance reservation. Riders unable, or unwilling, to travel to the checkpoints may access a demand-responsive service with advance reservation. There is no designated route between checkpoints.

Fares may be lower for checkpoint boarding to encourage use of the lower-cost service. There is sufficient time built into the schedule to allow for the deviations between checkpoint stops. The overall running times between checkpoints are therefore longer than they would be on a fixed route.

The checkpoint stops are usually made within a 10-minute window, not early, but up to 10 minutes late. If there are no deviations between checkpoints, vehicles may arrive early at a checkpoint, but will not leave until the scheduled time.

Checkpoint service provides access to riders within one-quarter mile of the checkpoints, as well as within the deviation service area. As with a pure demand-responsive system, the route deviation area would need to be defined.

Zone Service

Zone service is a method of providing limited transit access over a large area that could not otherwise support service. Zone service can assign fixed-route, demand-response or other type of service to certain zones or sectors on certain days. For example, a community might have five zones, each of which is provided transit service one day of each week. Communities with a more densely populated core could provide daily

service in the core area and zone service in outlying areas. Depending upon demand, zones may have service several days a week or as infrequently as once a month. Potential users in the zones plan their trips around the schedule, concentrating their trips on the days that service is offered.

Taxi Service

There are several types of taxi service that may provide public transportation in rural areas. In its common form, a private taxi transports individuals or prearranged groups of individuals on demand, for a fixed fee or a per-mile rate. Fares are usually expensive, on the order of \$2.00 to \$3.99 per mile, which can be prohibitive for longer trips. No subsidy is provided, and the level and quality of service is proportional to the business that can be generated.

A group taxi is similar to a demand-responsive system, except that smaller vehicles are usually used. Fares tend to be somewhat higher. In smaller systems without a dispatcher, the trips can be somewhat circuitous.

Taxi programs may be funded through a user-side subsidy. This program provides residents with a discounted ride on private taxi services. The discount usually takes the form of coupons or vouchers that passengers present to drivers when riding. Some operators automatically provide a discount to eligible riders. The taxi systems are reimbursed by the sponsoring agency for the discounted trip.

Van and Car Pooling

Service through van- and car-pooling involves pre-arranging shared rides in which several people travel together on a regular basis in a van or car. Arranging for this type of service falls within transit's role as a community mobility manager.

Vehicle Selection

One of the most crucial tasks for transit agencies is obtaining the appropriate vehicles for the designed operation. Needs-assessment information and service-design considerations, along with budgetary constraints and coordination efforts, will impact this decision-making process. Questions that need to be answered in vehicle selection include:

- Vehicle cost;
- Anticipated ridership (determine vehicle-size requirements);
- Service-area geography, road width and weather conditions;
- Vehicle accessibility and wheelchair stations;
- Vehicle maintenance and parts availability;
- Vehicle fuel efficiency; and
- Fixed-route vs. demand-response service modes.

Financial Considerations

Factors that influence the cost of providing transit service include:

- Prevailing wages in the community and the extent to which full-, part-time or volunteer employees will be used;
- Service modes such as fixed-route or demand-response;
- Distance vehicles will travel;
- Cost of purchasing and maintaining vehicles;
- Days and hours of operation; and
- Local and regional support.

Other financial management questions include:

- What information, payment or reimbursement requirements will be in place?
- How will contracts be negotiated and monitored?
- How will fares or donations be handled?
- What maintenance records will be kept?
- What are the restrictions on services that can be delivered?

Routing, Scheduling and Dispatching

If the scope of operations envisioned is large enough and financial resources are available, computerization of routing and scheduling is essential. However, some smaller transit systems (fewer than five vehicles) still operate effectively through the use of a manual scheduling process. Typically, this task is performed by experienced dispatchers who are familiar with the characteristics of passengers, drivers, road networks, trip patterns and system limitations.

The process of vehicle routing, scheduling and dispatching generally consists of four phases: 1) establishing demand-response reservations; 2) determining the vehicle routes and scheduling the trip(s); 3) monitoring vehicle location and adjusting the schedule when needed; and 4) keeping statistics and accounting records.

Some systems use a scheduling board that displays the days of the week and the times of the day. A scheduler can use the board to help determine passenger pick-ups and drop-offs for each vehicle and driver, and then place this information manually on a schedule. Other transit systems schedule trips manually and then plug the manual scheduling information into a computer database to generate reports and driver logs.

A simple computer spreadsheet can be used for scheduling as well. This requires that various routes and schedules be entered on the spreadsheet to determine viability. This use of the basic computer spreadsheet function can speed up the scheduling and dispatching process dramatically and, because

it uses standard, off-the-shelf software, it is relatively inexpensive.

When a transit system is billing multiple funding sources or running a large multi-modal operation, computer-based data that can be manipulated to generate reports is an invaluable tool in possessing operational efficiency and service quality. Transit systems should take the following steps when considering the purchase of scheduling and dispatching software:

- Conduct a software (and hardware) needs assessment;
- Identify and evaluate options;
- Select a system;
- Implement the system;
- Plan for upgrades of both hardware and software.

