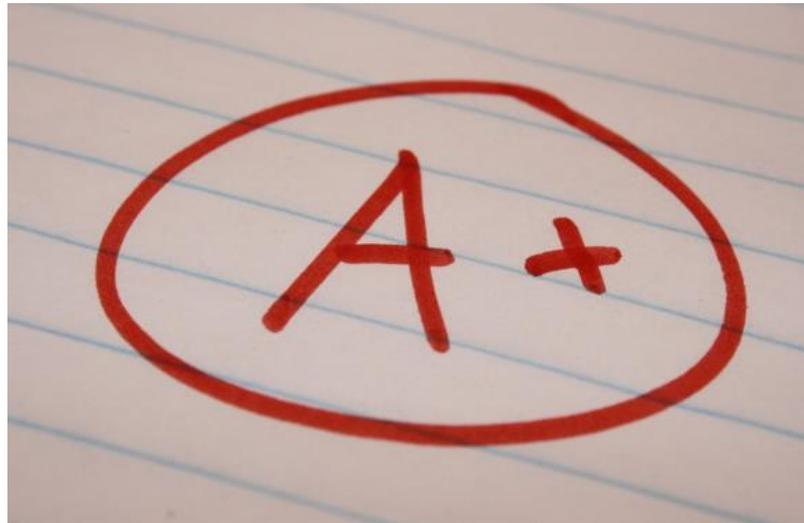


PERFORMANCE MEASUREMENT & SYSTEM SUCCESS: MONTANA DOT

Wednesday, September 30, 2015
Helena, Montana

Today's Objectives:

- By the conclusion of this training, participating Montana rural and community transit managers will be able to review, assess and improve the effectiveness of their transit operations.



After Today

- You will be able to identify one or more meaningful, quantifiable objectives for your own transit organization.
- Be able to begin identifying the performance indicators that will help determine how well these objectives are being met.

We all collect a lot of data...

- Number of riders.
- Hours of service.
- Miles of service.
- Operating expense.
- Maintenance expense.
- Miles between breakdowns
- Revenues.
- Complaints.
- Trip denials.

But what do we do with it?

Data can:

- Gauge system success.
- Identify your strengths.
- Identify potential weaknesses and,
- Pinpoint areas that may need more scrutiny.
- Maintain a foundation that matches our systems' strengths with our communities' needs.

Some questions...

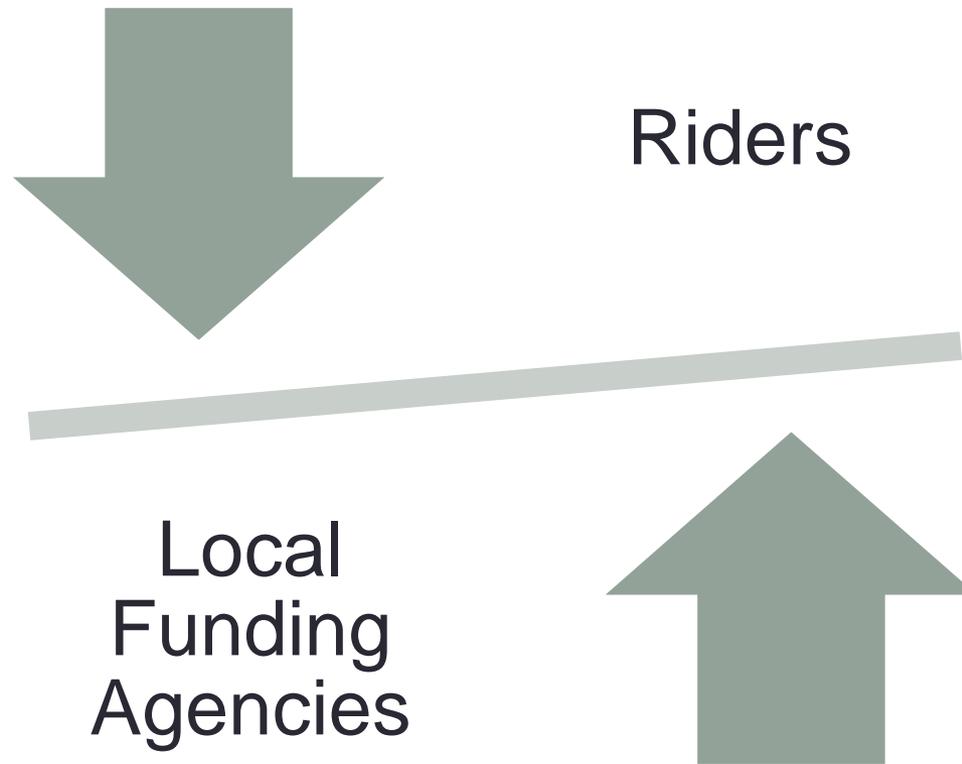
- How do you define success?
- How do you demonstrate your performance?
- How do performance data influence your future?

