PENNSYLVANIA STATE TRANSPORTATION ADVISORY COMMITTEE

TRANSIT OPERATOR PERFORMANCE MEASURES




FINAL WHITE PAPER

JULY 2007

Gannett Fleming

The Pennsylvania State Transportation Advisory Committee (TAC)

The Pennsylvania State Transportation Advisory Committee (TAC) was established in 1970 by Act 120 of the State Legislature, which also created the Pennsylvania Department of Transportation (PennDOT). The Committee consults with and advises the Secretary of Transportation and the State Transportation Commission and undertakes in-depth studies on important issues as appropriate. Through its public members, the Committee also serves as a valuable liaison between PennDOT and the general public.

The Advisory Committee consists of the following members: The Secretary of Transportation; the heads (or their designees) of the Department of Agriculture, Department of Education, Department of Community and Economic Development, Public Utility Commission, Department of Environmental Protection, and the Governor's Policy Office; two members of the State House of Representatives; two members of the State Senate; eighteen public members; six appointed by the Governor, six by the President Pro Tempore of the Senate, and the Speaker of the House of Representatives.

Public members, with experience and knowledge in the transportation of people and goods, are appointed to represent a balanced range of backgrounds (industry, labor, academia, consulting, and research) and the various transportation modes. Appointments are made for a three-year period and members may be reappointed. The Chair of the Committee is annually designated by the Governor from among the public members.

The Advisory Committee has two primary duties. First, the Committee "consults with and advises the State Transportation Commission and the Secretary of Transportation on behalf of all transportation modes in the Commonwealth." In fulfilling this task, the Committee assists the Commission and the Secretary "in the determination of goals and the allocation of available resources among and between the alternate modes in the planning, development and maintenance of programs, and technologies for transportation systems." The second duty of the Advisory Committee is "to advise the several modes (about) the planning, programs, and goals of the Department and the State Transportation Commission."

The Committee "consults with and advises the State Transportation Commission and the Secretary of Transportation on behalf of all transportation modes in the Commonwealth."

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TAC White Paper

The State Transportation Advisory Committee typically conducts studies through a task force structure. Each study task force consists of a Chairman (named by the TAC Chairman) and TAC members. Task force membership is often augmented by PennDOT subject matter experts and/or others representing state agencies, academia, local government, associations or private organizations. The task force directs each study effort and forwards its findings to the full TAC for its consideration.

TAC recognizes the need from time to time to produce shorter term white papers such as this study. It was carried out over several weeks rather than a few months as is usually necessary to accommodate the task force process.

The white paper provides an opportunity for TAC to rapidly address a timely issue of immediate interest and the need for a quick assessment. Because this does not involve a study task force, an effort is made to involve a member or members who are interested in the topic in a more ad hoc way. That occurred with this study as TAC member Louis C. Schultz interacted regularly with the Department Project Manager and the consultant team.

TAC may choose to adopt a white paper formally or just receive it as informational. In either case the report would typically be forwarded as well to the Secretary of Transportation and the State Transportation Commission, TAC's statutory audience.

***Study Team Note**: The Gannett Fleming consultant team wishes to express its appreciation to TAC member Lou Schultz for his involvement and insight. The team is also appreciative of the involvement and availability of Acting Deputy Secretary of Local and Area Transportation, Toby Fauver, and LaVerne Collins and John Dockendorf of the Bureau of Public Transportation. Last, but certainly not least, we express our appreciation to Jim Arey from PennDOT's Center for Program Development and Management for his day-to-day guidance throughout this study.*

This project was led by Keith Chase as Project Manager and Joe Daversa as Senior Analyst.

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Executive Summary

Study Purpose

The purpose of this study is to document the current state of the practice regarding application of performance measures and standards in (a) the management and oversight of state public transportation funding programs, and (b) in the evaluation of the delivery of public transportation services. The study results and recommendations are intended to inform the process of implementing the recommendations of the Pennsylvania Transportation Funding and Reform Commission, and to provide the necessary background information to assist PennDOT and others in the drafting of legislation related to reforming the structural basis and the management approach for the Commonwealth's public transportation funding programs. In addition, as of June 28, 2007, the Pennsylvania General Assembly was considering proposed transportation legislation that would address both funding levels and transit performance and accountability issues.

Research Conclusions

Conclusions from the literature search and interviews of other states are:

1. Of the states interviewed that use performance measures for allocating funding, there is nearly an even split between those that use the measures to distribute both transit operating and capital funding on a block grant basis (5 states), and those that use the measures to distribute only operating funds (4 states).
2. Most funding allocation formulas and performance measures used by other states have been in place for relatively long periods of time.
3. By a significant margin, peer groupings for purposes of evaluating performance and allocating funding are most often done on a geographic basis. For example, providers serving urban areas are compared to each other or against the group average; and providers serving rural areas are separately grouped and compared against each other or against that group's average.
4. Most states compare providers against peer group performance rather than against pre-determined standards such as 4 passengers/vehicle mile, or $65/vehicle hour. One exception is

the cost recovery measure (revenue ÷ expense) where specific targets or minimums are often stated.

5. Data timeliness and reliability is a common concern, with no real breakthroughs found through this research.

Recommendations

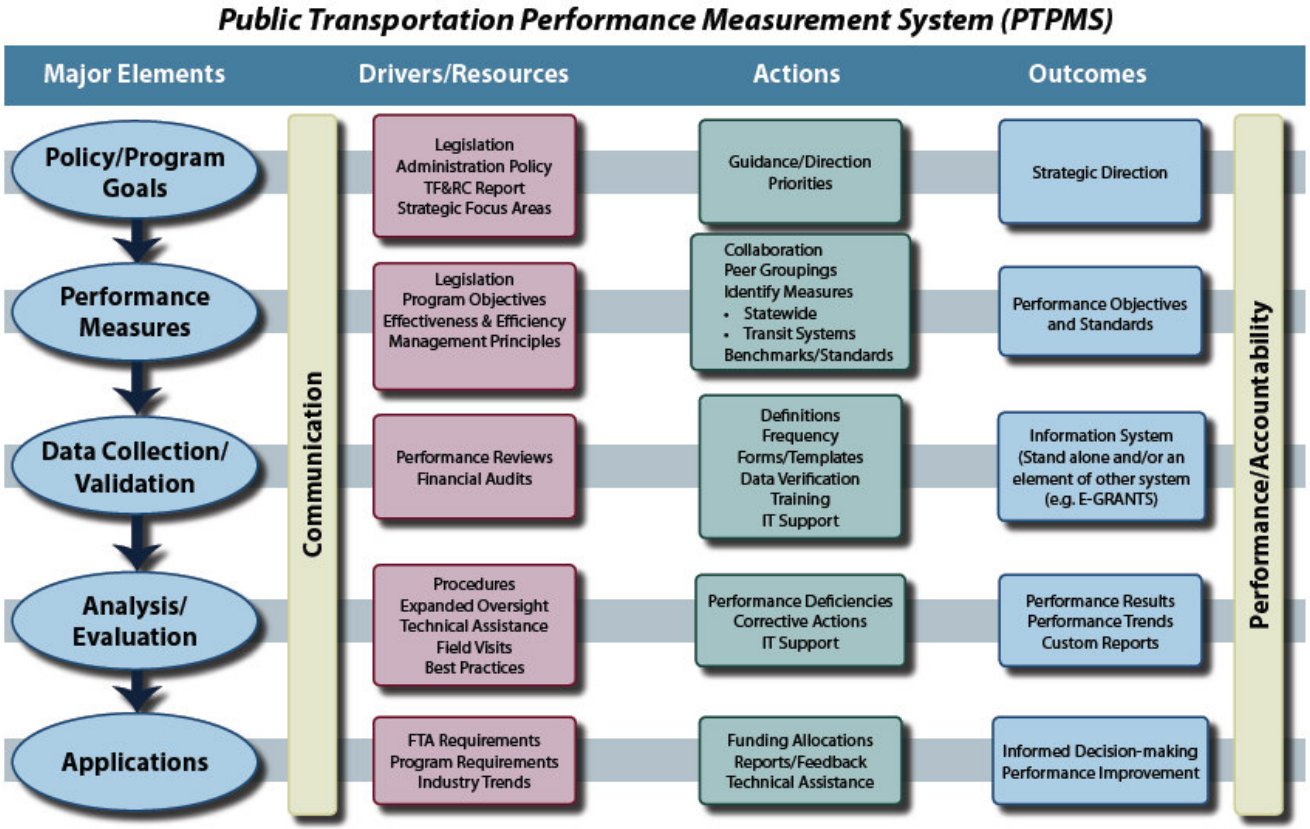
Three levels of performance-oriented recommendations are presented.

- **Public Transportation Performance Measurement System (PTPMS)** - The first and highest level presents a systematic, overall policy framework for managing transit grant programs for enhanced performance.
- **Grants Management Process Flow** - The second level recommendations address the grants management process and include both enhanced inputs and outputs of the various grants process steps.
- **Performance Measures** - The third and final set of recommendations is for use in evaluating transit providers. A recommended approach to establishing relevant peer groups is also presented.

1. A Systematic Approach to Performance Enhancements

Figure A illustrates a comprehensive public transportation performance measurement system (PTPMS). It shows how performance measures should be driven by overall policy goals and objectives. The PTPMS provides the overall framework for performance measurement and corrective actions, and represents one of the key tools used to assure that the desired outcomes of performance improvement and enhanced accountability are attained.

Figure A



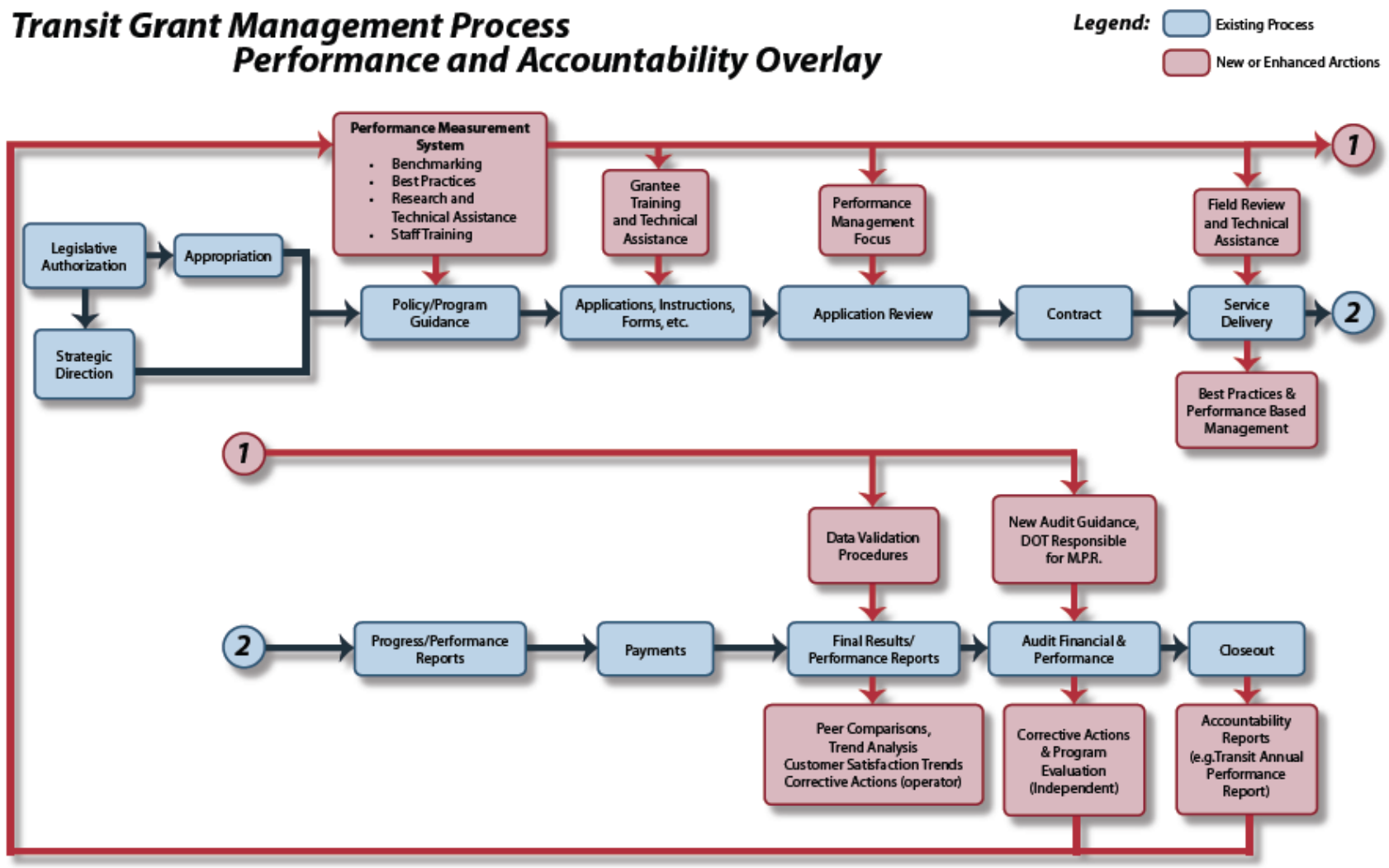
Success factors for an effective performance measurement system are listed below:

- The system should be primarily **positive rather than punitive** -- the goal is to improve performance rather than identify and punish shortfalls, particularly in the short term.
- **Collaboration** occurs at all levels and all phases to achieve the maximum degree of buy-in by stakeholders.
- **Maximizes the use of existing data systems.**
- The selected **measures should be intuitive** and clear in purpose.
- A **modular design** should be employed that recognizes both the unique requirements of individual programs, as well as the need to produce compilations across programs.
- The system is **expandable** to permit incremental system development and enhancement.

2. Grants Management Process - Performance and Accountability Enhancements

Figure B takes this conceptual system framework to the next level by overlaying opportunities for performance and accountability enhancements on the high-level process flow for a typical transit grant program currently administered by the Bureau of Public Transportation. The blue boxes represent standard grants management processes that are currently in place, while the information shown in red depicts how various new or enhanced actions can be overlaid on the existing process to achieve the desired focus on improving performance. Figure B is a particularly useful starting point for determining how existing state grant management processes can be enhanced for a greater consideration of performance and accountability.