Typical computer scheduling and dispatching software functions include:

- Scheduling: Matching passenger requests for trips with appropriate vehicles and drivers;
- Routing: Determining the routes vehicles will take to transport passengers;
- Graphic Route Design: Using computer-based maps to display service area and demographic information as an aid to service design;
- Billing: Preparing request for payments; and
- Data Analysis: Using information from driver logs, maintenance records, administrative records and related services to summarize service provided and generate performance measures to evaluate efficiency and effectiveness.

There are no quick solutions to selecting the appropriate level of computerization for your transit system's size or activity. Key issues for analysis include:

- Are you providing route-deviated or demand-response service?
- Are manual tasks too labor intensive?
- Is data extraction too time consuming?
- What are the financial constraints?
- What is the availability of computer talent and support service?

In the end, no matter how sophisticated a computer system is, it still depends on highly skilled and trained staff to make it work.

Developing a Service Policy

Once the service type has been designed, your transit system needs a service policy that its employees and the riding public understand. Using clear, simple language, the policy should establish the parameters of the service area and what

procedures will be followed. The following should be addressed in your service policy document:

Description of Service

Describe the basic characteristics of the transit service, including items such as: public transit, demand-response or fixed-route, non-emergency transportation, door-to-door or curb-to-curb service, first-come, first-served reservations, accessibility to persons with disabilities.

Important considerations:

1. This statement should be clear to the general public, so do not use transit industry jargon.
2. While the statement should be fairly brief, it should accurately reflect the service actually provided by the transit system. Don't say "curb-to-curb" if door-to-door service is provided, or "public transit" if members of the general public are excluded from the system.

Service Area

On a map, specify the area in which service is provided, including:

- Geographic area (parish, county or city boundaries);
- Residency basis (i.e., whether or not service is provided to all residents, regardless of their destination);
- Specific points outside of pick-up area to which service is provided; and
- Any other unique considerations concerning the service area.

Days and Hours of Service

Address the following issues, as appropriate:

- Holiday hours;
- Office hours;
- Where to call in inclement weather or emergency situations;
- Where to call for specific schedule information;
- Service hours, clearly identifying times for earliest pick-ups and last drop-offs;
- Special hours in parts of service area; and
- Statement that exceptions may be made based on extenuating circumstances.

Reservations, Scheduling and Cancellations

Detail the following issues, as appropriate:

- Policy on being ready for pick-ups (e.g., communicate the expectation that the driver may arrive up to 15 minutes early, and the passenger must be ready to go).

- Minimum call-in time (e.g., 24 hours in advance, or 48 hours, or by 4:00 p.m. or a specific number of working days prior to the requested trip).
- Whether transit system dispatcher will call doctors, etc., to confirm passengers' appointments.
- Whether trip requests received after the call-in time are honored on a space-available basis.
- Description of how service is handled on holidays.
- Statement explaining that actual pick-up times will be adjusted based on the transit system's needs (such a statement probably should include a reiteration of the system's commitment to honor passengers' schedule needs in a cost-efficient fashion).
- Clear instructions on how to reserve trips, call in cancellations or request changes in trips. (Don't forget to include the telephone and TDD number).
- Standard wait time (the number of minutes a driver will wait at the pick-up location before moving on).
- Statement of the transit system's no-show policy.

Fares

Include a detailed breakdown of the transit system's fare structure, and an explanation of the basis of the fare policy. Special considerations, such as allowing older passengers to pay suggested contributions, should be stated as well.

Passenger Assistance

To a large degree, this section should detail the level of assistance the transit system provides to passengers with disabilities in compliance with the Americans with Disabilities Act (ADA). This section also helps define the limits of what assistance passengers can reasonably expect from the transit system, regardless of their disability.

As appropriate, address issues that include, but are not limited to:

- Routes and destination information;
- The nature of service, whether (curb to curb) door to door, explaining any safety considerations (e.g., door-to-door service will not be provided if conditions make it unsafe to do so) or other limitations;
- Drivers' ability to enter passengers' homes or otherwise pass beyond the threshold when providing door-to-door service;
- Policy on escorts or attendants, particularly as this applies to passengers with disabilities. (This includes defining what is meant by and expected of an escort, how many escorts may be allowed or required, circumstances under which transportation will not be provided unless a passenger is

accompanied by an escort and a statement that the passenger, not the transit system, is responsible for furnishing an escort);

- Transportation of unaccompanied children;
- Carrying passengers' packages or other personal items;
- Passengers needing mobility aids;
- Compliance with the ADA (e.g., attempting to accommodate all wheelchairs and mobility aids in common use, including scooter-style devices).
- Policy on standees, including where and when standees are allowed.