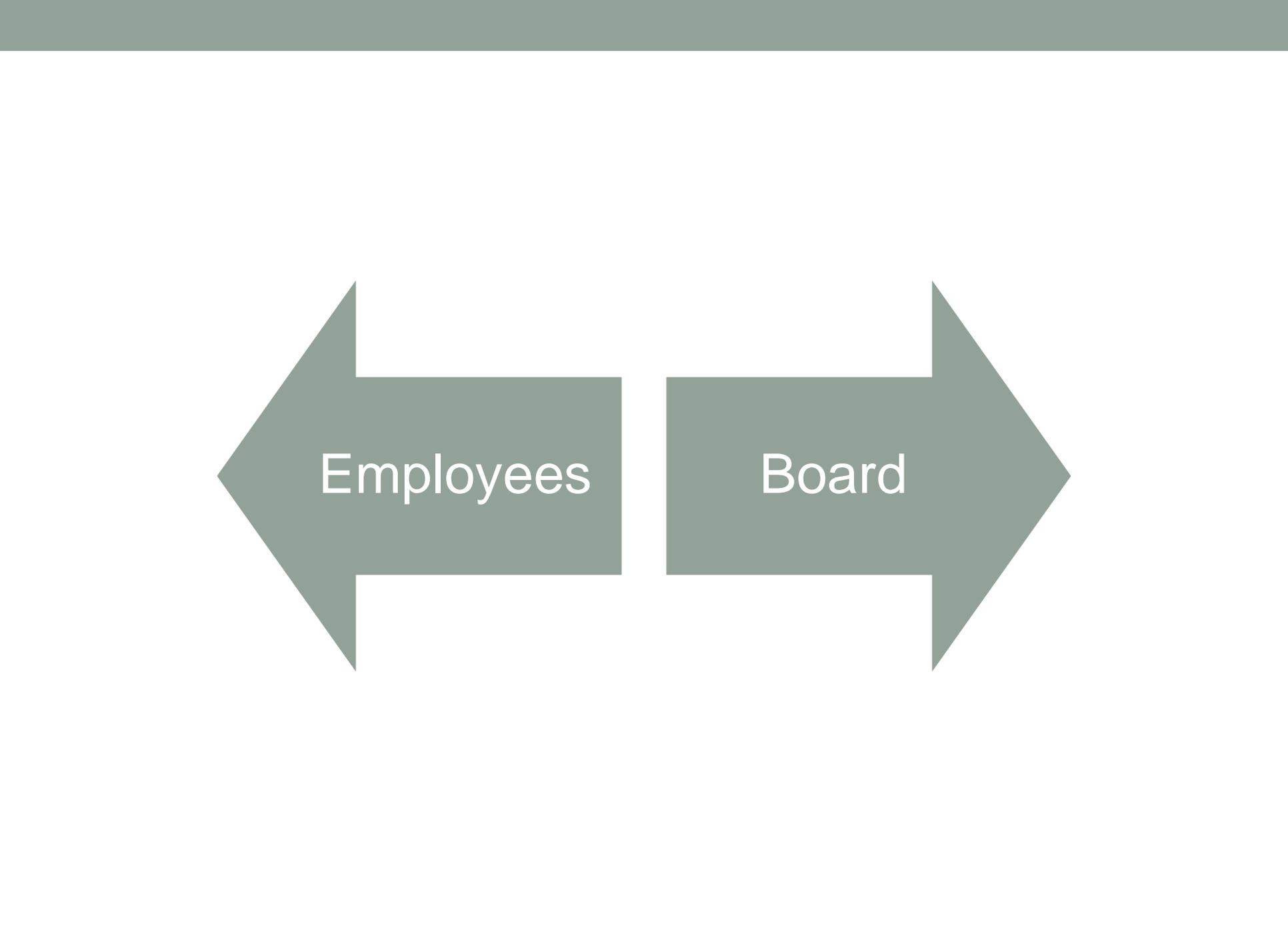
To answer these questions...

