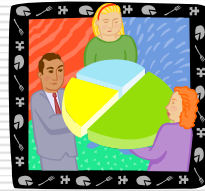


Use of Transit Performance Data

This material is adapted from a NTI course "Improving Transit System Performance: Using Information Based Strategies" developed at the University of Wisconsin-Milwaukee 1996-98. This material was written by Jack Reilly then of the Capital District Transportation Authority (Albany, N.Y.), Edward Beimborn of UWM and Robert Schmitt of RTR Associates in Pittsburg.



1

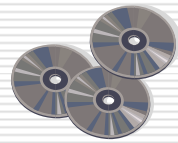
Interpretation of Results

- Standards and Norms
- Peer Group Comparison
- Time-Series Comparison

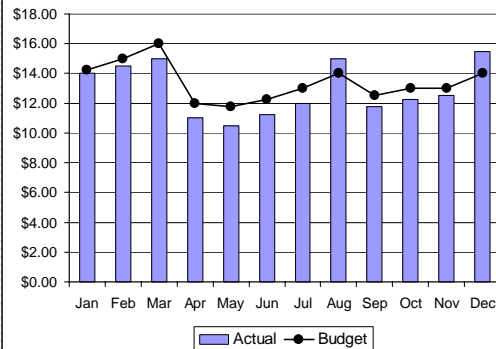
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Standards and Norms

- ❑ Benchmarks as Goals
- ❑ Funding Agency Imposed Standards
- ❑ Comparison to Other Systems



Example of Performance Measure Compared to Budget Goal



Peer Group Comparison

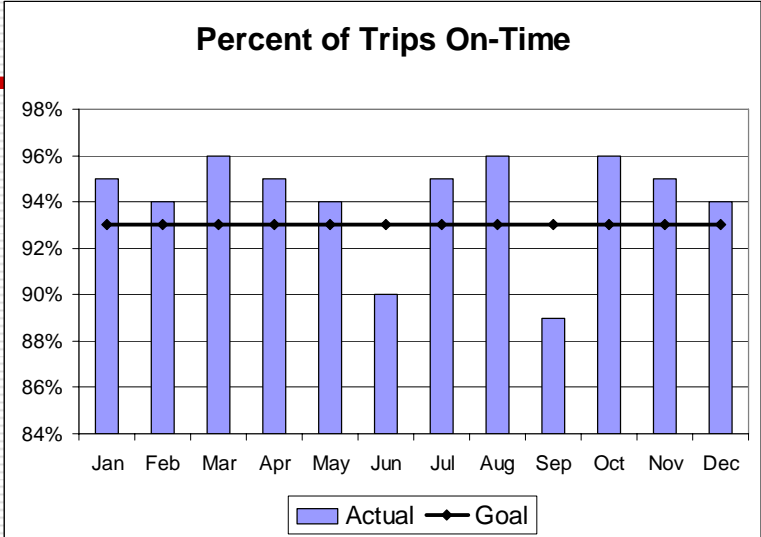
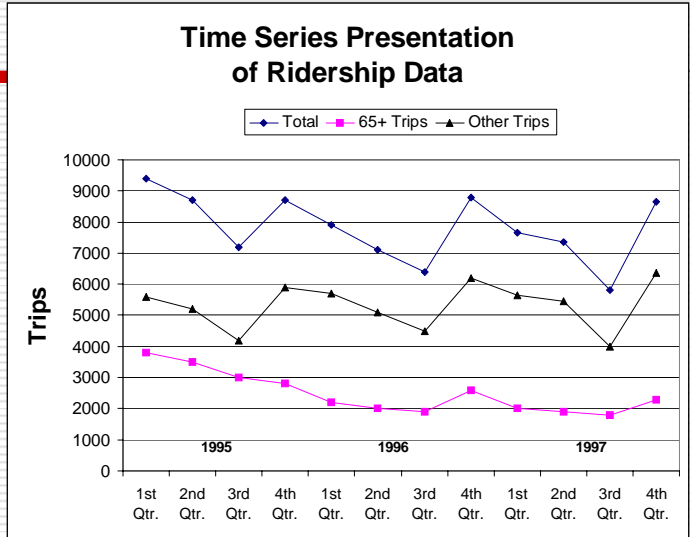
- Selection of Peers
 - population served
 - area served
 - population characteristics
 - type of service
 - type of organization
 - type of operation
 - size of operation
-