Figure B


Transit Grant Management Process
Performance and Accountability Overlay
Legend:
Existing Process
New or Enhanced Arctions
Performance Measurement System
Benchmarking
Best Practices
Research and Technical Assistance
Staff Training
Grantee Training and Technical Assistance
Performance Management Focus
Field Review and Technical Assistance
1
Legislative Authorization
Appropriation
Strategic Direction
Policy/Program Guidance
Applications, Instructions, Forms, etc.
Application Review
Contract
Service Delivery
2
Best Practices & Performance Based Management
1
Data Validation Procedures
New Audit Guidance, DOT Responsible for M.P.R.
2
Progress/Performance Reports
Payments
Final Results/ Performance Reports
Audit Financial & Performance
Closeout
Peer Comparisons, Trend Analysis Customer Satisfaction Trends Corrective Actions (operator)
Corrective Actions & Program Evaluation (Independent)
Accountability Reports (e.g.Transit Annual Performance Report)

3. Peer Grouping and Performance Measures Recommendations

TAC recommends a two-tiered approach to peer grouping for funding allocation and performance assessment purposes. The first tier would group transit providers for purposes of a basic funding allocation that recognizes the number one priority of providing mobility, and also the desire to provide sufficient funding predictability and stability so as not to disrupt day-to-day transit operations. The majority of funding would be distributed according to tier one. The second tier would identify relevant peer groups for individual providers. These groupings would be used for purposes of performance measurement and incentive funding decisions. Recommendations for each tier are presented below.

TAC recommends a two-tiered approach to peer grouping for funding allocation and performance assessment purposes

Tier One Peer Group Recommendation – For Basic Funding Allocations

This first tier would be most useful for purposes of allocating available resources to the selected grouping to reflect current levels of service, the current structure of federal programs, and the relative scale and "needs" of the various providers. Pennsylvania's current peer groupings (classes 1, 2, 3, 4, and 5) are generally consistent with what is in place among peer states, and represents a sound basis for the "first cut" in establishing peer groups. Should these classes change, the principle of comparing within like categories still remains valid.

Tier Two Peer Selection – For Performance Comparisons and Funding Incentives/Sanctions

The recommended approach for tier two peer grouping, which would be used for performance comparison purposes, is based largely on the approach used by the Reform Commission as part of their study, but with several suggested modifications. The Reform Commission's approach was to first identify a pool of approximately 10 systems from the Federal Transit Administration's National Transit Database based on the size of the annual operating budget. The next step narrowed the initial list down to three peer systems using eight factors that encompassed demographics (population and population-driven variables), annual ridership per capita, annual vehicle miles of service, number of employees, and fleet size. Performance comparisons would be done at this level, and would serve as the basis for the department to offer incentive funding, or to require operators to implement corrective actions to address areas of weak performance. After a reasonable grace period, funding sanctions could be applied if performance does not improve to acceptable standards.

Tier Two Peer Grouping Recommendations for Performance Comparisons and Funding Incentives/Sanctions

Southeastern Pennsylvania Transportation Authority (SEPTA)	• Reform Commission Approach, modified to reflect relative growth trends and local financial commitment
Port Authority of Allegheny County (PAAC)	• Reform Commission approach, modified to reflect relative growth trends and local financial commitment
Other Urbanized	• Reform Commission approach, modified to require that approximately half of the peers be in-state providers
Small Urban & Rural	• Reform Commission approach, modified to require that approximately half of the peers be in-state providers
Community Transportation	• Peer groups based on factors such as service area square miles, total service area population, population or percent of population in various target groups, number of vehicles, total budget, agency-operated versus contracted service, and total system expenses

Recommended Performance Measures

Ideally, a performance measurement system should reflect a balance that addresses efficiency in the use of resources, utility to the local population as measured by ridership and revenue, and support for broader policy goals that may suggest priorities other than purely economic factors.

Statewide Measures

Drawing upon the recently-released Pennsylvania Mobility Plan and the draft list of transit indicators being considered by the Department for a "State of The System Report," TAC recommends that the Department track the following three key transit performance indicators on a statewide basis:

- total transit boardings
- operating expense per vehicle mile
- total boardings per revenue vehicle mile

The three recommended statewide measures were chosen based on the fact that they encompass both efficiency and effectiveness, they are not duplicative of one another, the data should be readily available, and the data should be accurate

Transit Provider Performance Measures for Fixed Route

When selecting performance measures for transit providers, candidate measures that were either (a) recommended by the Funding and Reform Commission, or (b) included in pending legislation, are evaluated below along with several others gleaned from the research, and recommendations follow. TAC recommends that the number of adopted measures should be kept to five to minimize the administrative burden on both providers and the Bureau of Public Transportation (BPT), and to keep the focus on the most important indicators. The expansion of these performance measures over time may be desirable and beneficial. PennDOT, for example, should assess the opportunity to more fully evaluate transit's broader benefits and impacts in areas such as land use, energy conservation, the environment, tourism, economic development, and adaptation to changing demographics.

The expansion of these performance measures over time may be desirable and beneficial

Figure C – Performance Measure Recommendations for Fixed Route Systems

Measure	Source			
	Reform Commission	Draft Legislation	Comment	Recommendation
Cost per hour	X	X	efficiency measure used by 2 of 11 states	Yes
Passengers per hour	X	X	effectiveness measure used by 5 of 11 states	Yes
Cost per passenger	X	X	efficiency measure used by 3 of 11 states	Yes
Subsidy per passenger	X		effectiveness measure used by none of 11 states	No This measure would be redundant given that cost per hour and revenue per hour are already being evaluated.
Operating Revenue per hour		X	effectiveness measure used by none of 11 states	Yes
(Operating Revenue + Local Funding) ÷ Total Expense	From research		local commitment measure used by 4 of 11 states	Recommend choosing one
Revenue ÷ expense	From research		common throughout transit industry	

Performance Measure Recommendations for Demand-Responsive Transit Services

For the Community Transportation Programs, which provide demand responsive services primarily to designated target groups such as the elderly or persons with disabilities, the following measures are recommended for consideration:

- passenger trips per revenue hour
- operating cost per revenue hour
- operating cost per passenger trip.

Policy Implications and Implementation Issues

Since the recommendations contained in this report represent a significant departure from past practice in both the way transit grants are administered, and the Department's expectations of transit providers, there are a number of policy implications and implementation issues that merit further discussion.

Policy Implications

1. **Performance Measurement Should Reflect a Balance Between Higher Level Departmental Goals, and Productivity and Efficiency Goals.** It is necessary to evaluate Transit on a wider range of factors than efficiency.

2. **State-Local Partnership** – The TAC views the recommendations contained in this report as steps to help strengthen the state-local partnership.

3. **Positive Approach to Performance Measurement and Accountability -** Performance measurement activities should be viewed as positive steps rather than mechanisms to punish operators that fall below certain performance targets.

4. **Recognizing the Full Spectrum of Benefits Derived From Public Transportation Services** –The broader benefits of public transportation such as air quality, sustainable land use practices, and economic development, should be kept in view as the shift to a stronger performance and accountability strategy is advanced.

Implementation Issues

There are a host of implementation issues that will have to be addressed as the provisions of new legislation and program procedures are rolled out

A reasonable transition period with defined milestones should be provided

1. **Transition Period** – A reasonable transition period with defined milestones should be provided to allow both the Department and the transit providers to adapt to the new performance and accountability features. The TAC envisions a 3-4 year period before all new features are fully operational.

2. **Communication** – The TAC recommends a collaborative process between the Department and all stakeholders that allows for input at the outset as program enhancement steps are developed, during implementation, and during program reviews designed to identify ongoing program improvements.

3. **Maximize Use of Existing Data and Systems –** The TAC recommends that the Department strive to make full use of existing data systems before expanding data collection and reporting requirements.

4. **Data Verification –** Any performance measurement system can only be effective if there is a reasonable degree of confidence in the data. Several states have addressed this issue by devoting additional staff resources to data verification, or hiring consultants to assist providers with compilation/submission of the data and/or assist Department staff with the review and correction of the data. TAC recommends that the Department explore the advantages and disadvantages of using FTA's National Transit Database as a source of data for performance monitoring.

5. **Time Lag in Availability of Data –** On average, the 11 states surveyed reported approximately a two-year time lag between the year of the data, and the year in which the data is actually used to calculate grants. The Department should assess the implications of using more current data, and adopt an approach which appropriately balances the desire to have performance assessments and impacts occur as close to the actual service delivery as practical, with the associated objective of having a level of data integrity that engenders confidence in the results that support decision making.

6. **Corrective Action Period** – Consistent with the view that the overriding goal of the performance and accountability mechanisms is to positively influence performance outcomes rather than be punitive by cutting funding allocations, service providers must be given a reasonable period of time to implement corrective actions and demonstrate that they are being effective.

7. **Information Technology Support** – The TAC recommends that the Department move in the direction of developing information technology systems that feature on-line data submission, automated edit check functions, standard compilations, and both standard and customized reporting capabilities.

Study Objective

The objective of this study is to document the current state of the practice regarding performance measures and standards in the management and oversight of state public transportation funding programs, and for evaluating the delivery of public transportation services. The study results and recommendations are intended to inform the process of implementing the recommendations of the Pennsylvania Transportation Funding and Reform Commission[1] (hereafter referred to as "the Commission"), and to provide the necessary background information to assist PennDOT and others in the drafting of legislation related to reforming the structural basis and the management approach for the Commonwealth's public transportation funding programs. The Commission recommended a comprehensive overhaul of state transit funding statutes, policies and approach to funding distribution, and that "…PennDOT be charged with developing the formula distribution methodology …" In addition, as of June 28, 2007, the Pennsylvania General Assembly was considering proposed transportation legislation that would address both transit funding levels and transit performance and accountability issues.

Through expanded knowledge of how other states are handling the management of state transit funding programs and distribution of state funding, PennDOT will be better positioned to develop recommendations that are relevant, reflect the best practices and "lessons learned" by others, and are responsive to the charge that the Commission has defined.

Since the Commission recommended that the Shared-Ride Program retain its identity for the present, this study focuses primarily on the urban and rural transit assistance programs, with limited attention to demand-responsive providers and services.

Background

The Commonwealth has been providing state funding in support of locally-provided public transportation services since the late 1960's. Initially the funding was provided in response to the financial collapse of privately owned and operated transit companies in the state's metropolitan areas. Over the years, the state role has been expanded to provide support for all facets of public transportation planning, research, system development, management, and delivery of public

[1] *Investing in Our Future: Addressing Pennsylvania's Transportation Funding Crisis, Commission Final Report, Pennsylvania Transportation Funding and Reform Commission, November 2006*

transportation services. While the state-supported programs initially targeted traditional fixed-route services in urban areas, the current slate of programs also address rural areas, intercity services, and community transportation programs which generally focus primarily on mobility and access for specific target populations. The Persons With Disabilities Program, for example, was the subject of a major TAC study several years ago. This program has been expanded substantially in lass than a decade, serving a wide range of mobility needs.

For fiscal year 2006-07, the Commonwealth distributed approximately $850 million in state funding to local public transportation providers, as shown in Figure D.

For fiscal year 2006-07, the Commonwealth distributed approximately $850 million to local public transportation providers.

Figure D – 2006-07 Pennsylvania Transit Funding Summary

Grant Program	FY 2006-07 State Funds (millions)
Urban & Rural Operating Assistance	$ 301.8
Urban & Rural Capital Assistance	$ 125.0
Public Transportation Assistance Fund (PTAF)	$ 175.6
Act 3 of 1997 Supplemental Operating Assistance	$ 73.8
Free Transit for Seniors	$ 80.0
Shared Ride	$ 72.2
Community Trans. Capital	$ 3.5
Intercity Bus and Rail	$ 8.3
Persons With Disabilities	$ 4.8
Welfare to Work & Jobs Access and Reverse Commute (JARC) Match	$ 4.8
TOTAL	$ 849.8

The procedures and criteria for distributing state transit funding have evolved, but as a general rule the majority of the available state funding is distributed by statutory formulas or long-standing policy formulas that generally reflect historical levels of service and historical shares of state funding. Funding levels are typically set annually through state appropriations (general fund), executive authorization (lottery funds), or projections of dedicated funds (Public Transportation Assistance Fund – PTAF, and Act 3 of 1997 funding).

Two distinct concerns with the structural basis of the current state transit funding sources are: (a) the fact that the funding levels are not sensitive to inflation and often are held relatively constant for periods of five or more years; and (b) funding levels are generally not predictable, which undermines efforts directed at sound financial planning and planning for system development.

The following excerpts from Chapter Six – Transit Funding Structure of the Transportation Funding and Reform Commission report spell out the Commission's findings regarding weaknesses in the current approach to managing and distributing state transit funding, and also the Commission's recommendations for restructuring the programs to address those weaknesses:

- "Funding distribution does not shift with significant demographic or market changes." – page 85

- "This funding dynamic (editor's note: "this funding dynamic" is referring to the fact that the state provides the preponderance of public funding for transit operations) provides little financial incentive for local governments to aggressively control costs and allows local goals and interests, which may be distinctly different from the state's, to take priority without accompanying financial responsibility." – page 86

- "The Commission believes that distribution of transit funding should be based on need and performance." Page 86

- "Link transit funding to need and performance through the changes in the conditions for and distribution of funds." Page 83

- "Distribute operating funds based on a formula dependent upon transit agency passengers (performance) and vehicle hours (need)." Page 88

- "A formula-based approach for funding distribution will allow the Commonwealth to link funding with policy goals to move people more efficiently. The use of passengers and vehicle hours as the driving variables provides that linkage." Page 85

- "Provide a financial incentive to transit systems that show a significant performance improvement relative to the previous year." Page 88

- "To earn the full amount of operating funds available annually, each transit provider will be required to meet minimum performance standards established by PennDOT such as subsidy per passenger, passengers per vehicle hour, and costs per vehicle hours." Page 88

- "Strengthen the state's role in the audit of transit agencies and provide for increased accountability on the part of transit agencies and local governments." Page 83

- "The new program should reflect a new state-local partnership, where local communities and transit agencies manage their operations using effective performance measures and solid business practices." Page 86

- Transit Agencies that have met the minimum performance standards for their existing operations shall be eligible for state expansion funding." Page 88

The remaining sections of this report will describe the research approach, the analyses and the findings, and TAC's recommendations as to how PennDOT can apply these observations and recommendations in addressing the changes called for by the Transportation Funding and Reform Commission.

Methodology

The methodology employed for this study consisted of the following activities:

1. Review of background material that led to the need for this study
2. Early discussion with PennDOT executives and managers to gain a clear definition of the Department's needs and requirements
3. Fact finding consisting of:
    a. a review of PennDOT's historical approach and current practice for management and distribution of state transit funding
    b. a literature review of materials available from transit research associations and clearinghouses such as the Transportation Research Board (TRB), Transportation Research Information Service (TRIS), Transit Cooperative Research Program (TCRP), etc., and from PennDOT
    c. a review of related PennDOT documents, such as the Mobility Plan (PennDOT's new long-range transportation plan available at www.pamobilityplan.com), to help identify the Department's values, goals, and objectives with respect to public transportation
    d. outreach to 11 other state DOT's to ascertain the state of current practice among peer agencies
    e. outreach to select representatives of regional transportation agencies to gain their perspective
4. Analysis of the information obtained through the fact finding activities to glean the most relevant material and identify:
    a. commonalities among peer agencies in their use of transit performance measures
    b. lessons learned by peers
    c. best practices
5. Assess additional opportunities for innovation beyond current practice
6. Prepare conclusions, recommendations, and implementation guidance.