We first need to ask and answer this question:

- For *WHOM* are we trying to demonstrate success?
 - FTA?
 - MDT?
 - Local funding agencies?
 - Riders?
 - Non-riders?
 - Board of Directors?
 - Employees?

The metrics to satisfy each of these audiences may be similar, but sometimes conflict.





Employees

Board

The Foundation of Performance Standards

Your Transit System Operations Plan

Key point: Have a documented set of plans, policies and procedures....and follow these plans, policies and procedures

- This plan itself is probably not required by anyone, but helps you better discharge your responsibility as a steward of taxpayer funds.
- A system operations plan helps you document and monitor your compliance with government requirements.
- A system operations plan can help you manage and monitor the risky aspects of your organization's work, and can protect you and your agency when something bad happens.

Your Transit System Operations Plan

- Establishes standards and metrics against which you can compare actual performance.

The Standards and Objectives should be “SMART”

- Specific
- Measurable
- Attainable
- Relevant
- Trackable

Specific

- The objective is a clear statement of expectations.
- It describes an observable action or achievement.
- The objective is specific about the result, not the way it is achieved.
- Example: Ridership will increase by 2% by 6/30/16.

Measurable

- Include a way to assess and describe the result in terms of, for example, quality, quantity, cost or time.
- Some results are measured easily.
- Others may need to be verified or observed.
- Example: Demand responsive trips will pick up passengers no later than 10 minutes past scheduled time.

Attainable

- Objective is realistic and achievable.
- The best objectives challenge employees but are not extreme-neither out of reach nor below standard performance.
- Objectives that are set too high or too low become meaningless and will not be a source of motivation.
- Example: Passenger complaints will be no more than one per 2,000 trips carried.

Relevant

- The objective is consistent with established policies, procedures and rules.
- Example: Random drug tests of employees will be 100% negative.

Trackable

- There is a time limit for achieving the objective.
- Example: All drivers will receive PASS training within 30 days of being hired.

An Operations Plan can include many different elements...

Covering various aspects of a transit system's activities.

Establishing expectations in each of these areas can ensure that

All constituencies of the transit program
are satisfied.

For the standards and expectations in your plan, ask questions.

Organizational Purpose

- The question “Why?”

1. Organizational Purpose

- Why is your organization engaged in providing transportation?
- Are you serving the general public in your community, or is your purpose to provide transportation to some subset of your community's population?
- How do the funds your organization receive influence the way you carry out your purpose?
- If your organization succeeds at carrying out its purpose, what benefits accrue to your community?
- What stake does your community have in your organization's success?

1. Organizational Purpose

- Possible performance metrics:
 - # of passengers transported to work.
 - # of passengers transported to vocational education.
 - # of human service agency transportation contracts.

Geographic Service Area

- “Where?”

2. Geographic Service Area

- Where does your organization provide transportation service?
- Are there places within your service area that you do not serve? If so, why is that the case?
- Are there places outside your stated service area that you serve?
- What do you know about your service area's demographics, such as numbers and concentrations of older persons, people with disabilities, populations with standing under the Civil Rights Act of 1964, etc.?
- What do you know about how your service area's demographics and local economy are expected to change over the next 3 to 5 years?

2. Geographic Service Area

- Possible performance metrics:
 - Fixed routes no more than $\frac{1}{2}$ mile from all areas in core service area.

Days and Hours of Operation

- “When?”