5

Time-Series Comparison

- Most Effective for Internal Management Appraisal
 - Portray System Trends
-

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Revenue miles per vehicle

Source: Broward County 2005-2009 plan

Figure 5-14
BCT's Revenue Miles/Vehicle
Miles/Vehicle (000's)

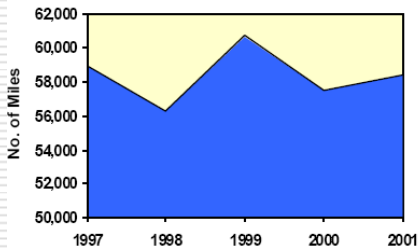
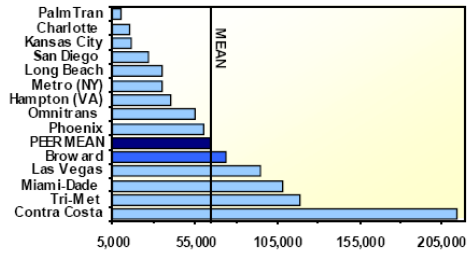


Figure 5-15
Peer Revenue



Operating expense

Source: Broward County 2005-2009 plan

Figure 5-42
BCT's Operating Expense per Rev. Mile
per Rev. Mile

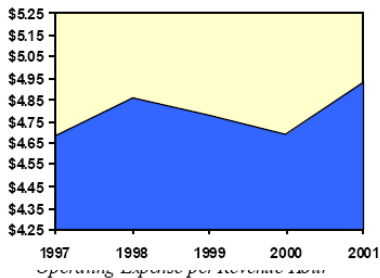
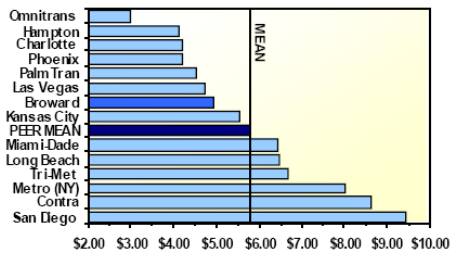


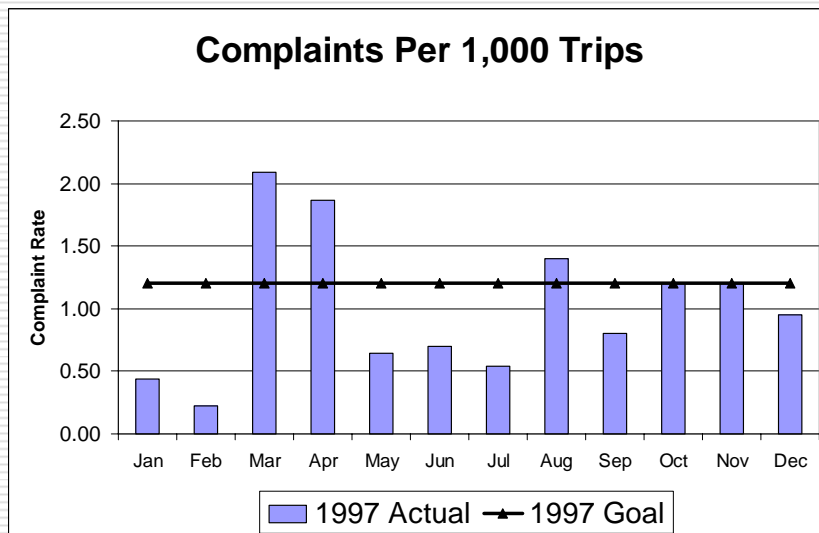
Figure 5-43
Peer Operating Expense



Presentation of Results

- Once the performance indicators are tabulated, and comparisons have been made, the next step in the process is presentation of the results to the intended audience
- If the evaluation has been prepared solely for internal use, then the method of presentation is less important than if the results are to be communicated to a policy board, funding agency, or the media.
- Performance reports to external audiences need to be simple yet complete. A graphical presentation is recommended

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Diagnosis of Problems and Corrective Actions

- See detailed charts that relate problems to indicators to possible actions
- Problem → Indicator → Action
- Categories
 - Financial: high operating cost, poor cost effectiveness, limited subsidy
 - Quality of Service: poor service quality, schedule adherence, crowding
 - Efficiency: poor productivity, vehicle utilization
 - Ridership
 - Safety

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Example: high operating cost