Public Transportation Performance Measures – Definition

Any discussion of the application of performance measures should begin with a definition of exactly what is meant by "performance." Since this topic has been the subject of numerous studies and research among public transportation professionals, a review of existing publications was conducted to gain an understanding of how others have handled this topic. Of the literature reviewed, the most current (2004) and relevant source was TCRP Synthesis 56 "Performance-Based Measures in Transit Fund Allocation: A Synthesis of the Practice." The Study was sponsored by the Federal Transit Administration and conducted under the auspices of the Transportation Research Board - Transit Cooperative Research Program. The definition of transit performance used for purposes of that study encompasses two dimensions of performance measurement, and is paraphrased below:

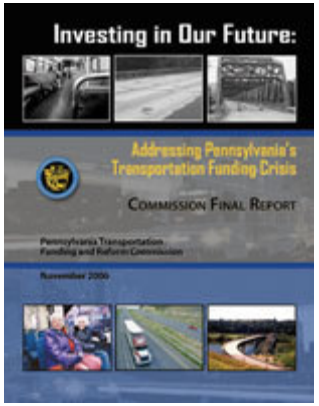
1. The more traditional, and perhaps the most common, approach to defining transit performance focuses on the ***internal efficiency, effectiveness and productivity*** of the transit system in applying resources (inputs) to generate various outputs or outcomes that comprise the transit service. This approach to performance generally uses ratios such as passengers per hour of service, cost per passenger, cost per vehicle hour, etc.

2. In addition, the extent to which a transit service is ***contributing to the attainment of established policies or goals*** is a second aspect of transit performance that represents a broader perspective of how well or how much public transportation service is helping to accomplish overall community (broadly defined to mean funding agencies, local setting for the transit system, transit board, etc.) goals such as environmental quality, mobility and access, economic development, safety, etc. These aspects of transit performance generally are measured through single dimension indicators such as total riders, service area coverage, infrastructure investment, budget adherence, etc.

The most current (2004) and relevant data source was TCRP Synthesis 56 "Performance-Based Measures in Transit Fund Allocation: A Synthesis of the Practice."

As evidenced by the following Guiding Principles which have been excerpted from the Transportation Funding and Reform Commission report (italics have been added to the excerpts for emphasis), this dual approach to defining transit performance is compatible with the Commission's approach and recommendations, and will serve as the basis for the discussion of performance in subsequent sections of this report.

Guiding Principles From Transportation Funding & Reform Commission Report



- Transportation must be *integrated with land use, economic development, and environmental policies, programs, and goals*.
- *The highest priority is to provide for the mobility of all Pennsylvanians*, including traditional groups who are transit dependent, such as senior citizens and persons with disabilities. Optimizing the core transportation network and infrastructure is key to improving mobility.
- Stringent criteria must be used to evaluate proposed increases in capacity of the transportation network.
- *Funding sources must be reliable*, dedicated, inflation-sensitive, and *adaptive to changing environmental factors*.
- Funding level, structure, and distribution must be *responsive to performance, reforms, and need.*

Pennsylvania's Experience With Performance Measures

Historically there were different statutes governing state transit funding for the urban and rural programs. As such, the goals with respect to urban and rural transit program goals are not necessarily the same. As a result, the historical and current practice with respect to performance measures for the two program areas varies.

Urban Transit Programs

The use of performance measurement in the oversight and distribution of funding in the administration of the Commonwealth's public transportation programs has gone through a number of cycles. From the time that the urban capital and operating assistance programs were established in 1967-68 and continuing through the 1970's, public transportation grants were administered on a discretionary basis, and focused primarily on "need" as defined by the deficits incurred in the provision of services. The Department also looked beyond the deficit level and attempted to account for factors such as administrative compliance (complete, accurate, and timely applications), new or growing systems, variation in demonstration of cost containment at the various systems, growth in ridership, etc. So even in the earliest days of the program, performance measures and other goals identified by the Department were a factor in program administration.

Legislative amendments to the Commonwealth's urban transit statute enacted in the early 1980's (Act 101 of 1980) formalized a system that imposed financial constraint and established a system of "performance bonuses" for urban transit systems that was used in the determination of transit grants. The financial constraint spelled out in Act 101 targeted both expenses and revenue. Eligible expense, for grant calculation purposes, was limited by the aggregate rate of expense increase for all systems in the prior year, plus an allowance for inflation.

In an era of high rates of inflation, this cap imposed on expense increases had a significant impact on grant amounts. Adjustments to the expense cap were made for special circumstances such as the introduction of new service. Revenue, for grant calculation purposes, was based on mandatory cost recovery percentages spelled out in the Act. The statutory cost recovery percentages varied based on the number of peak vehicles operated (20 or less vehicles versus more than 20 vehicles), and the percentages were on a declining scale starting with 48%/38% in 1980-81 and reducing to 42%/32% in 1984-85 and thereafter.

Additional financial incentives were established based on four bonus factors that were used to reward systems that demonstrated:

1. increase in operating revenue per vehicle hour
2. increase in ridership per vehicle hour
3. increase in the ratio of operating revenue to operating expense, and
4. operating expense increase less than the rate of inflation.

For the first three bonus factors, each urban system's annual performance was compared to their performance in the prior year. For the last bonus, the system's expense increase was compared to the consumer price index for the corresponding period. By qualifying for all four bonuses, a transit system could increase the state share of the deficit (after federal funding) from the base grant of 66 2/3% of the non-federal share to 75% of the non-federal share. For the period during which these procedures were in place, transit systems (on average) qualified for two of the four available bonuses resulting in an average increase in the state share of the non-federal deficit from 66 2/3 % to approximately 70-71%.

The benefits of the bonus system of performance-based grants included incentives to (a) control system costs, (b) to set fares to reflect increasing costs of providing service, and (c) to attract more riders to the system. While the bonus system of grant funding clearly focused attention on performance, several concerns with the program that are worth noting include:

1. There was a significant time lag between a shift in a system's actual performance and the availability/use of that data for bonus calculations (e.g. FY 1985-86 bonus award determinations would be based on FY 1983-84 results compared against 1982-83 results).
2. There was a "yo-yo effect" with the first three bonuses. This was caused by the fact that when a system had a "good" year and qualified for a particular bonus category, that set the stage for it being more difficult to qualify for the same bonus in the subsequent year. The reverse of this phenomenon was also true.
3. Since an increase or decrease in state funding caused shifts in the required amount of local matching funds, the variability (unpredictability) of the amount of state funding caused problems for local transit systems in submitting budget requests to their local sponsors. Going back to

ask for more local funds (either to make up for a reduction in anticipated state funding, or to supply the additional local match required to qualify for the additional bonus funding) was not looked upon favorably by local officials.

4. There was a degree of internal inconsistency among the four bonuses since the incentives to control costs and raise fares (bonuses 1, 3, and 4) could be viewed as in conflict with the incentive to increase ridership (bonus 2).

The bonus system was eliminated from state law with the enactment of State Act 73 of 1987. With the formation of the state transit association (currently the Pennsylvania Public Transportation Association – PPTA) in the late 1970's, the association took an active role in influencing the manner in which the Department administered grant funding, and the statutes which established funding sources, overall levels of funding, and the allocation criteria. One key underlying factor in the elimination of the bonus language from statute was the influence of the state transit association in successfully lobbying for

more predictability for state transit grants. As a result, the current statutory formula (excluding lottery-funded grants) for distributing operating funds is designed to mimic historical shares of funding, using 1990-91 as the base year.

Rural and Small Urban Programs

The state transit funding program for rural and small urban systems (subsequently referred to simply as "rural program" or "rural systems") was initially authorized by Act 10 of 1976. That act gave the Department broad discretion in the administration of the program, including the allocation of available funds. From 1976 until 1991 when the funding for rural systems was merged into the same statute as urban systems, grants were based on need (deficits) and certain standards established by the Department.

The two principle standards were an operating ratio of 30% for established systems, and a local share of the total operating deficit of not less than 10%. Like the urban program, the rural program has a long history of annual collection and analysis of data on service levels, finances and system utilization, and the compilation and publication of annual reports based on the data. The annual reports include a number of performance ratios and factors for both individual systems and for statewide averages, to facilitate peer comparisons.

Since PennDOT also administers the Federal Section 5311 funding (5311 funds can be used for capital, operating, and planning purposes) for rural systems, federal regulations and requirements have always been a factor in how funds are allocated to these providers.

Current PennDOT Practice With Performance Measures

Current state transit legislation separates state-funded transit providers into the following groups for funding purposes as shown in Figure E.

Figure E - Peer Groups for Transit Funding Purposes/Current Practice in Pennsylvania

Class 1	Southeastern Pennsylvania Transportation Authority (SEPTA)
Class 2	Port Authority of Allegheny County (PAAC)
Class 3	Providers of Public Transit Service in Other Urbanized Areas
Class 4	Providers of Public Transit Service in Small Urban and Rural Areas
Class 5	Community Transportation Providers With Targeted Client Groups

Performance measures are currently a relatively minor factor in the allocation of state transit funds.

Performance measures are currently a relatively minor factor in the allocation of state transit funds. SEPTA and PAAC shares of state operating funds are set at fixed percentages of the annual state appropriation and are not affected by shifts in service factors or performance measures. There is the potential for an impact of financial performance on funding for the Commonwealth's two largest transit providers in that SEPTA is required to achieve a 50% revenue/cost ratio to qualify for the full level of operating funding allocated by the statutory formula, and PAAC is required to achieve a 46% revenue/cost ratio to qualify for the full level of operating funding. However, both SEPTA and PAAC have always met their respective requirements, so they have never experienced withholding of state funding under this provision.

Other urbanized systems and rural operators (there are separate peer groups for systems operating in urbanized areas vs. non-urbanized areas) can experience shifts based on changes in each system's pro rata share of total vehicle miles (weighted 25%), total vehicle hours (weighted 25%), and historical share of state funding (weighted 50%). The funding shifts due to these factors have been relatively minor, and they significantly lag the actual shift in the data.

Capital funding allocations from dedicated sources are distributed similarly to operating funds. For dedicated capital funds (PTAF and Act 3), SEPTA and PAAC shares are fixed in statute at 70.3% and 25.4% respectively. Other urbanized areas and rural areas share the remaining dedicated funding, with individual system allocations based on pro rata shares of annual vehicle miles (16 2/3 %), annual

vehicle hours (16 2/3%), annual total passengers (16 2/3%), and historical state and federal funding (50%).

For capital funding derived from state capital budgets, there is no statutory formula. However, Department policy has been to distribute these funds using an allocation based on historical shares of bond financing. In any particular year, there may be shifts in individual shares to reflect which systems have federal matching funds lined up and which have projects in a ready-to-go status, but over time funding shares fall in line with historical shares.

Although performance measures do not currently have a significant impact on a system's level of state funding, there is still substantial attention focused on performance. Current statute requires, and the Bureau of Public Transportation administers, the following performance-based program features:

- **Urban Systems Performance Measures** - urban transit systems are required to adopt performance standards for the following measures and annually report their individual results, and comparisons against peer systems, to the Department. In instances where their actual performance falls below the adopted targets, the transit providers must propose corrective actions to address those areas:
    - Ratio of administrative employees to operating employees
    - Number of vehicles per mechanic
    - Vehicle miles per employee
    - Accidents per 100,000 vehicle miles
    - On-time performance
    - Miles between road calls
    - Operating cost per passenger
    - Operating subsidy per passenger
    - Operating ratio (revenue divided by expense).

- **Management Performance Reviews** - All urban and rural systems are required to complete, and submit to the Department, periodic (every five years for SEPTA and PAAC, every three years for other urbanized systems, and every ten years for rural and small urban systems) Management

Performance Reviews encompassing a broad array of performance measures focusing on both system management and operational efficiency and effectiveness.

- **Customer Satisfaction Surveys** - All urban and rural systems are required to conduct periodic customer satisfaction surveys (every two years for SEPTA and PAAC, and every three years for all other systems) to measure customer perceptions and to submit action items to address identified areas of concern regarding five mandatory topics:

    - on-time performance
    - vehicle cleanliness
    - fares
    - driver courtesy
    - safety
    - overall customer satisfaction.

- **Annual Transit Statistical Report** - The Bureau of Public Transportation annually collects a comprehensive set of data from all urban and rural transit systems and compiles and publishes an annual report that presents detailed information (both for individual systems and the programs as a whole) regarding levels of service, operating efficiency and effectiveness, system financing, and system utilization.
- **Community Transportation Performance Measures** - The Bureau of Public Transportation has developed performance measures for community transportation service providers that are applied during the application review process, plan reviews, and for purposes of technical assistance and oversight. Measures currently in use include:

    - passengers per paid driver hour
    - live hours as a percent of total hours
    - live miles as a percent of total miles
    - cost per mile.

Literature Search Methodology and Results

Traditional (Fixed-Route) Transit Services

A search of traditional transportation research clearinghouses and industry websites was conducted including:

- Transportation Research Information Service (TRIS)
- Transportation Research Board (TRB)
- Transit Cooperative Research Program (TCRP)
- American Public Transit Association (APTA)
- American Association of State Highway and Transportation Officials (AASHTO)
- Community Transportation Association of America (CTAA).

As noted earlier, TCRP Synthesis 56 – Performance-Based Measures in Transit Fund Allocation (2004) is a relatively recent and authoritative source on the state-of-the-practice for application of performance measures in administering public transportation programs. This synthesis updated a 1994 Synthesis on the same topic, so trends in the practice were also documented. That study included its own extensive literature search; therefore the findings and conclusions represent the results of a broad assessment that spanned a 10-year period. The Synthesis also included case studies of four states (Indiana, North Carolina, Ohio, and Pennsylvania) that were interviewed as part of additional outreach conducted for this study (results of that outreach will be covered in detail in the next section) to assess whether there have been pertinent changes at those agencies since 2004.

The principle observations that the authors of TCRP Synthesis 56 arrived at were:

1. Performance measures commonly in use encompass both the traditional ratio measures of outputs to resource inputs (passenger per hour or mile, cost per hour, cost per passenger, etc.), but also can include a number of single-dimension measures (ridership, service coverage, extent of local financial contribution, etc.). The former are drivers for assessments focusing on a goal of efficient and effective operation, while the latter are commonly used to assess the degree to which the transit service is supporting or attaining broader policy goals such as mobility, quality of life, sound land use practices, etc.