3. Days and Hours of Operation

- When do you operate? This starts off as an easy question, but.....
- Are there holidays when you don't operate?
- Assuming you're not a "24/7/365" operation, how have you determined which days and hours you're closed?
- How do your routine days and hours of operation fit the transit demands of your target population?
- If parts of your service area receive service on a less-than-daily basis, why is that?
- Are there days, times or other circumstances when you prioritize the types of transportation service you provide?

3. Days and Hours of Operation

- When do you suspend operations due to inclement weather?
- Are there growing employment transportation needs for second and third shift workers?
- Do your times of operation match demand?

3. Days and Hours of Operation

- Possible performance metric:
 - On time performance.

3 A. Days and Hours of Operation- Demand

- Transit Wants.
- Transit Needs.
- Transit Demand

Transit Want > Transit Need > Transit Demand

- Transit Demand can establish a benchmark for service.

4. Modes of Service Delivery

- “How?”

4. Modes of Service Delivery

- Let's consider five ways of providing transit service:
 - A. Passengers arrange in advance for service on a prescribed schedule (e.g., airlines, intercity bus)
 - B. Passengers arrange in advance for service customized to their needs/requests (e.g., traditional dial-a-ride transit)
 - C. Passengers spontaneously use transit by relying on designated stops, routes and schedules (e.g., traditional fixed-route transit)
 - D. Passengers spontaneously use transportation by requesting customized service at the time they're ready to travel (e.g., taxis, Uber, Lyft)
 - E. Passengers arrange transportation with one another, using resources made available by the transportation agency (e.g., vanpools, carpools, carshare, bikeshare)
- Which of these are offered by your transportation organization, and why?

4. Modes of Service Delivery, cont.

- Do your staff understand how and why you provide the service(s) you offer? Are you sure?
- What populations in your service area are least well-served by the modes of transit that you offer?
- Do your transit services interface with other modes of transportation, whether personal (e.g., bicycle, pedestrian, personal vehicle) or large-scale (e.g., intercity air, bus or rail)?
- What data do you collect that show how well your mode(s) of transit is/are performing?
- What is likely to change in your modality(ies) of transit service over the next 3 to 5 years?

4. Modes of Service Delivery, cont.

- The forecasts of transit demand can suggest the appropriate mode of service.

5. Trip Arranging & Customer Service

- More “How?”

5. Trip Arranging & Customer Service

- How do customers find out about your transit service?
- If service needs to be arranged in advance, how is that supposed to be done? Is this REALLY what happens?
- How do you accommodate last-minute changes in service, whether customer-driven (e.g., cancellations, changes in destinations) or agency-driven (e.g., service disruptions, schedule changes)?
- If your system's operations depend on communication with your customers, can that be done even when customers can't speak on the phone, aren't proficient in English, or have other communications barriers?
- If use of your system requires familiarity with routes and schedules, how is that information made available to your customers?
- Do you have meaningful ways to get customer input on the quality of the service(s) you provide?

5. Trip Arranging & Customer Service

- Possible performance metrics:
 - All telephone calls answered within 20 seconds.
 - Demand responsive trips will arrive at destinations within 10 minutes of scheduled times.
 - Trips denials < 0.5%

6. Fares and Fare Policies

- “How much?”

6. Fares and Fare Policies

- Do you require customers of your service to pay a fare? If so, why?
- If you charge fares, what's your fare structure? Do you have discounts (such as for seniors, disabled persons, children, students and/or veterans or military)? Do you have reciprocity or any other fare-sharing arrangements with neighboring transit systems? Do you charge for transfers? Do you make change?
- Do your staff and your customers know the fares you charge?
- What fare media do you accept?
 - Cash
 - Paper media (passes, tickets, vouchers)
 - Electronic/magnetic media (magnetic stripe cards, embedded chip ["smart"] cards, mobile phone apps with bar or QR codes)
 - Customers' credit or debit cards
- Are your cash handling procedures safe and secure?

6. Fares and Fare Policies

- Possible performance metric:
 - Farebox ratio >5%.

