

# How to Develop a Business Plan for Your Small Transit System

SURTC Transportation Learning  
Network (TLN) Transit Technical  
Assistance Workshop

Tuesday, October 18, 2005  
10:00 a.m. - 4:00 p.m. (CDT)



Small Urban & Rural Transit Center

# Workshop Agenda

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- 10:00 am Overview and Introductions
- 10:15 am What is a business plan and how can it help a transportation system?
- 10:30 am Basic components of a transit business plan
- 10:45 am Getting started – data requirements, stakeholders, review of goals, mission, review of opportunities and threats
- 11:00 am Break
- 11:10 am Review of Existing Operations
  - Operating and financial data
  - Organization, management, information systems, maintenance, marketing
  
- 12:30 pm – 1:45 pm Lunch Break
  
- 1:45 pm Understanding your market
- 2:15 pm Developing and quantifying service changes
- 2:45 pm Forecasting Operating Revenue and Expenses
- 3:00 pm Break
- 3:10 pm Developing a Capital Plan and Budget
- 3:30 pm Bringing it all together, questions, and follow up
- 4:00 pm Adjourn



## Mission, Goals, Vision

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- What is the purpose of your organization?
  - Information and Referral
  - Brokerage
  - Coordinator
  - Operator
  - Sub-contractor



## Mission, Goals, Vision

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- Who decided your mission and goals?
  - External to your organization
    - State or local government
    - Sponsoring organization
  - Internal – your board, staff



# The “Shoulds” and “Coulds” of your Organization

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- What services do you have to provide? (the shoulds)
- What services would you like to provide?
- Who decides?



# Transit System Goals – Some ideas

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- To provide transportation to residents of the service area so that they can age in place and have access to needed services without driving or owning a vehicle
- To provide medical and nutritional service transportation to senior citizens that meet income guidelines
- To provide work-trip transportation to all residents of the service area



# Relationship of Goals or Vision to the Business Plan

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- Goals and vision guide formulation of service options
- Goals lead to measurable objectives and performance measures



# Outline of Transit System Business Plan (Continued)

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- **Market for transportation in your service area**
  - Demographic information on existing service area including, population, age distribution, disabled, low income population, auto ownership
  - Estimate of current ridership by sub areas (county, township, city)
  - Demographic information on areas considered for expansion
  - Estimates of ridership potential from existing areas as well as new expansion
  - Census data available at:  
<http://quickfacts.census.gov/qfd>



# Consideration of New Markets and Services

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- New mandates (ADA, jobs programs, etc)
- Desire to do more for your community
- Changes in existing provider networks – coordination opportunities



# Describe new Services

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- Routes, service areas, hours, sponsoring agencies
- Annual vehicle miles, hours
- Ridership Estimates
- Vehicle requirements



# Methods to Forecast Ridership for New Services

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- Previous experience if taking over an existing service from another provider
- Direct estimates based on known clients/riders
  - Ex. 10 psgrs a day x 2 trips x 255 days = 5,100 trips/yr
- Needs Surveys
- Comparative Demand Methods



# Needs Surveys

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- May be helpful to sell new service to policymakers
- Helps build support and awareness
- **Not** a good way to forecast ridership
- Overstates demand by a factor of as much as 10 times



# Comparative Demand Methods

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- Use per vehicle hour or per capita trip rates for similar services
- Determine your own system averages, for example:

One-way trips/vehicle hr =  
3.5

One-way trips/capita = 2.0



## Using Comparable Trip Rates

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- Example: You plan to serve a new county with a population of 8,000 people. One demand estimate would be:

8,000 x your system trip rate

8,000 x 2.0/capita = 16,000

trips



# Using Comparable Trip Rates

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- You plan to add 4 hours per day of door-to-door service within your existing service area or to an area similar to your present one
- Estimate using per hour trip rates
- $2.5 \text{ trips/hour} \times 1020 \text{ hrs} = 2,550 \text{ one-way trips/year}$