2. A typical set of state performance measures often include contradictory or competing measures. Objectives aimed at expanding area coverage or increasing ridership can be in conflict with budget adherence objectives that may require reductions in service coverage and frequency which leads to fewer riders. This presence of competing measures is unavoidable, and policy makers have to decide the proper balance between pure efficiency measures and outcomes, and broader policy goals.

3. Transit system performance is often affected by laws, regulations and policies that limit a provider's ability to "operate like a business." There are both restrictions on providing certain types of service that could improve financial performance (charter service and pupil transportation are two examples), and mandates to provide other services (for targeted populations such as the elderly, low income, and disabled) that dilute financial performance.

Transit system performance is often affected by laws, regulations and policies that limit a provider's ability to "operate like a business."

The following summary of findings and conclusions from TCRP Synthesis 56 are repeated verbatim from the report:

- "Transit system performance continues to be of considerable importance when viewed across the full spectrum of processes, activities, and organizations involved in the design, funding, operation, and oversight of transit services.
- The allocation of funds for transit takes place at several levels and a differing mix of performance measures and other allocation factors is in evidence at each level.
- Management and oversight of transit performance and the allocation of funds to transit systems are being pursued increasingly as independent activities.
- Transit system performance measurement is broadening to include progress against goals and objectives that extend beyond efficiency in the use of available resources.
- There has been no apparent increase in the use of traditional internal measures of performance in fund allocation at either the state or regional level since the 1994 synthesis survey and report.
- There are a wide array of perspectives and approaches to achieving "equity" in fund allocation."

The study also revealed that state DOT's consistently expressed reservation regarding the quality of the data used in the assessment of transit system performance.

Demand Responsive Transit Services

A second valuable source of information identified through the literature search was a draft TCRP report that addressed performance measures for demand responsive transportation. The report is titled "Measuring, Assessing, and Improving Demand-Responsive Transportation Performance." Although the report was not cleared for publication at the time of this study, a copy was made available to TAC. That report reviewed a comprehensive set of measures and identified the following as "key" demand responsive transportation performance measures:

- passenger trips per revenue hour
- operating cost per revenue hour
- operating cost per passenger trip
- safety incidents per 100,000 vehicle miles
- on-time performance.

A second tier of demand responsive performance measures were also identified:

- no show/cancellation rate
- missed trips
- customer complaint rate
- average passenger trip length
- average travel time.

Peer Grouping Practices

Regarding peer system identification for comparison purposes, the Transportation Funding and Reform Commission's Working Paper on Overall Peer Selection Process is the most recent and pertinent source of information. The Commission's approach used FTA's National Transit Database (NTD) to identify peers. Peer selection was handled as a two-step process with the first step focusing on systems with similar size operating budgets. Ten potential peers were identified using this criterion, and a further screening process was completed based on the following characteristics:

- population of the urbanized area
- population density for the urbanized area

- population with ratio of income to poverty level below 1.5
- population over age 60+
- annual ridership per capita
- annual revenue vehicle miles
- employees
- vehicles available for maximum service.

In the case of the Southeastern Pennsylvania Transportation Authority (SEPTA) and the Port Authority of Allegheny County (PAAC), separate peer analysis and selection was done for different modes such as commuter rail, light rail, and bus. This same procedure was applied to a sample of other urban and rural transit providers. Since the two community transportation providers analyzed by the Commission do not report data to the NTD, the two step process was applied by drawing solely on other similar operators in Pennsylvania.

Outreach to Other States and Regional Agencies – Approach and Results

As part of this study, two complementary approaches were used to obtain current information regarding use of performance measures from other states, and from several regional transit oversight/funding agencies:

- The American Association of State Highway and Transportation Officials (AASHTO) Multi-State Technical Assistance Program (MTAP) offers an electronic process known as MTAP ALERT to obtain quick feedback from all participating states on topics of interest to any member state. An MTAP ALERT was issued by PennDOT asking for feedback from other states regarding their uses of performance measures in the administration of public transportation programs. A copy of the MTAP ALERT is included in the appendix.

- Phone interviews were conducted with select states and regional transportation agencies that were reported to have experience with the use of transit performance measures, and/or states responding to the MTAP ALERT that appeared to have procedures in place that would be of interest for this study. A total of 11 states (*note: a 12th state – Colorado- was interviewed after the initial compilation of results. That interview did not affect the recommendations, so it is included in the table in the appendix, but not reflected in the discussion below*) and three regional agencies participated in the interview process, and they are listed in the accompanying text box to the right.
- A matrix of the detailed responses obtained during the phone interviews is included in the appendix. Summaries of the measures in use by the 11 states, approaches to establishing peer groups, applications of performance measures, and common themes are presented in tables below.
- The most commonly cited ratio-style measures in use as reported by the 11 states interviewed are listed in Figure F. The measures have been categorized, for purposes of this study, as targeting either:
    - efficiency – measures that compare inputs (budget, employees, etc.) and outputs (vehicle miles, vehicle hours, etc.).
    - effectiveness - measures that reflect the degree to which the service is utilized, and generally include any measure with either passengers or revenue in the numerator.

Telephone Interview Participants

California

Florida

Georgia

Indiana

Iowa

Michigan

New York

North Carolina

Ohio

Texas

Washington

Oakland, CA Regional Transportation Commission

San Diego, CA Association of Governments (SANDAG)

Chicago Regional Transportation Authority

Figure F - Performance Ratios and Frequency of Use

Performance Ratio (efficiency & effectiveness measures)	Number of States Using the Measure	Type of Measure
Passengers/vehicle hour	5	effectiveness
Cost/vehicle mile	5	efficiency
Revenue/expense	5	effectiveness
Passengers/vehicle mile	4	effectiveness
Cost/passenger	3	efficiency
Passengers/operating expense	2	efficiency
Passengers/population	2	effectiveness
Cost/vehicle hour	2	efficiency
Cost per passenger mile	2	efficiency
Vehicle miles /operating expense	2	efficiency
Local funding/population	1	local commitment
Revenue vehicle hours/total vehicle hours	1	efficiency
Revenue vehicle hours/full-time employees	1	efficiency

Source: Telephone Interview of 11 states, Gannett Fleming, June 2007

Figure G - Single Dimension Measures and Frequency of Use

Measure	Number of States Using the Measure	Type of Measure
Ridership	3	effectiveness
Revenue Miles	3	policy-system size
Local Funding	3	local commitment
Population	2	demographics
Vehicle Hours	1	policy-system size
Eligible Expense	1	policy-system size

Source: Telephone Interview of 11 states, Gannett Fleming, June 2007

Other states' approaches to grouping of transit providers for purposes of performance comparisons and/or funding allocations are shown below in

Figure H. Some states reported using multiple factors.

Figure H - Peer Groupings Used by States Interviewed

Peer Group	Number of States
Urban - Rural	9
Fixed Route vs. Demand Response	2
Community Transportation Treated Separately	2
Vehicle Miles	1
Number of Vehicles	1

Source: Telephone Interview of 11 states, Gannett Fleming, June 2007

The various applications for performance measures reported by the states interviewed are presented in Figure I below.

Figure I - Reported Uses of Performance Indicators

Use	Number of States
Distribute Block Grant (operating and capital) Funds	5
Distribute Operating Funds only	4
Oversight only	2

Source: Telephone Interview of 11 states, Gannett Fleming, June 2007

Some states only use the measures to distribute operating funds, while handling capital funding on a discretionary or "needs" basis

Common themes and lessons learned are summarized in the following points.

Types of Measures – States reported using both single dimension measures (such as ridership, population, and vehicle miles) and ratio-style performance measures (such as cost/rider, cost/mile, revenue/expense, etc.). Even where they are not used for funding decisions, efficiency and effectiveness ratios are often collected and published as a means of illustrating comparative performance and as an accountability mechanism.

"Softer measures" such as mobility and access, customer satisfaction, energy conservation, congestion relief, etc. are generally not being applied in performance measurement of transit providers and the distribution of state transit funding. Where they are being used, the measures are typically stated in "goals documents" prepared, monitored, and updated by the DOT. Given the heightened interest in transit's energy, environmental, and economic benefits, these "softer" impact measures will likely be of greater interest in the future.

Duration of Use - Many states reported that their performance measures and funding allocation formulas have been in place for many years, some dating back to the late 1970's or 1980's. While only a few states have successfully introduced new measures and funding formulas, a number of other states reported that they attempted to revise the formulas to achieve better equity or to reflect changing

demographics. Such efforts, however, were met with resistance from the transit community which generally seems to prefer the predictability of the status quo.

Uses of Performance Measures - Of the states interviewed that use performance measures for allocating funding, there is nearly an even split between those that use the measures to distribute both transit operating and capital funding on a block grant basis (5 states), and those that use the measures to distribute only operating funds (4 states). In those states that only use the measures to distribute operating funds, capital funding is allocated on a discretionary or "needs" basis. One example (NY) of state priorities used in the discretionary distribution of capital funding is the prioritization of projects oriented toward state-of-good repair and replacement of existing assets vs. system expansion projects.

Performance Standards - Other states are generally not comparing performance results against pre-defined standards or performance targets (i.e. 4 passengers/vehicle mile, or $65/vehicle hour, etc.) One exception is cost recovery, which often has specific target percentages associated with it. The cost recovery percentage standards are typically customized for various peer groups (see "peer groups" item below).

Funding Impacts - For States that use performance measures in a more direct incentive/disincentive fashion, there is usually a grace period between a finding of unacceptable performance and any withholding of funding. The intent of the grace period is to focus attention on encouraging and affording the opportunity for the operator to implement actions intended to improve performance to acceptable levels, rather than on punitive funding actions. The grace period can be as long as 3 years.

When there is a fixed pot of funding and a wide range in the size of systems that are included in the same formula, and the formula uses an individual system's share of the group total as a funding formula factor; the funding for smaller systems can often shift more due to what is happening at the large systems than what is happening at their own system. This is not consistent with the notion of performance-based funding.

Conflicting Measures - A number of states cited concern regarding conflicting objectives/measures. For example, encouraging maximum farebox recovery (set the fare as high as necessary to maximize revenue) could run counter to a goal of maximizing transit ridership to alleviate congestion (which would be facilitated through lower fares).

Comparisons of Providers - Where performance measures are being used to evaluate transit providers, comparisons are generally done against peers rather than comparing a system against itself over time.

Peer groups - The most common grouping for purposes of peer comparisons is urban vs. rural areas. Other breakouts currently in use include:

- Fixed route vs. demand responsive services
- Special treatment for services specifically targeting transportation disadvantaged groups.
- By system size (vehicle miles, fleet size).

The most common grouping for purposes of peer comparisons is urban vs. rural

Electronic Data Submission Practices - Several states offer on-line data submission; and almost all other states reported that they are either working toward on-line submission capability, or would definitely like to have that capability in place.

Best Practice/Use of FTA's NTD - Florida sponsored the development of the Florida Transit Information System (FTIS) which is user-friendly software that facilitates access to FTA's National Transit Database (NTD) and the ability to download select data to support transit planning, including performance assessment and comparison. FTIS is on the web and is available for anyone to use.

Timeliness of Data - The average time lag between actual shifts in data and the application of that data to state program management and oversight is approximately two years. There is a tradeoff between using the most recent data available and using the most reliable (audited) data.

Data Reliability/Confidence - A commonly-cited concern is data reliability/confidence. Several states use consultants as extension of staff to assist the locals with preparing the data, or to assist with "cleansing" the data. A number of states rely solely on FTA's Section 15 National Transit Data Base (NTD) as the source for data, believing it provides an extra layer of review and correcting of the data. While use of the NTD also lessens the burden on transit providers, two drawbacks of that approach are (a) the significant time lag of approximately 3 years in the availability of the data, and (b) rural transit providers have not been obligated to submit their data until very recently.

Lessons Learned – Several states offered the following observations regarding their experiences with the use of performance measures:

- Keep it simple and understandable. It is counterproductive to be overly technical and then not be able to effectively communicate the measures and what they represent to transit board members or other non-technical persons.
- It may be best if performance measures and targets are not specified in legislation since that prevents the DOT from addressing any unintended consequences that arise.
- Recognize that rural, less densely populated areas may not lend themselves to straight forward application of measures – there is a need to balance goals of mobility and access for all persons

against strict efficiency objectives that focus on moving large numbers of people at the least cost. Some types of important service are expensive to provide.

- Funding stability should not be sacrificed in the application of performance measures. Providers need some measure of predictability to permit reasonable service and financial planning to occur. One state (Indiana) uses a three-year rolling average for the data to mitigate the amount of annual variation that would otherwise occur.
- If changes are being made to an existing funding allocation methodology, a transition period should be provided to allow local providers ample opportunity to plan for and adjust to the anticipated changes.

Funding stability should not be sacrificed in the application of performance measures

Conclusions Regarding Performance Measures and Their Use, Based on Literature Search and Telephone Interviews

Based on the collective information gleaned from the literature search and outreach to other states, the following conclusions can be supported:

1. **Other states have successfully applied performance measures in the administration of transit funding programs and allocation of available transit funding**.

2. There is nearly an even split between states that use the measures to distribute both transit operating and capital funding on a block grant basis (5 states), and those that use the measures to distribute only operating funds (4 states). In many states there is a "first cut" that allocates funding to certain subgroups (i.e. urban, rural, ADA, etc.) before the performance-based funding approach is applied. The allocation basis for that first cut is frequently set in law.

3. **Most performance measures and the funding allocation formulas that use them have been in place for relatively long periods of time**. This appears to be more a result of resistance to change than the ongoing relevance or utility of the measures and approach, since several states indicated the need/desire to update the measures and formulas to reflect current conditions.

4. **The performance measures used by other states appear to be more a reflection of past practice than the result of a strong case for certain measures being superior to**

others. The most commonly used performance measures as reported by the 11 states interviewed are:

a. passengers/vehicle hour (5 states)
b. cost/vehicle mile (5 states)
c. revenue/expense (5 states)
d. passengers/vehicle mile (4 states)

Data timeliness and reliability is a common concern

Many states reported excluding specialized services that target specific groups such as the elderly, persons with disabilities, unemployed, or low income persons, from the application of performance measures and allocation formulas that are applied to providers of traditional transit service.

5. By a significant margin, **peer groupings are most often done on a geographic basis such as providers serving urban versus rural areas**. When allocating funding, other states did not report using out-of-state transit systems for purposes of establishing peer groups for in-state operators. Very large operators with no in-state peers are frequently treated as a "special case" outside of the procedures and formulas applied to other providers. The most useful resource regarding the selection of peers for very large providers was the Working Paper produced by the Pennsylvania Transportation Funding and Reform Commission.