7. Maintenance

- Do the personnel who maintain your vehicles have appropriate training and credentials?
- Do you have a documented maintenance plan for your equipment? Do you follow this plan?
- Do you use – and document – regularly scheduled preventive maintenance procedures for your equipment?
- Do you regularly inspect and maintain wheelchair lifts and other accessibility features?
- Do your maintenance plan and preventive maintenance procedures exceed manufacturers' minimum requirements?
- How do you track and respond to manufacturers' alerts, recommendations and other notices concerning your equipment?
- What system do you have for tracking warranty issues and recovering warranty claims?
- Do you maintain records of the maintenance history of your equipment?
- Do you have a maintenance management system that helps you carry out your maintenance program, and that alerts senior management about the status of your maintenance and the condition of your assets?

7. Maintenance

- Possible performance metric:
 - 100% compliance with pre-trip inspection requirement.
 - All vehicle maintenance consistent with manufacturer's/warranty requirements.
 - On the road breakdowns less than one every six months.

8. Safety and Security

- Do you have a written system safety plan that includes the following?
 - Methods to identify and evaluate safety risks,
 - Strategies to minimize exposure to hazards and unsafe conditions,
 - Annual review and update,
 - Performance targets based on the safety performance criteria and state of good repair standards established in the National Safety Plan,
 - Assignment of adequately trained safety officer who will report to the General Manager, and
 - A comprehensive staff training program
- Have you identified and planned for those security risks that are present in your transit organization?
- Do you have regular, ongoing relationships with the first responder and emergency management agency(ies) in your service area?

8. Safety and Security

- Possible performance metrics:
 - Zero preventable accidents.

9. Civil Rights

- Does your transit operation provide service differently to segments of the community based on persons' race, color or national origin?
- Are there portions of your service area where the nature or quality of transit service you provide may appear to be distinguished on the basis of residents' race, color or national origin?
- How are persons with limited English proficiency able to understand how to use and engage with your transit operation?
- Are your maintenance facilities, operations centers, etc., located in ways that create disparate impacts for racial minorities and/or low-income populations?
- What opportunities do disadvantaged businesses have for being vendors, contractors or suppliers to your transit operation?
- Do you provide equal employment opportunities for qualified applicants, regardless of their race, color, religion, sex, national origin, age, disability, family history, genetic information or military history?

9. Civil Rights

- Possible performance metric:
 - Zero civil rights complaints.

10. ADA

- Are your fixed-route transit services accessible to persons with disabilities?
- Are accessibility features of your vehicles inspected regularly and kept operable?
- What vehicles are you acquiring that do not satisfy ADA guidelines?
- If you're a public agency operating fixed-route transit, do you have a complementary paratransit plan that meets ADA requirements?
- Can you demonstrate that personnel are trained to proficiency in the use of accessibility features?
- Do your demand-response transit services provide equivalent service to all passengers, regardless of disability?

10. ADA

- Possible performance metric:
 - Trip denials < 0.5%
 - Zero ADA complaints.

Setting Goals, Measuring Performance

Key Point: Why should taxpayers invest in your transit operation?

We are trying to satisfy multiple audiences, but it is essential to demonstrate to taxpayers that we are providing an important, essential, safe and efficient service.

- We gather and report a lot of data. Let's use these data to help tell our story
- Raw numbers (e.g., ridership) are great, but they don't tell the whole story.
- Likewise, supply data (e.g., number of people you employ, vehicle-miles you operate, goods and services you purchase) help make a point, but they're not the whole story, either.
- Productivity or efficiency data (e.g., passengers per vehicle-hour, operating cost per passenger trip, vehicle miles between maintenance road call) speak volumes about how well you do your job, but they're not the bottom line that defines your success.

Goal-Setting-For the Community

- Among the goals of your transit organization should be something quantitative, that can measure the difference you're making in your service area
 - **How do you define the success of your transit organization?**
 - Hints: each organization will have its unique goal(s), based on the community being served and the mission of the transit organization. Think about the measurable ways in which your transit organization is supposed to be making a difference in the community.
 - Possible goals could include:
 - Increased employment as a result of transit availability
 - Improved health outcomes as a result of medical transportation
 - Improved throughput of the transportation infrastructure (i.e., decreased roadway congestion) or improved environmental indicators (e.g., air or water quality, environmental health measures) as a result of people using transit modes
 - Improved public health indicators (e.g., reduced levels of obesity, asthma, or other preventable chronic health conditions) as a result of persons using transit and related “active living” modes of transportation

Target-Setting

Goals are aspirational, and likely to be set over a longer time frame. Targets are based on goals, but are specific, measurable ways to show that you're on track for meeting your goals. Often, targets are set for one year increments.