# Reality Check Statistics

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- Typical demand responsive systems average between 2.0 and 6.0 one-way trips/vehicle hour
- In North Dakota, the number of rides per capita for rural systems ranges from .2 to about 3.5
- CTAA surveys show the national average is between 1.0 and 2.0 trips per capita



# Developing and Quantifying Service Changes

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- Service reductions
  - Based on poor performance
  - Changes in priorities
- Service increases
  - Expanded service area
  - New opportunities – new employers, new destinations, funding sources



# Data needed to quantify service changes

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- Service reduction
  - Miles, hours, vehicles saved
  - Ridership lost
- Service increases
  - Proposed vehicle miles and vehicle hours of service required
  - Ridership estimate
  - Proposed fares



How do you figure out the additional cost or cost savings resulting from service additions or deletions?



## How do you figure out the additional cost or cost savings resulting from service additions or deletions?

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- Add up the additional resources required or resources saved by change, e.g., how many gallons of fuel, hours of labor, specific fringe benefits, maintenance expenses, insurance



## How do you figure out the additional cost or cost savings resulting from service additions or deletions?

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- Use average variable expense information
- DO NOT use system-wide average cost per mile or cost per hour
- Why not?



# Estimating Operating Expenses

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- Need to understand fixed and variable costs of your system
- Fixed costs – administration, facilities
- Variable – related to hours of service (driver wages and fringe) and miles of service (fuel, maintenance, tires), number of vehicles (insurance)



# Determining Unit Costs

| Operating Expense Example      |           |         |           |
|--------------------------------|-----------|---------|-----------|
| Expense Item                   | Expense   | Units   | Cost/Unit |
| Vehicle Hours Related Expenses | \$210,000 | 13,500  | \$15.56   |
| Vehicle Mile Related Expenses  | \$125,000 | 175,000 | \$0.71    |
| Peak Vehicle Related           | \$8,000   | 7       | \$1,143   |
| Administrative and Fixed       | \$50,000  |         |           |
| Total Expense                  | \$393,000 |         |           |



## Example 1: Drop evening service

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- Save 4 hours/day, 255 days a year or 1,020 vehicle hours
- Save 14,000 miles/year
- No savings in number of vehicles
- Lose 1,500 riders
- The fare was \$2.00 per trip`



## Savings by Dropping Night Service

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- Expense Savings
  - 1020 hours x 15.56/hr = \$15,871
  - 14000 miles x .71/mi = 9,940
- Total Savings \$25,811
- Revenue lost \$2 fare x 1500 3,000
- Net savings \$22,811



## Example 2: Add One-day-a-week rural service to 4 sectors of new county

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- Add 10 hours/day, 4 days a week or 2,080 vehicle hours/year
- Add 37,500 miles/year
- Need one additional vehicle
- Ridership forecast 4,500 riders
- The fare will be \$2.00 per trip



## Added Cost of New Rural Service

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- Expense increases
  - 2,080 hours x 15.56/hr = \$32,365
  - 37,500 miles x .71/mi = 26,265
  - Vehicle expense = 1,143
- Total Expense  
\$57,773
- Revenue \$2 fare x 4500 9,000
- Net cost \$48,773



### Example 3: Major service expansion – take over transportation provided by two other agencies in the community

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- Add 4 vehicles each operating 8 hours/day, 5 days a week or 8,320 vehicle hours/year
- Add 115,000 miles/year
- Need four additional vehicle
- Ridership forecast 24,500 riders
- The fare will be \$1.50 per trip



# Added Cost of Major Expansion

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- Expense increases
  - 8,320 hours x 15.56/hr = \$128,627
  - 115,000 miles x .71/mi = 81,650
  - Vehicle expense = 4,572
- Total Expense  
\$214,849
- Revenue \$1.50x24,500 36,750
- Net cost \$178,099



# Added Cost of Major Expansion

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- Total Expense  
\$214,849
- This answer is wrong, why?