6. **Specific standards are not in general use, except for cost recovery (revenue ÷ expense).** Revenue for purposes of determining cost recovery is frequently broadly defined to include both operating revenue and local public funding. By combining both operating revenue and local funding for cost recovery calculation purposes, local communities are afforded the opportunity to determine the appropriate balance that best fits their community when choosing between maximizing revenue versus emphasis on maximizing ridership.

7. **Data timeliness and reliability is a common concern,** with no real breakthroughs found through this research. The average time lag between the year of the data and the use of that data in performance calculations is approximately two years. Some states rely on the NTD on the assumption that FTA and their consultants are carefully scrutinizing that data, while other states put extra effort (either internally or through consultant assistance) into reviewing and correcting the data. The data that is available the soonest tends to be the least scrutinized for accuracy.

Recommendations

Three levels of performance-oriented recommendations are presented.

- **Public Transportation Performance Measurement System (PTPMS)** - The first and highest level presents a systematic, overall policy framework for managing transit grant programs for enhanced performance.
- **Grants Management Process Flow** - The second level recommendations address the grants management process and include both enhanced inputs and outputs of the various grants process steps.
- **Performance Measures** - The third and final set of recommendations is for use in evaluating transit providers. A recommended approach to establishing relevant peer groups is also presented.

A Systematic Approach to Performance Enhancements

The research described in previous sections focused on the specific topics of performance measures and peer grouping practices. There is a broader context, however, within which these topics are typically managed. Figure J illustrates a comprehensive view of a Public Transportation Performance Measurement *System* (PTPMS) that shows how performance measures should be driven by overall policy goals and objectives. The measures in turn represent one of the key tools used to evaluate the extent to which the desired outcomes of performance improvement and enhanced accountability are being attained.

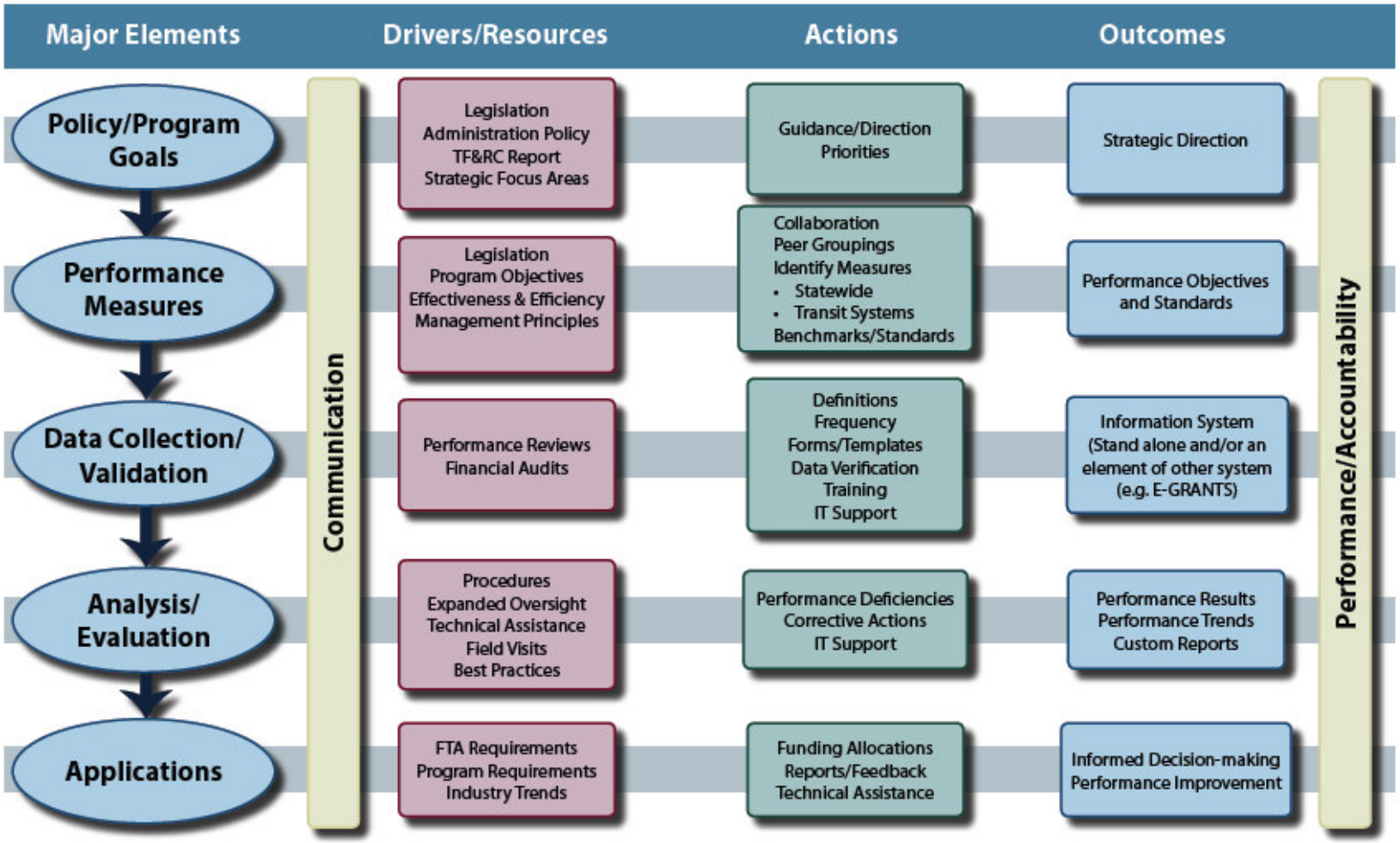
Performance measures should be driven by overall policy goals and objectives

The benefits of viewing and managing performance measures in this context are that it achieves:

- a comprehensive public transportation approach encompassing both providers and PennDOT
- clarity of results by tying together all of the components into one cohesive presentation
- efficiency as a result of managing all performance related topics for all program areas according to a consistent framework, and
- positioning the Department to be proactive and prepared on accountability and performance issues.

Figure J

Public Transportation Performance Measurement System (PTPMS)



Proceeding vertically though the major elements of the PTPMS, once policy goals and performance measures are established, direction is also required for:

- performance measure definitions and rationale
- consistent direction on data collection and verification, and
- appropriate applications of the measures

The horizontal flow operationalizes the system by:

- assuring appropriate linkages with key drivers (such as the Transportation Funding and Reform Commission recommendations, applicable legislation, funding agency requirements, and the Department strategic focus areas)
- defining the actions necessary to execute the process; and
- measuring the outcomes and refining the process as appropriate.

Performance Measurement Success Factors

Success factors for an effective performance measurement system are listed below:

- The system should be **primarily positive rather than punitive** -- the overarching goal is to progressively improve performance rather than identify and punish shortfalls, particularly in the short term.
- **Collaboration** occurs to achieve the maximum degree of buy-in by stakeholders.
- Maximize the **use of existing data systems**.
- The selected **measures should be intuitive** and clear in purpose.
- A **Modular design** should be employed that recognizes both the unique requirements of individual programs and the need to produce compilations across programs.
- The system is **expandable** to permit incremental system development and enhancement.

Grants Management Process Enhancements

Figure K takes this conceptual system framework to the next level by overlaying opportunities for performance and accountability enhancements. This is shown by using a high-level process flow for a typical transit grant program administered by the Bureau of Public Transportation. The blue boxes represent standard grants management processes that are currently in place. The information shown in red depicts how various new or enhanced actions can be overlaid on the existing process to achieve the desired focus on improving performance. Figure L is a particularly useful starting point for determining how existing state grant management processes can be enhanced for a greater consideration of performance and accountability. This two color presentation is intended to demonstrate the following:

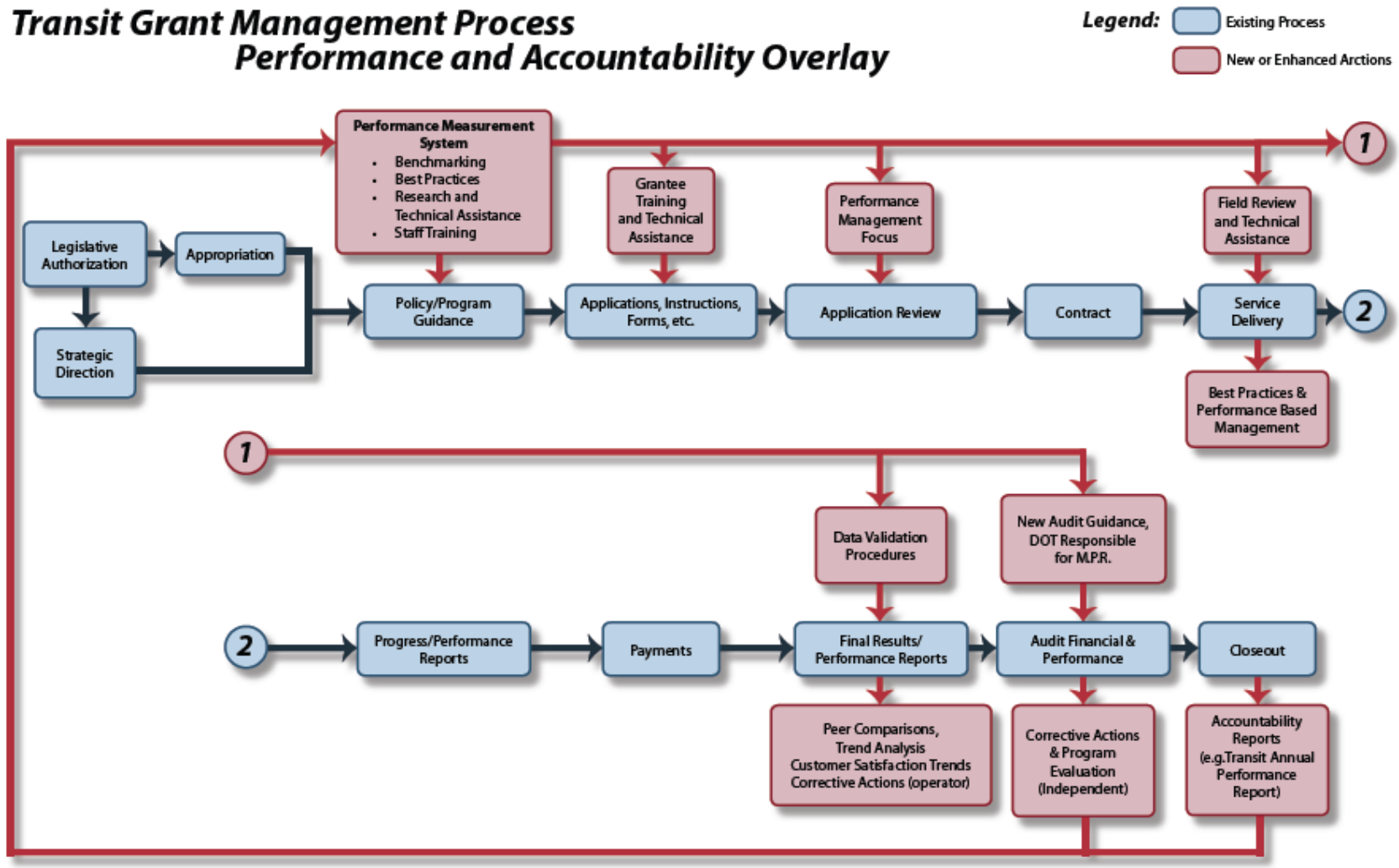
- The existing grant process is generally consistent at the level presented. Even though the Department has made great strides to streamline grants administration, the basic process at the high level shown will not vary much over time.

- There is a significant opportunity to enhance public transit performance and state oversight through implementation of the performance based processes or interventions shown in red.

Some enhancements are shown as inputs to existing grant processes, while others are shown as products that can be expected as a result of the process enhancements.

Existing state grant management processes can be enhanced for a greater consideration of performance and accountability

Figure K


Transit Grant Management Process
Performance and Accountability Overlay
Legend:
Existing Process
New or Enhanced Arctions
Performance Measurement System
Benchmarking
Best Practices
Research and Technical Assistance
Staff Training
Grantee Training and Technical Assistance
Performance Management Focus
Field Review and Technical Assistance
1
Legislative Authorization
Appropriation
Strategic Direction
Policy/Program Guidance
Applications, Instructions, Forms, etc.
Application Review
Contract
Service Delivery
2
Best Practices & Performance Based Management
1
Data Validation Procedures
New Audit Guidance, DOT Responsible for M.P.R.
2
Progress/Performance Reports
Payments
Final Results/ Performance Reports
Audit Financial & Performance
Closeout
Peer Comparisons, Trend Analysis Customer Satisfaction Trends Corrective Actions (operator)
Corrective Actions & Program Evaluation (Independent)
Accountability Reports (e.g.Transit Annual Performance Report)

The recommended enhancements at each step of the grant management process are discussed briefly below.

Existing Grant Process In Brief

Transit programs and policy are established through **Legislative Authorizations** and **Appropriations**; the former typically sets high level authority and direction, the latter sets funding levels on a year to year basis. Strategic Direction may also shape transit programs through additional sources such as Administrative policy and Department priorities.

Transit Operators receive **Policy/Program Guidance** from the Bureau of Public Transportation that reflects and further specifies legislative and strategic direction. Such guidance is used to help frame the grant application process in terms of emphasis areas and issues requiring attention of the grantee.

Transit Operators are provided with detailed **Applications, Instructions and Various Forms** to submit a grant application. The Bureau reviews the applications and enters into a contract which is the basis for **delivering services** according to the prescribed terms of the Commonwealth.

Service delivery occurs as the transit operator provides transit services to riders through a range of state-funded programs. The administration of the grant also requires some **Progress and Performance Reporting** for accountability purposes. Those reports become the basis or rationale for the Commonwealth to make **Payments** to the Operator in line with the Contract.

Closure on the grant process includes final results which are reflected in performance reports that are subject to both **Financial and Performance Audits** prior to **Grant Closeout.**

Grants Process Recommendations

This section is structured to advance TAC's recommendations for an enhanced Performance Management focus for the Commonwealth's Transit Grant programs. This overall emphasis is consistent with both the recommendations of the Transportation Funding & Reform Commission and recent legislative considerations.

For the sake of brevity the recommendations are organized as follows:

Each of the ten "performance based interventions" as shown in red in Figure K are briefly described, followed by a series of TAC recommendations. In this way the reader can gain an overall understanding of the new recommended processes in relation to the existing grant process (described in the preceding section and shown in blue in Figure K).