Both goals and targets are best established with some meaningful level of stakeholder input.

Keep the number of goals and targets minimal, ideally no more than one or two at a time.

- **What are some measurable targets that will show how well you're achieving your goal within the coming year?**
- How will stakeholders be involved in setting these targets?
- What data will be gathered to show whether you're making the target(s), and where will you get these data?
- How will you report on your progress in making these targets?

Performance Indicators

In the course of your day to day operations, you're likely to gather lots of performance data. Each data element makes its own contribution to the story of how well you're doing as a transit operation.

- Some performance data are important on a daily, weekly or monthly basis. Examples might be ridership, operating cost per passenger trip, number of passenger trips per vehicle hour.
- Some performance data may be important on a quarterly or annual basis. Examples might be farebox recovery, route-level analytics for fixed-route transit, customer service metrics for call centers or complaints.
- Some performance data are needed episodically, when you are seeking to identify or quantify a performance issue. Examples could be patterns of late or missed trips, vehicle failures, utilization of particular routes or vehicles.

NOTE: The typical public transit organization collects a lot of performance data, some of which is reported to FTA or the state, and much more of which is kept internally. Put these data to good use!

- **What performance data do you collect within your transit organization, and how do you use these data?**

Performance Data & Your Future

This combination of setting goals, identifying and measuring targets, and analyzing performance should make it possible for you to steer your organization's future course as effectively as possible. How can this be?

- Your goals and targets are responsive to the realities and priorities of your service area.
- You can examine the trends in your performance data, overlaying these with forecasts of resources, demands and conditions in your community to see what changes are needed in your future, so that you can keep addressing your goal(s) successfully.

For example:

- You can see if resources are not growing at the same pace as projected demand, or if projected demand is outgrowing the capacity of your currently configured operation, something's got to change.
- Or, as patterns of growth, population and travel change within your service area, you can alter the levels and types of service accordingly.
- Or if you see changes on the horizon that may alter the core mission of your transportation organization, you can begin laying the foundation for beginning to adjust to this new future.

KEY POINTS

KEEP IT SMART
SHARE THE FINDINGS
KEEP IT RELEVANT
KEEP IT GOING

NTD & Performance Measures: Recommended Reading

- **National Transit Database Information Resources**
- **NTD Program Website:**
<http://www.ntdprogram.gov/ntdprogram/>
- **Training on NTD Reporting:**
<http://www.ntionline.com/courses/courseinfo.php?id=7>
- **Current NTD Reporting Manuals:**
 - Glossary of terms as used in NTD reporting, with reference to reporting forms:
<http://www.ntdprogram.gov/ntdprogram/Glossaries/pdf/Glossary2013.pdf>
 - Rural Module Reporting Manual and related documents:
<http://www.ntdprogram.gov/ntdprogram/rural.htm>
 - Small Systems Waiver Reporting Manual and related documents:
<http://www.ntdprogram.gov/ntdprogram/smallsystem.htm>
 - Urban Reporting Manual and related documents:
<http://www.ntdprogram.gov/ntdprogram/annual.htm>

Some Performance Measurement Literature

- NCHRP Research Results Digest 361: State DOT Public Transportation Performance Measures:
<http://www.trb.org/Publications/Blurbs/166065.aspx>
- Performance Evaluation: Practical Indicators for Evaluating Progress Toward Planning Objectives (from the Victoria Transport Policy Institute's on-line TDM Encyclopedia):
<http://www.vtpi.org/tdm/tdm131.htm>
- TCRP Report 88: A Guidebook for Developing a Transit Performance-Measurement System: <http://www.trb.org/Main/Blurbs/152127.aspx>
- TCRP Report 141: A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry:
<http://www.trb.org/Publications/Blurbs/163872.aspx>

Conclusion & Thanks

For follow up, or any related conversations, contact:

- Charlie Rutkowski, Community Transportation Association of America
202-299-6593; rutkowski@ctaa.org