- | | |
|--|--|
| <ul style="list-style-type: none">□ Problem: High Total Operating cost□ Primary Indicators<ul style="list-style-type: none">■ Expense/vehicle mile■ Expense/vehicle hour■ Expense/passenger□ Secondary Indicators<ul style="list-style-type: none">■ Expense/revenue hour■ Administrative expense/expense | <ul style="list-style-type: none">□ Possible Actions:<ul style="list-style-type: none">■ Decrease expenses■ Reroute service■ Expand ridership■ Decrease deadhead■ Modify fares■ Eliminate marginal routes■ Part time help■ Renegotiate labor contract■ Shorten phase-in for new employees■ Cooperative purchasing and maintenance■ Insurance pooled risk■ Private contractors |
|--|--|

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**RELATIONSHIP BETWEEN PROBLEMS, PERFORMANCE
AND CORRESPONDING ACTIONS**

<u>Problem</u>	<u>Indicators</u>	<u>Possible Actions</u>
1. Financial		
A. High Total Operating Cost	<p>PRIMARY INDICATORS Expense/vehicle mile Expense/vehicle hour Expense/passenger</p> <p>SECONDARY INDICATORS Expense/revenue hour Administrative expense/expense</p>	<p>Decrease expenses Reroute service Expand ridership Decrease deadhead Modify fares Eliminate marginal routes Part time help Renegotiate labor or contract Shorten phase-in for new employees Cooperative purchasing and maintenance Insurance pooled risk Private contractors</p>
B. Poor Cost Effectiveness	<p>PRIMARY INDICATORS Revenue/revenue hour Revenue/passenger</p> <p>SECONDARY INDICATORS Pass revenue/revenue mile Pass revenue/revenue hour Pass revenue/passenger</p>	<p>Increase speed Increase service Stop unproductive routes Decrease headways Increase stop locations Increase fares Reduce administrative cost Increase fare paying passengers Increase contract service Increase ancillary services</p>
C. Limited Subsidy Revenue	<p>PRIMARY INDICATORS Revenue/expense Subsidy/vehicle mile Subsidy/vehicle hour Subsidy/pass</p> <p>SECONDARY INDICATORS Pass revenue/revenue Pass revenue/expense Fares/revenue Pass revenue/revenue</p>	<p>Reduce administration Reduce staff Streamline procedures Reduce services Reroute and reschedule Improve promotions Increase fares Modify fare structure Increase contract service Improve fleet reliability</p>

2. Quality of Service	<p>PRIMARY INDICATORS % stops on time Complaints/driver</p> <p>SECONDARY INDICATORS Stops with signs/stops Vehicle mile/road call</p>	<p>Monitor drivers Change stop dwell time Reroute congested areas Speed up fare collection Increase stop spacing Improve on-time performance Improve vehicle reliability Improve employee training Improve bus cleanliness Improve preventative maintenance Rehabilitate and replace vehicles Improve passenger amenities</p>
A. Poor Service Quality		
B. Schedule Adherence Problem	<p>PRIMARY INDICATORS Percent of trips late</p>	<p>Holding strategy Increase run time and/or layover Modify route</p>
C. Unacceptable crowding	<p>PRIMARY INDICATORS Load factor</p>	<p>Increase frequency Articulated buses</p>
3. Efficiency	<p>PRIMARY INDICATORS Revenue/cost Load factor Passengers/vehicle hour</p>	<p>Decrease frequency Split route Short turn strategies Local/express/zonal strategies Partial deadheading</p>
A. Poor Productivity	<p>PRIMARY INDICATORS Rev/cost Pass/vehicle hour</p>	<p>Eliminate route segments Eliminate trips Extend route Modify schedule</p>
B. Poor Vehicle Utilization	<p>PRIMARY INDICATORS Passengers/vehicle mile Pass/vehicle hour</p>	<p>Improve cleanliness, safety, and reliability Modify fare structure Fare incentives Alter routes and schedules Increase vehicle speed Improve marketing Decrease deadhead Increase number of fare</p>
4. Ridership	<p>SECONDARY INDICATORS Fare pass/pass Elderly pass/pass Percent change pass/year</p>	<p>085580085</p>

Acknowledgements

- Some of this material was developed as part of work being conducted by the Great Cities University consortium under the lead of the University of Alabama at Birmingham using funds provided by the Federal Transit Administration of the U.S. Department of Transportation.
- The opinions expressed are the product of independent university work and not necessarily those of the sponsoring agencies or of the agencies supplying data for the project.