A) Performance Measurement System

The first red box represents the establishment of an overall Performance Measurement System. The Performance Measurement System should become central to establishing Program and Policy Guidance. In terms of the performance measurement process, TAC's recommendations follow.

1. **Benchmarking and Best Practices**—The BPT's performance measurement system should include the development, over time, of meaningful performance benchmarks. Benchmarks provide an opportunity to track and compare performance to high performing operators, statewide averages, standards, or expected minimum criteria. Benchmarks should be developed in phases and involve the input of Pennsylvania's transit operators. Also, a repository or database of best practices in transit management and service delivery should be developed and kept up to date, particularly as it relates to performance measurement/management and accountability. The best practices information can include Pennsylvania systems to foster a healthy technology transfer and information sharing culture among systems and between the systems and BPT.
2. **Research and Technical Assistance**—As noted, another major component of the overall push for greater focus on performance and accountability with Commonwealth oversight is the supporting research and technical assistance activity. TAC recommends that BPT make performance enhancement a key focus area of the existing Transit Research and Demonstration Program. The objective would be to develop research resources, in partnership with the transit operators, that are value-adding to both individual systems and the public transportation network as a whole. Further TAC recommends that a stronger emphasis be placed on a program of technical assistance to allow the Commonwealth to more effectively partner with and assist the transit operators in meeting performance targets, and addressing any corrective actions that are identified through routine reporting and/or performance and financial audits.

Benchmarks provide an opportunity to track and compare performance to high performing operators

B) Grantee Training and Technical Assistance

1. TAC recognizes that the BPT already does annual workshops for grantees to discuss the current round of grant applications. The proposed enhancements at this step would involve adding performance enhancement as a specific topic at these workshops. This topic would encompass:
    - purpose and background of the changes

- methods for data collection and validation
- assistance available from BPT.

Particularly in the first year of change, it is anticipated that the BPT should plan to provide a higher level of technical assistance in the application and grants process in light of the changes. As such, this might extend beyond the workshops to expand the availability of Bureau staff to offer provider-specific assistance and answer questions.

2. TAC recommends that the BPT develop a Performance Measurement Handbook as a practical resource for Transit Systems, and plan for regular updates of the information.

C) Performance Management Focus (in the Application Review)

1. TAC recommends that BPT staff be trained and prepared to review the grant applications with respect to any of the performance measurement and accountability changes. This should be accomplished in a manner to promote a generally uniform approach, priority consideration of this new aspect of the grant application, and attention to the accuracy and completeness of the grantee submission.

D) Field Review and Technical Assistance

1. TAC acknowledges and supports the goal of BPT to spend more time with transit operators as part of its overall shift to expanded technical assistance, oversight, and the associated emphasis on performance and accountability.
2. Field Review and Technical Assistance during Service Delivery should focus on:
    a. The practical incorporation of performance measurement and associated practices into the management practices and operations of the transit system.
    b. The proper collection, maintenance and validation of performance related data.
    c. The existence and functioning of sufficient management controls that provide reasonable assurance that data collection is valid and reliable.
    d. Constructive interaction between BPT and transit system staff aimed at the common goal of improved transit performance, efficiency and effectiveness.
3. From these reviews throughout the state, BPT should leverage the knowledge gained to produce Best Practices information to share among operators.

E. Data Validation Procedures

1. Valid performance data is the lynchpin for the Public Transportation Performance Measurement System. As such, the BPT specifically should develop policy and supporting processes for ensuring valid data. Other states address the hands-on validation/correction of data either through staff intervention or consultant assistance.
2. This should be reinforced through the delineation of standard collection and storage methods (e.g., common templates) and processes for management review and sign off at the transit operator level—if not by the Transit System Board.
3. Data validation procedures must be in place as a prerequisite of any Performance Reports submitted to the Department.
4. As Transit Operator Performance Reports become increasingly performance based, the BPT should produce Peer Comparisons, and Trend Analyses (operator level and statewide) and share these results with all providers.
5. Corrective action identification is also the responsibility of the operator. Sound management practices dictate that an organization's executives have systems in place to monitor organizational performance and to initiate corrective actions in response to negative or adverse trends. These topics should be a required component of final reports submitted by all grant recipients.

Corrective action identification is also the responsibility of the Operator

F. Revised Audit Guidance and DOT Responsible for Management Performance Reviews (MPR)

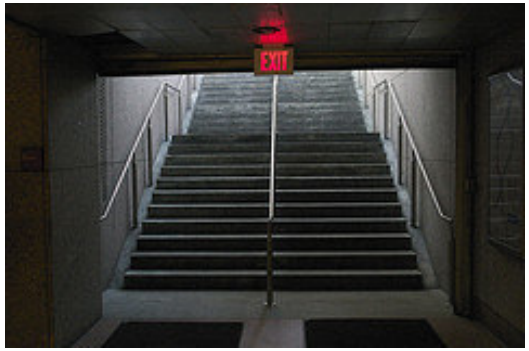
1. BPT should modify current audit guidance to incorporate the data validation, performance assessment, and corrective action components of the performance enhancement initiative.
2. Transit operator representatives should be involved in the development of draft guidance.
3. PennDOT should also review its existing guidance regarding customer satisfaction surveys to assess whether enhancements are needed to support consistent and reliable measurement of performance from the customer's perspective. Ideally, the individual system results would be sufficiently consistent to support the rollup of the data into uniform statewide assessments and trend analyses.
4. The TAC supports the Reform Commission recommendation that PennDOT should be the client when independent consultants perform Management Performance Reviews of transit systems. This step is necessary to assure that the reviews are in fact independent.

G. Corrective Actions & Program Evaluation

1. Financial and Performance Audits of transit systems will trigger a range of outcomes, such as:
   - verification/certification of acceptable performance or progress
   - the identification (BPT) and acceptance (transit operator) of required corrective actions
   - funding sanctions if corrective actions are not effectively advanced over a period of time.
2. BPT should define and publish a multi-year time horizon that would represent a full cycle of transit performance measurement from inception, to initial use, to performance reporting and auditing, to corrective actions and possible sanctions. This topic is further addressed in the Implementation Issues section of this report.
3. TAC also recommends a periodic independent program evaluation of the performance enhancement and accountability aspects of the state's transit programs. This could be incorporated in the Legislative Budget & Finance Committee's six-year PennDOT performance audit, or preferably as a stand alone review approximately every four years, at minimum. A statewide program evaluation would provide independent assessment of program progress both at the operator and the BPT level.

H. Closeout

1. PennDOT should develop appropriate accountability reports that result in effective closeout of grants at the operator and statewide levels.
2. Reports developed at the operator level would document the performance of the operator in relation to established goals and standards, and assure the level of accountability required by legislation, regulations, policies and grant contracts. Performance measures would be a core element of the operator closeout report.



3. A statewide report should be developed as a roll-up of system performance measures.

PERFORMANCE MEASURES AND ACCOUNTABILITY

Why It Is Important

- Assure that transit services are meeting the mobility needs of individuals
- Assure that transit services support policy goals
- Provide accountability for the efficient and effective use of public funding.

Recommendation

PennDOT should develop and adopt a transit performance measurement policy that incorporates:

- Broad governing principles
- Specific applications of the performance measures in line with the Department's oversight and funding responsibilities and activities
- Basic roles and responsibilities for PennDOT and the transit operators.
- How performance and non-performance will relate to reporting requirements, technical assistance, corrective actions, and funding incentives or sanctions.
- A framework for a state-local partnership that supports both state and local goals, and represents a joint commitment to improved public transit
- A schedule for phase-in that initially focuses on efficiency and effectiveness, and but is expanded over time to include a stronger customer focus, and measures that acknowledge public transportation's secondary impacts such as those related to the environment, public health, employment, energy efficiency, economic development, etc.

Recommendations for Peer Grouping

TAC recommends a two-tiered approach to peer grouping for funding allocation and performance assessment purposes. The first tier would group transit providers for purposes of a basic funding allocation that recognizes the number one priority of providing mobility, and also the desire to provide sufficient funding predictability and stability so as not to disrupt day-to-day transit operations. The majority of funding would be distributed according to tier one. The second tier would identify relevant peer groups for individual providers. These groupings would be used for purposes of performance measurement and incentive funding decisions. Recommendations for each tier are presented below.

Tier One Peer Group Recommendation – For Basic Funding Allocations

This first tier would be most useful for purposes of allocating available resources to the selected grouping to reflect current levels of service, the current structure of federal programs, and the relative scale and "needs" of the various providers. Single dimension measures rather than true ratio-style performance measures would be applied at this step. Also, current funding levels would be taken into account to prevent significant disruptions to budgets and service levels. Pennsylvania's current peer groupings (classes 1, 2, 3, 4, and 5) are generally consistent with what is in place among peer states, and represents a sound basis for the "first cut" in establishing peer groups. Neither SEPTA nor PAAC have an in-state peer; and the relative system size, and funding sources and requirements for the remaining providers tend to naturally group them along current lines. In the event these classes change, the principle of comparing operators within like categories still remains valid.

Tier Two Peer Grouping Recommendation – For Performance Comparisons, Incentive Funding, and Potential Sanctions

The recommended approach for tier two peer grouping is based largely on the approach used by the Reform Commission as part of their study (documented in the Literature Search section of this report), but with several suggested modifications. Performance evaluations and comparisons would be done at this level and would serve as the basis for the department to offer incentive funding, or to require operators to implement corrective actions to address areas of weak performance. After a reasonable grace period, funding sanctions could be applied if performance does not improve to acceptable standards. The suggested groupings along with suggested modifications and the rationale for those changes are discussed below.

- **SEPTA** (**Class 1)** – recommend using the Reform Commission approach to identifying peers, with possible modification to reflect relative growth trends and local financial commitment

- **PAAC (Class 2)** – recommend using the Reform Commission approach to identifying peers, with possible modification to reflect relative growth trends and local financial commitment

- **Class 3 (other urbanized)** – recommend using the Reform Commission approach, modified to require that approximately half of the peers to be in-state providers, and to look for peers that provide a similar mix of services

- **Current Class 4** - recommend using the Reform Commission approach, modified to require that approximately half of the peers to be in-state providers, and to look for peers that provide a similar mix of services

- **Current Class 5** – recommend that the Bureau of Public Transportation develop appropriate peer groups based on factors such as service area square miles, total service area population, population or percent of population in various target groups, number of vehicles, total budget, agency-operated versus contracted service, and total system expenses

For SEPTA and PAAC, the general approach used by the Funding and Reform Commission is recommended. That approach addressed the key variables of demographics (both total and specifically targeted groups), available resources, levels of service provided, and system utilization. Consideration should be given to whether the variables applied by the Commission adequately reflect the important factors of relative growth trends of the service area (population growth is the simplest indicator) and local commitment (e.g. local funding as a percent of total budget).

For both the current class 3 and 4 providers, a modified Reform Commission approach is recommended. The Commission's general approach to identifying peers would be followed, but approximately 50% of the peers would be from within the state. This modification is intended to have peer groupings better reflect the policy and operating environment within which transit systems operate. A second possible modification would be to have a peer selection criteria that reflects whether the provider operates fixed route services only, or both fixed-route and demand-responsive service. For Class 4 providers, whether a system provides services directly or through a private contractor can be an important driver of economic measures and other factors.

The services provided by Class 5 operators are sufficiently different from the other classes in mode of operation, goals and objectives, and operating environment to warrant separate treatment. Since the class is so large, it may be appropriate to attempt to establish smaller peer groups rather than use program averages for comparison purposes. Factors such as service area square miles, total service area population, population or percent of population in various target groups, number of vehicles, total

budget, agency-operated versus contracted service, and total system expenses would be examples of relevant peer grouping factors.

The Tier 2 grouping recommendations are summarized in Figure L.

Figure L – Tier Two Peer grouping Recommendations for Performance Measurement and Incentive Funding

SEPTA	• Reform Commission Approach, modified to reflect relative growth trends and local financial commitment
PAAC	• Reform Commission approach, modified to reflect relative growth trends and local financial commitment
Other Urbanized	• Reform Commission approach, modified to require that approximately half of the peers to be in-state providers
Small Urban & Rural	• Reform Commission approach, modified to require that approximately half of the peers to be in-state providers
Community Transportation	• Peer groups based on factors such as service area square miles, total service area population, population or percent of population in various target groups, number of vehicles, total budget, agency-operated versus contracted service, and total system expenses

Recommended Performance Measures

Ideally, a performance measurement system should reflect a balance that addresses efficiency in the use of resources, utility to the local population as measured by ridership and revenue, and support for broader policy goals that may suggest priorities other than purely economic factors. Examples of such policy goals might include “make transit available and accessible to more people,” “increase transit ridership by twice the rate of population growth,” or “enhance transit services for the elderly.” Pursuit of any of these policy goals could have the effect of diluting the efficiency or effectiveness of a transit system as measured by tradition ratio-style indicators.

Statewide Performance Measures

PennDOT's recently issued Mobility Plan was reviewed to identify state-level performance measures related to public transportation, to serve as a broader context for the discussion of transit-specific performance measures presented in this section. Also, a draft list of transit indicators being considered for a "State of The System Report" was also reviewed. Both sets of indicators are listed in Figure M along with recommendations.

Figure M - Statewide Transit Performance Indicators

Indicator	Mobility Plan	Draft State of the System Report	Recommended
Number of transit Boardings	√	√	√
Average fleet age (bus and passenger rail cars)	√		
Average age of transit infrastructure	√		
Average distance vehicles driven between breakdowns	√		
Percent transit on-time performance	√		
Operating expense per vehicle mile		√	√
Operating expense per passenger mile		√	
Unlinked trips per revenue vehicle mile		√	√

The three recommended statewide measures were chosen based on the ease of data collection, the likely accuracy of the data, and the fact that they encompass both efficiency and effectiveness and are not duplicative of one another.

Transit Provider Performance Measures – Fixed Route

The literature search and outreach to other states was conducted for purposes of getting an objective view of how others are handling the issue of public transportation performance measurement, and how their processes are linked to funding decisions. However, it is imperative to consider the current political and funding environment within which this study is being done to assure that the results are practical and suitable for implementation in Pennsylvania.

The Funding and Reform Commission Report included recommendations for several performance measures which are evaluated below. Also, since draft legislation, including candidate performance measures, is currently being discussed by the Department and other stakeholders, a review of those measures in the context of the preceding research findings is also in order. Both sets of measures are listed in Figure O below along with others gleaned from the research. The measures recommended by TAC for consideration as part of the overhaul of the state transit funding and oversight activities are identified in the text following Figure N. There is no absolute "right" number of measures to use, but TAC recommends that the number of adopted measures should be kept to five to minimize the administrative burden on both providers and BPT, and to keep the focus on the most important indicators.