Passenger Conduct and Responsibilities

This section details circumstances under which passengers can be denied service. It should not allow for misunderstandings on the passenger's part, nor should it allow the transit system to be inconsistent in how it responds to the conduct and needs of passengers.

As appropriate, address issues that include, but are not limited to:

- The expectation of passenger courtesy and consideration of others;
- Driver authority (i.e., the driver is in charge, responsible for on-vehicle behavior, and all instructions from the driver are to be followed by passengers);
- Seatbelt use;
- Types of inappropriate on-vehicle behavior (These may include: eating, drinking, using tobacco products, foul language, lack of personal hygiene, bothering other passengers, horseplay, fighting, carrying weapons, possessing illegal drugs, having open containers of alcohol on the vehicle, etc.);
- Compliance with the fare policy;
- Securement of carry-on items and personal belongings while riding; and
- Denial of service when a passenger is a danger to others;
- The transit system's right to refuse service based on violation of these standards.

Passenger Comment and Complaint Procedures

Address the following issues, as appropriate:

- Commitment to respond to passenger perceptions and complaints.
- Comment cards or evaluation forms available on all vehicles;
- Phone number and/or address for passenger commendations

or complaints; state that the transit system solicits positive as well as negative input from the passengers;

- Explanation of how comments and complaints are handled; and
- Time frame in which the transit system will respond to comments or complaints.

Transit System Responsibilities

State the following responsibilities, as appropriate:

- The transit system is responsible for providing clean, on-time, reliable, safe and efficient service;
- The transit system is not responsible for passengers' items left on its vehicles;
- The transit system is responsible for abiding by the policies detailed in other sections of the service policy;
- The transit system has insurance coverage meeting or exceeding legally mandated minimums;
- The transit system abides by all applicable federal, state and local regulations;
- The transit system maintains an alcohol-and drug-free workplace;
- The transit system is committed to keeping all vehicles and equipment properly maintained and in safe working order.

Safety

Address the following issues, as appropriate:

- Necessary licenses and regular training for all drivers and staff;
- Seating, seat belt and wheelchair securement requirements while the vehicle is in motion;
- Wheelchair tie-downs, safety restraints and child restraint systems;
- Secure locations for passengers' packages and belongings, and for service animals;
- Standard on-vehicle safety equipment that the transit system inspects daily to make sure it is in working order;
- Safe operation of vehicles, including the safe boarding and de-boarding of passengers.

Emergency Procedures

Address the following issues, as appropriate:

- Foul weather and emergency closing policies;
- Accident/on-vehicle emergency procedures, to include: following driver's instructions, remaining calm, making an

orderly evacuation of the vehicle if warranted, staying off the roadway in a safe location until further notification, not smoking anywhere near the vehicle, calling for emergency response if required;

- Passenger's responsibility to notify the driver if they or another passenger are ill, injured or in distress while on the vehicle;
- The transit system's role in the community's disaster preparedness plan.

Non-discrimination

This section is very brief and contains boilerplate legal language on non-discrimination that is part of most civil rights assurances.

Closing Statement

This is the transit system's opportunity to solicit ridership and customer input. It should include a positive, sincere statement welcoming community support, and should end with the transit system's office address, telephone number and e-mail address for further information.

DRIVER SAFETY, TRAINING AND QUALITY SERVICE

The final key to service design and delivery excellence is to recruit and train the safest and most quality- focused drivers possible. Toward this end, a transit system must dedicate serious energy to both its training program for newly hired drivers and its on-going professional development of experienced drivers. The following topics should be covered in the system's classroom and on-the-job driver-training programs:

Classroom training:

- Organizational issues;
- Pre-trip inspection;
- Defensive driving;
- Passenger service and safety;
- Elderly and disabled sensitivity;
- Customer service;
- Crisis management;
- Basic first aid;
- Bloodborne pathogens;
- CPR;
- Drug and alcohol policies; and
- ADA transportation issues.

Field training

- Vehicle orientation (to include special equipment, securements, emergency equipment);
- Pre-trip inspection;
- Defensive driving;
- Handling accidents;
- Handling incidents;
- Passenger assistance; and
- Routes, fares, paperwork and customer service.

CONCLUSION

Establishing and operating a community transportation system is challenging and rewarding. The key is to create a value-based business. Values are met when the quality of community life is enhanced by providing mobility through the efforts of an empowered transit team that is dedicated to safety and customer service. The business is enhanced by keeping administrative and operating costs under control through the efficient use of resources that results from strong planning, service design and delivery and the application of appropriate technologies.

RESOURCES

The National Transit Resource Center maintains a peer-to-peer technical assistance network, tapping into a wealth of experience from professionals in the community transportation field. For more information, visit the CTAA website at www.ctaa.org/ntrc/services/, or contact the National Transit Resource Center at 800.527.8279.

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This Technical Assistance Brief was written to provide an overview of transit service development, design and delivery. More information is available through the National Transit Resource Center at 800.527.8297, the CTAA web site at www.ctaa.org or e-mail at resources@ctaa.org.

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