Figure N - Transit System Performance Measures Currently Under Consideration

Measure	Source			
	Reform Commission	Draft Legislation	Comment	Recommendation
Cost per hour	X	X	efficiency measure used by 2 of 11 states	Yes
Passengers per hour	X	X	effectiveness measure used by 5 of 11 states	Yes
Cost per passenger	X	X	efficiency measure used by 3 of 11 states	Yes

Measure	Source			
	Reform Commission	Draft Legislation	Comment	Recommendation
Subsidy per passenger	X		effectiveness measure used by none of 11 states	No This measure would be redundant given that cost per hour and revenue per hour are already being evaluated.
Operating Revenue per hour		X	effectiveness measure used by none of 11 states	Yes
(Operating Revenue + Local Funding) ÷ Total Expense	From research		local commitment measure used by 4 of 11 states	Recommend choosing one
Revenue ÷ expense	From research		common throughout transit industry	

- **Cost Per Hour – RECOMMENDED**
  - commonly accepted measure of transit system efficiency
  - recommended by both the Commission and the Department
  - relatively low usage reported in the phone survey
  - easily understood.

- **Passengers Per Hour - RECOMMENDED**
  - measure of transit system effectiveness in attracting riders, and the utility of the service to persons within the service area

- recommended by both the Commission and the Department
- one of most frequently used among states surveyed
- common throughout the industry
- easily understood.

- **Cost Per Passenger - RECOMMENDED**
  - commonly accepted measure of transit system efficiency
  - recommended by both the Commission and the Department
  - used by 3 of 11 states in the phone survey
  - easily understood.

- **Subsidy Per Passenger – NOT RECOMMENDED**
  - recommended by the Commission
  - not included in draft legislation
  - none of states surveyed use
  - somewhat redundant to cost per passenger
  - fare policy skews figures
  - easily understood.

- **Operating Revenue Per Hour – RECOMMENDED**
  - not recommended by the Commission
  - in draft legislation
  - none of states surveyed use
  - somewhat redundant to passenger per hour
  - easily understood.

In addition to the four measures recommended from among those offered by the Commission and/or the Department, it is recommended that one of the following two measures, ***but not both***, be considered. Of the two, there is a slight preference for (local revenue + local funding)/total expense since it permits local flexibility to provide additional local funding to qualify for full funding or incentive funding. This is consistent with the Reform Commission's recommendation for a shift toward more local funding, both to expand the base of funding available and to increase local accountability when decisions are being made regarding service levels and fare policies.

- **(Operating Revenue + Local Funding) ÷ Total Expense – RECOMMENDED (see text above)**
  - must broadly define revenue and local funding to be effective
  - not recommended by the Commission, but consistent with the Commission's call for increasing the local responsibility and accountability for transit funding and decision-making
  - not in draft legislation
  - the degree of local funding was a commonly cited measure among surveyed states
  - allows locals to balance fare policy (user fees) with public subsidy
  - local financial commitment will encourage stronger local interest in performance
  - somewhat more difficult to administer due to the combining of various local revenue sources and local funding sources.

- **Revenue ÷ Expense – RECOMMENDED (see text above)**
  - not recommended by the Commission
  - not in draft legislation
  - one of most common measures used in the industry
  - one of most commonly cited by states participating in the telephone survey
  - all-encompassing measure of efficiency and effectiveness
  - easily understood

- **Customer Satisfaction Index – FOR FUTURE CONSIDERATION**
  - not recommended by the Commission
  - not in draft legislation
  - current data system would have to be enhanced to support annual analyses
  - would better balance technical measures against customer views which influence whether they use the service

The last measure addressing customer satisfaction would be a desirable measure to include; however, it would require substantive additional effort by both the Department and transit providers to generate reliable data on an annual basis to support the calculation of results. This could be considered as a future enhancement.

Demand Responsive Performance Measures

For the Community Transportation Program, the following measures are recommended for consideration:

- passenger trips per revenue hour
- operating cost per revenue hour
- operating cost per passenger trip.

These measures are drawn from the draft TCRP report on performance measures for demand responsive transportation. That report also recommended on-time performance as a key performance measure, but it is not included in the recommended list due to potential difficulties in cost-effectively obtaining reliable data on that measure. If the Department believes that the data availability and accuracy concerns can be overcome, that measure would provide performance information on one of the key factors that influences whether a customer is inclined to use a service, and whether they are satisfied with the service.

Policy Implications and Implementation Issues

Since the recommendations contained in this report represent a significant departure from past practice in both the way transit grants are administered, and the Department's expectations of transit providers, there are a number of policy implications and implementation issues that merit further discussion.

Policy Implications

1. **Proper balance between higher level Departmental goals, and productivity and efficiency goals. -** Many states reported that they routinely deal with conflicting goals such as "enhance mobility and access" versus "maximize revenue." The Reform Commission addressed this topic in the following guiding principle that preceded its recommendations: "*The highest priority is to provide for the mobility of all Pennsylvanians*, *including traditional groups who are transit dependent, such as senior citizens and persons with disabilities*." TAC agrees with the Commission in that program changes designed to enhance productivity and efficiency must not compromise the basic goal of providing mobility. The two-tiered approach to funding allocations that the TAC is recommending, acknowledges this principle by making the basic tier of funding available to address basic mobility needs, while using the second and smaller tier of funding to address performance objectives.

2. **State-Local Partnership** – Nothing recommended in this report should be construed as moving away from the long-standing tradition of a partnership between the Commonwealth and the local sponsors of transit services. In fact, the TAC views the recommendations contained in this report as steps to strengthen that partnership. The goals of mobility and performance create common ground upon which the Commonwealth and local communities can work together to assure that the highest level and quality of transit services are provided at a cost that is affordable to both users and non-users alike. Ideally, over time local transit boards and transit managers would assume ownership of the transit performance issues and the Department's role could be reduced to one of oversight and technical assistance rather than initiator or enforcer.

Ideally, over time local transit boards and transit managers would assume ownership of the transit performance issues

POTENTIAL USERS OF PUBLIC TRANSPORTATION PERFORMANCE DATA AND EVALUATIONS

PennDOT

- **Executive Management** will benefit from annual roll up reports and trend analyses of transit performance data on a system by system basis and statewide
- **Bureau of Public Transportation** - for grant management, including an expanding role in technical assistance and performance oversight
- **District Offices** – will help provide District managers and staff with a greater understanding of the operators in their geographic areas and how well they are performing in relation to their peers

Regional Planning Organizations

- As background information for transit planning
- For use in evaluating projects proposed for funding

The Administration & the General Assembly

- To assess the performance and accountability for funds provided
- To help inform the legislative and budgeting process

The Public

- To develop a greater awareness and understanding of transit service available in their communities and how their performance compares with peer systems

3. **Positive Approach to Performance Measurement and Accountability** – A common theme among the other states interviewed is that their performance measurement activities are viewed as mechanisms to constantly move the programs and the services in the direction of enhanced performance rather than mechanisms to punish operators that fall below certain performance targets. This can be accomplished by incorporating appropriate periods of time for corrective actions to be effective, while still establishing some time frame beyond which declining performance will not be acceptable. This is discussed further in the next section on Implementation Issues.

4. **Recognizing the Full Spectrum of Benefits Derived From Public Transportation Services** – The TAC recognizes that the benefits of public transportation are much broader than can be evidenced by a simple count of passengers or the number of vehicle miles of service delivered. Public transportation is an important tool that both the Commonwealth and local communities rely on to help accomplish other goals in areas encompassing land use, energy, the environment, tourism, economic development, and adaptation to changing demographics. These important benefits must be kept in focus as the shift to a stronger performance and accountability strategy is advanced.

5. **Treatment of Transit Service Expansion –** Both the Reform Commission report and the current draft legislation have provisions for expansion of transit service. Since new services will not perform to their potential levels immediately after implementation, they could initially have an adverse impact on overall system performance if a combined analysis is done. Therefore, the TAC recommends that when the Department develops regulations to advance the performance measurement and evaluation process, the regulations should treat new transit systems or significant capacity expansion projects at existing systems as "demonstration projects" or "special projects" that get evaluated separately from existing services. Project-specific performance standards and expectations may be warranted, and reasonable demonstration periods should be established based on the nature of the projects (fixed guideway projects typically require a longer period of time to reach their potential), level of investment, policy goals and objectives, and other relevant factors.

TAC recognizes that the benefits of public transportation are much broader than can be evidenced by a simple count of passengers

Implementation Issues

There are a host of implementation issues that will have to be addressed as the provisions of new

legislation and program procedures are rolled out. A number of these issues are presented below with a brief explanation and suggestions for each.

1. **Transition Period** – A reasonable transition period should be allowed to afford both the Department and the transit providers to adapt to the new performance and accountability features. The TAC envisions a 3-4 year period before all new features are fully operational.

2. **Communication** – The TAC recognizes the importance of effective collaboration between the Department and stakeholders in general, and transit providers and their local sponsors in particular. Therefore it is recommended that the Department develop a communications strategy that it will follow as the new initiatives are developed and advanced. The collaborative process should allow for stakeholder input throughout the process – at the outset as program enhancements are developed, during implementation, and during program reviews designed to identify ongoing program improvements.

3. **Maximize Use of Existing Data and Systems –** To the maximum extent practical, The TAC recommends that the Department strive to make full use of existing data systems before expanding data collection and reporting requirements. It appears that most of the data elements that would be required to support the recommended measures are already being collected by the Department and/or the FTA.

4. **Data Verification –** Any performance measurement system can only be effective if there is a reasonable degree of confidence in the data. Several states have addressed this issue by devoting additional staff resources to data verification, or hiring consultants to assist providers with compilation/submission of the data and/or assist Department staff with the review and correction of the data. Some states rely on FTA's Section 15 National Transit Database (NTD) System for the data that they use on the assumption that FTA has already verified the data. TAC recommends that the Department explore the advantages and disadvantages of using the NTD.

Any performance measurement system can only be effective if there is a reasonable degree of confidence in the data

TIMELY AND ACCURATE PERFORMANCE DATA

IMPORTANCE

Accurate and reliable data is the foundation of the performance management system. Inaccurate data will result in transit systems and policy makers questioning the integrity of the entire process; and could lead to incorrect conclusions and decisions.

CONSIDERATIONS

There is a tradeoff between having the most accurate data possible for performance evaluations (fully audited), and having data that is as current as possible with respect to when the data is being applied.

RECOMMENDED ACTIONS:

- Develop standard definitions for all data for by transit systems (the definitions should be consistent with FTA's National Transit Data Base, to the maximum extent possible).
- Develop a Data Definitions and Data Collection Manual for use by both transit system staff and PennDOT staff.
- Conduct training for transit providers and PennDOT staff on the standard definitions, and data collection and verification techniques.
- Investigate the merits of using the National Transit Database as the source of performance data, with the option for further verification and correction by PennDOT.
- Develop a software system with on-line submission capability, built-in edit checks, and both standard reports and custom reports capability.
- Establish a system of operator and PennDOT spot audits to ensure the integrity and validity of data.

5. **Time Lag in Availability of Data –** On average, the 11 states surveyed reported approximately a two-year time lag between the year of the data, and the year in which the data is actually used to calculate grants. While some were using more current data, they were doing so with less scrutiny and verification of the data submitted by providers. The Department should assess the implications of using more recent data and adopt an approach which appropriately balances the desire to have performance assessments and impacts occur as close to the actual service delivery as practical, with the desire to have a level of data integrity that engenders confidence in the results that are used for decision making.

6. **Corrective Action Period** – Consistent with the view that the overriding goal of the performance and accountability mechanisms is to positively influence performance outcomes rather than punitive by cutting funding allocations, service providers must be given a reasonable period of time to implement corrective actions and demonstrate that they are being effective. Once a corrective action has been deemed necessary and is developed, the provider should be required to regularly report on the results and continue to make adjustments to achieve the intended outcomes. Funding sanctions should not be imposed until a provider has demonstrated failing performance on a particular measure for three consecutive years. That three-year period would encompass the initial year of operation which resulted in a corrective action being identified, and two years to show that a favorable trend has been reported.

7. **Information Technology Support** – Of the 11 states interviewed, many have developed IT systems that feature on-line data submission, automated edit check functions, standard compilations, and both standard and custom report capabilities. The TAC recommends that the Department move in that direction if those capabilities will not be available from the e-grants initiative that is underway. This is an important step to help relieve BPT staff of the burden of using less sophisticated and more time consuming tools to manage the data, so that other recommended functions such as field reviews and technical assistance can be addressed.

Appendix

- MTAP ALERT Form
- Phone Interview Template
- Phone Interview Contact Summary
- Phone Interview Results Summary
- Report Acronyms

Transit Performance Measures "MTAP Alert" Inquiry

The Pennsylvania Department of Transportation (PennDOT) is researching the use of public transportation performance measures by State DOT's and transit systems. This effort is being advanced concurrently with an ongoing debate by our legislature regarding the possibility of providing new sources of funding for public transportation, and hopefully increased levels of funding.

The Department currently uses a number of system-size variables, such as total passengers, total vehicle miles, and operating revenue, to distribute state funding. The Department is considering using performance ratios such as total passengers per total vehicle hours or total operating revenue as a percentage of total operating expenses in its management and oversight of its program. Therefore, please use this input/output definition of performance in your response to the attached survey.

Since our state budget is due to be enacted by June 30, 2007 and the additional transit funding and related accountability measures could be addressed in the budget legislation, we ask that you respond as soon as possible.

We have also been conducting phone interviews with select state DOT's and transit systems; if you have already been contacted by phone there is no need to respond to this electronic inquiry.

After we review the responses to this MTAP Alert, we would like to conduct phone interviews with selected respondents. We would appreciate your providing a point of contact for follow-up (space provided at the end of this survey).

If you have any questions, the PennDOT contact person for the project is:

John Dockendorf, Urban Transit Division Chief
Bureau of Public Transportation
Pennsylvania Department of Transportation
717-783-8025
jdockendor@state.pa.us

Questions:

1. Does your state currently use performance measures in determining the distribution of public transportation funding?

   _____Yes _____No

2. If yes, please list the measures that you use:

   a)

   b)

   c)

3. If your state does not use performance measures to distribute state public transportation funding, do you use performance measures as part of your program management and oversight or to provide accountability for uses of state transit funding?

   _____Yes _____No

4. If yes, please list the measures that you use.

   a)

   b)

   c)

d)

e)

f)

5. If your state does not currently use performance measures in any aspect of managing public transportation programs, but your state did us such measures in the past, please indicate the purpose(s) for which they were used

    a) Determining distribution of grant funding

    b) Program management/oversight/accountability

    c) Other

6. Contact for follow-up:

Name
Title
Phone number
FAX
E-mail

Transit Performance Measures - TAC Work Order #4
Phone Interview Template

Date_____
Conducted by_____

Introduction

- We are working on a Pennsylvania Department of Transportation (PennDOT) project to assess the state of the practice by state DOT's and transit systems in using transit performance measures to evaluate systems/services, provide accountability, etc.

- PennDOT is charged with responding to findings of the State Transportation and Reform Commission which recently issued a report calling for expanded use of performance measures in the management and distribution of state transit funding. A preliminary list of performance measures has been identified:

    - passengers per vehicle hour
    - operating cost per vehicle hour
    - operating revenue per vehicle hour
    - operating cost per passenger.

- We are interested in learning whether your state/transit system is using measures similar to those being considered in PA, and also other performance measures that you may be using and how they are applied.
- PennDOT contracted with Gannett Fleming to assist with the research and draft a summary of the findings.
- With the permission of the state's Transportation Advisory Committee, PennDOT will share the results with those that participated in the interviews.

Contact information here for the person interviewed:

name

title

agency

phone #

e-mail

1. Does your (*state or transit system*) currently or have you in the past either ____formally or ____informally established public transportation performance measures that are collected and analyzed on a regular basis?

   _____yes _____no

   If they did previously but have abandoned the process, ask why they stopped - use a separate page if necessary

   If formally established, are they set by
   _____ legislation
   _____executive mandate
   _____policy
   _____other

2. What are the measures that you monitor *(suggest asking for "top 5 or 6" if they have a lot) and* what are they attempting to measure (e.g. efficiency, effectiveness, service quality/reliability, customer satisfaction, attainment of policy goals, etc.)?

a.

b.

c.

d.

e.

Also ask if they have any DOT Transit Program Goals that they track and measure performance.

3. Have you established different measures for
    a. urban vs. rural services
    b. fixed route vs. demand response services
    c. individual modes (bus, light rail, commuter rail, subway, etc.)
    d. agency-provided vs. contracted services

4. What is the frequency for collecting the data?

    _____annual _____other

    What is the time lag between the date of the data and the use of the data?

5. Do you compare a system's performance against
    a. Their own past performance
    b. Peer systems?

6. If you are comparing against peers, what criteria are you using to define a relevant peer group?

a. Service area characteristics (population, square miles, urbanized/non-urbanized area, etc.)

b. Fleet size

c. Modes operated

d. Other

7. Is the information submitted electronically?
   _____yes _____no

8. Is the information compiled into reports that are made public?
   _____yes *(printed, web, or both?)* _____no

9. How is the information being used?

   a. Transit systems

      - Evaluate route/service evaluation and planning
      - Provide internal accountability to management/board
      - Provide accountability to external parties such as funding agencies, state DOT, public, other – *ask them to name the entities*
      - Comparison against peer performance

   b. State DOT's

      - routine monitoring
      - accountability for state grant funding – *who are the performance results submitted to?*

_____DOT
_____legislature
_____Administration
_____Other?

- for grant determination purposes (get an explanation)

  _____capital grant programs

  _____operating assistance

  _____other

10. General Questions

    a. What has worked well?

    b. What has not worked so well?

    c. Do you have confidence in the data?

    d. Do you feel that the process produces fair representation of transit system performance?

    e. Any other comments that you wish to offer?

11. Are you interested in a copy of our survey results?

Public Transportation Performance Measures - TAC Work Order 4

Record of Phone Interview Contacts

LEGEND

*	phone interview attempted
*	phone interview completed
*	MTAP ALERT Response received

MTAP Resp.	Phone Int.	State	contact	phone #	Contacted by:	Date		
	*	California	Gordon Arruda	919-654-9396	JLD	06/05/07		
	*	Oakland MTC	Vince Petrites	510-817-5749	JLD	06/06/07		
	*	SANDAG	Rachel Kennedy	619-699-1929	JLD	06/14/07		
	*	Colorado	Dan Kayser	303-757-9771	JLD	06/25/07		
*	*	Florida	Ed Coven	850-414-4522	JLD	06/04/07		
*	*	Georgia	Tony Sack	404-651-9207	JLD	06/14/07		
*		Idaho	Janet Weaver		they do not use perf. measures			
*		Illinois	David.Spacek@illinois.gov		they do not use perf. measures			
	*	Chicago RTA	J.C. Vanetta	312-913-3200	JLD	06/13/07	do not use measures	
	*	Indiana	Brian Jones	317-232-1493	JLD	06/04/07		
	*	Iowa	Peter Hallack	515-239-1765	JLD	06/14/07		
*		Maine	Barbara Donovan	202-624-3245	they do not use perf. measures			
	*	Michigan	Sharon Edgar	517-373-0471	JLD	06/11/07		
	*	New York	Ron Epstein	518-441-2585	JLD	06/04/07		
	*	North Carolina	Michael Kozak	917-733-4713 x229	JLD	06/11/07		
		North Dakota						
	*	Ohio	Brett Harris	614-466-7440	JLD	06/04/07		
*		Oregon	Dinah Van Der Hyde	503.986.3885	provided two state-level perf. measures only			
	*	Texas	Bobby Killebrew	512-416-2810	JLD	06/12/07		
	*	Virginia	Chip Badger	804-786-8135	JLD	numerous attempts		
	*	Washington	Cathy Silins	360-705-7919	JLD	06/11/07		

Phone Interview Results Summary

State	Approx State Funding Annual - Millions	Measures	Peers	Self	Measure Notes	Peer Groupings	Basis	Uses	Notes	data collection	time lag	confidence
California		cost/mile cost/passenger mile farebox recovery ratio - higher of 78/79 base year; or 20% for urban - 10% for rural	x x	 x	In place since 1971. First two used for oversight. Farebox revenue includes local funding. If farebox recovery ratio not met, they get a 1-year grace period. If x% over or under standard, then x% add'l or less funding. Caltrans distributes to regional entities and they distribute to transit providers.	1) urban 2) rural based on Census definitions	statute	allocation of operating & capital funds (block grant)	Florida Transit Information System (FTIS) available to anyone on-line to download and apply NTD data to assess performance	web	1 year	high
Colorado	$21.6 M in 2006 (first year of state funding)	trips/capita trips/hour cost/trip Min # of annual trips max cost/mile max. cost/hour max. cost/trip	x x x x x x x		first three measures used for funding allocation last four measures used in contracts to set annual goals, but they do not directly impact funding	Use budget and fleet size, and break into large medium small	policy	used to allocate funding for 20% of Section 5311 monies that are set aside for performance awards performance measures are not used to allocate state funding or any capital funding	no state-level transit performance measures	web	2 years	
Florida	State is not the primary funding source of the systems	population (1/3) ridership - "to reward performance(1/3) revenue miles-"to reward effort" (1/3) Statewide goal - ratio of ridership to population growth - target is 2.0	x		measures developed in consultation with transit association first cut is 85% urban, 15% Transp. Disadvantaged Trust Fund Urban $ distributed based 1/3 on each factor using pro rata share of urban total for each factor. Transp. Disad, Trust Fund uses "different formula"	1) urban&rural 2) commun. transp.	statute	operating funds allocation only capital is discretionary $20,000 minimum grant if formula yields a lesser amount	use NTD data & Univ of S. FL compile/clean data issue: shifts at large systems can adversely affect smaller systems	use NTD	3 yrs.	rely on NTD to cleanse data
Georgia	0$ for Operating State contributes 15% match for 5307 & 5311 capital projects	farebox recovery revenue veh miles total unlinked trips trips per capita	x		for rural systems, they compare against specific targets i.e. 100 trips per month is the minimum goal for rural systems	1) urban 2) rural		operating & capital funding allocation (block grant) oversight	State DOT consultant helps systems prepare NTD data submission which is also used by DOT for formulas	web process being developed	same as NTD	high since DOT cons. helps prepare

State	Approx State Funding Annual - Millions	Measures	Peers	Self	Measure Notes	Peer Groupings	Basis	Uses	Notes	data collection	time lag	confidence
Indiana	$35M for 2007	total pass. / oper. expense tot veh miles / oper expense local income / oper expense use a 3-year rolling average for each item was pop. & perf. based until late 90s, transitioned to all formula based starting 2003	x		1) each measure gets equal weight in formula 2)"local income" broadly defined to include all revenue plus local contributions-can be only revenue use each system's pro rata share of total state data for each measure	1) veh miles> 1M 2) fixed route 3) demand resp.	DOT Policy	both operating & capital funds distribution (block grant)	1)use 3-year average data when running formulas 2)don't have resources to audit the data	Excel Spread-sheet	2 yrs	not high
Iowa	$11M	riders/expense (25%) miles/expense (25%) local funds (50%)-includes fares, contracts, advertising, etc. Have "mom & apple pie" state transit goals, but do not track results.	x		1)calculate amounts for each measure, and then use pro rata share of total for each category 2)DOT wanted to revise formula to get veh miles of service in but urban systems blocked proposal	1) urban systems 2 multi-county regional systems (mostly demand resp)	Aminis-trative Code	both operating & capital funds distribution (block grant)	annual report of data on rides, miles, expense & funding goes to legislature	web process	2 years	high - staff does careful reviews & corrects as necessary
Michigan		cost / passenger cost / mile passengers / veh hour passengers / veh mile passengers / population		x	DOT considered developing specific targets but decided that is up to locals	do not do peer comparisons - encourage locals to do this themselves State DOT transit goal is to provide financial and technical assistance.	DOT policy	1)measures are for technical uses only - not for funding 2) funds are distributed based on pro rata share of eligible expenses times state appropriation	since pro rata share of total expense is used to distribute funding and the total size of the pot is fixed, small systems are amounts are affected too much by what is happening with expenses at large systems. Legislature hinted at introducing performance measures in recent legislation, but that has not been done to date.	web based	1 1/2 before data is published	"pretty good" DOT checks for irregularities
North Carolina	$32M - operating	URBAN passenger / hour (10%) net cost / trip (30%) "hold harmless-equity " (10%) locally derived revenue (30%) RURAL population (50%) "equity" (50%) PwD in rural areas based on specific targeted population measures	x	x	formulas in place since 1993 1)compare ratio measures results to statewide average 2)if x% below average, then x% less funding, etc.	1) urban 3-6 buses teens of buses 20's - 40's buses 200+ buses 2) rural - looking at establishing peer groups	NC Transp. Board action	1) allocation of operating funds only, capital grants are discretionary 2) consultants use data when doing route analyses	NCDOT had a consultant do a study in '93 - found that where measures were in place there was political pressure to go easy on funding decisions; where there were no measures there was political pressure to establish them	e-mail spread-sheet	2 years	this is a concern in N.C. according to 2004 TCRP report

State	Approx State Funding Annual - Millions	Measures	Peers	Self	Measure Notes	Peer Groupings	Basis	Uses	Notes	data collection	time lag	confidence
New York		tot. revenue/rev veh mile passengers/rev veh mile oper. exp. / rev veh mile local contribution per capita			use standard deviation with respect to systems' average used these measures for urban systems (operating $ only) in 05/06 but not in 06/07	1) MTA is unique 2) 5 counties around NYC 3) rural	policy/administrative authority	for **rural** systems, they do comparative evaluations considering quality of life, population, population density, sq. miles, etc	1) there was a bill in the legislature to establish a "Performance Measurement Council" but it did not pass 2)process is difficult to explain to transit boards and other non-technical people	mail in CDROM	1 year	good, but only after much effort to clean the data
Ohio	$3.8M - state $12.6M - federal	**ridership** **revenue miles** **local contribution (all revenue plus local $)** passengers / hour cost / hour cost / mile	x		**bold measures used to distribute funding** - others used for oversight & feedback only - calculate pro rata shares of each. 50% of allocation for rural systems is based on population*1.6	they use a weighting system to adjust for urban vs. rural (e.g.. Rural ridership is multiplied by 1.6 since they have less potential riders to capture	policy	funding allocation and oversight	weighting is done when formulas are run to try to balance the goals of "access" and "efficiency" - done primarily to help rural systems ODOT also does quality assessment reviews that do not affect funding they try to match NTD definitions for data elements	e-mail spread-sheet		generally good. DOT does training on data definitions & collection
Texas		local $ / operating expense riders/revenue mile changed to this method 5 years ago - did 2-3 year transition			both measures receive equal rating compare systems against statewide averages	1) urban 2) rural 3) PWD systems	Transp. Commission on Rule Making	both operating & capital funds (block grant) allocation 65% of funds are distributed based on performance measures 35% of funds distributed based on demographics BUT guaranteed 90% of previous year funding	performance measures were previously in legislation but it has been delegated to the transportation Commission to handle	e-mail spread-sheet	2 years	"OK" edit checks are done to cleanse data DOT provided training on data definitions & collection
Washington	about 80% of subsidies in Wash. are local funds $8.5M rural $9.25M special needs paratransit $4M van purchases $10M "system efficiencies - TSM type improvements"	cost/hour boardings/rev veh hour cost/passenger mile cost/boarding rev veh miles/rev veh hour passengers/rev veh hour passengers/rev veh mile cost/rev veh hour rev veh hours/total veh hours rev veh hours/FTE	x	x	Transportation Commission oversees the first four factors and submits annual reports to the legislature the governor oversees the last six factors	urban rural fixed route demand resp modes operated etc.	statute	oversight only since 80% of public subsidies come from locals	believes "system produces fair comparisons on a global level but less so as you drill down"	ACCESS; working toward web based	1 year	average try to use NTD definitions

Report Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ACT 3	State Act 3 of 1997 – Transit Funding Legislation
APTA	American Public Transit Association
BPT	Bureau of Public Transportation of the Pennsylvania Department of Transportation
CLASS 1	Southeastern Pennsylvania Transportation Authority
CLASS 2	Port Authority of Allegheny County
CLASS 3	Transit systems serving urbanized areas other than Philadelphia and Pittsburgh
CLASS 4	Transit Systems serving small urban and rural areas
CLASS 5	Community Transportation Providers
CTAA	Community Transportation Association of America
DOT	Department of Transportation
FTA	Federal Transit Administration of the US Department of Transportation
JARC	Job Access and Reverse Commute
MTAP	Multi-State Technical Assistance Program
NTD	National Transit Data Base – also known as “Section 15 data”
PAAC	Port Authority of Allegheny County

PTAF	Public Transportation Assistance Fund
PTPMS	Public Transportation Performance Management System
PwD	Persons With Disabilities
SANDAG	San Diego Association of Governments
SEPTA	Southeastern Pennsylvania Transportation Authority
TCRP	Transit Cooperative Research Program
TRB	Transportation Research Board
TRIS	Transportation Research Information Service
W2W	Welfare To Work Transportation Program