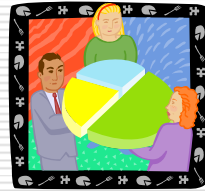


Use of Transit Performance Data

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

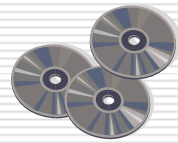
Interpretation of Results

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

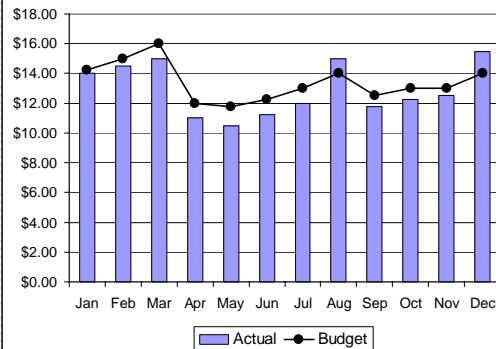
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Standards and Norms

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



Example of Performance Measure Compared to Budget Goal



Peer Group Comparison

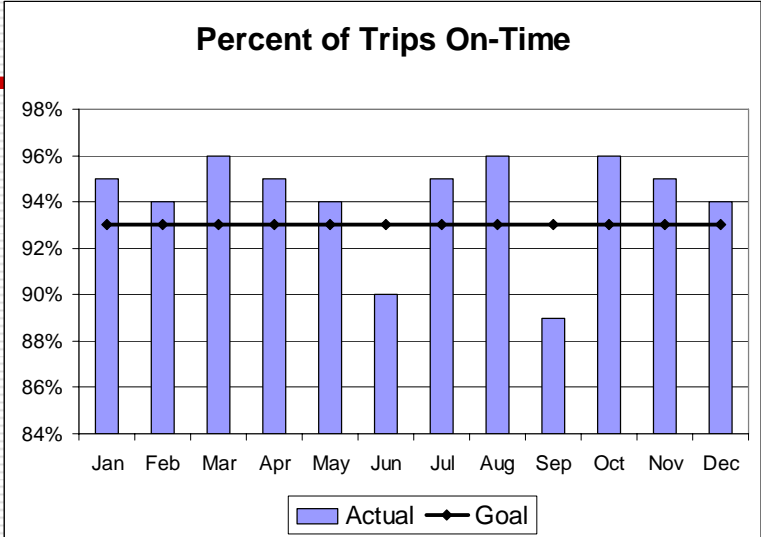
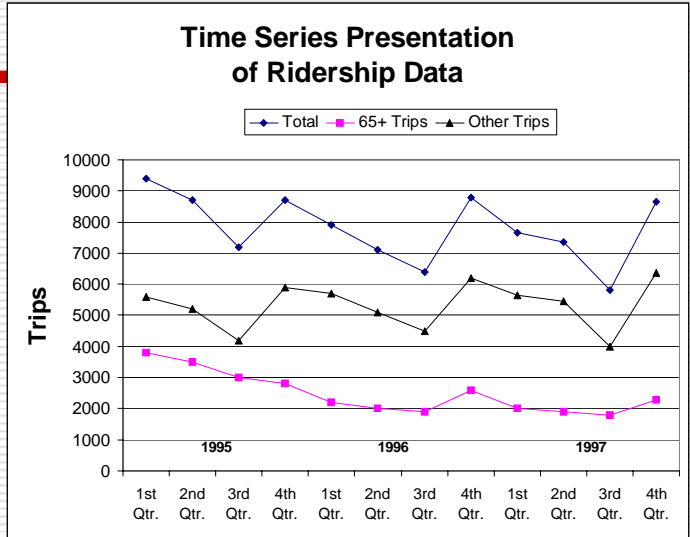
- Selection of Peers
 - population served
 - area served
 - population characteristics
 - type of service
 - type of organization
 - type of operation
 - size of operation
-

5

Time-Series Comparison

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

6



Revenue miles per vehicle

Source: Broward County 2005-2009 plan

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

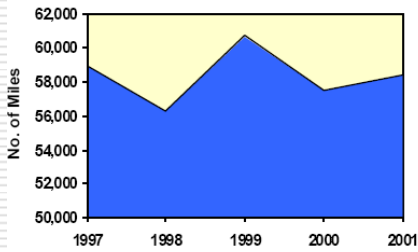
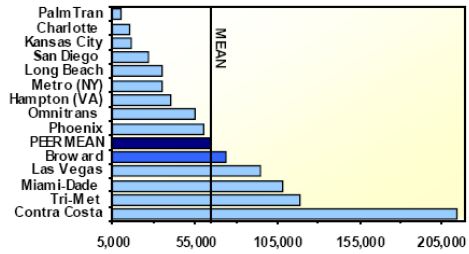


Figure 5-15
Peer Revenue



Operating expense

Source: Broward County 2005-2009 plan

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

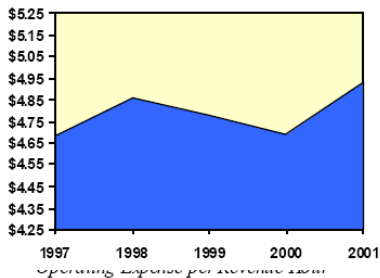
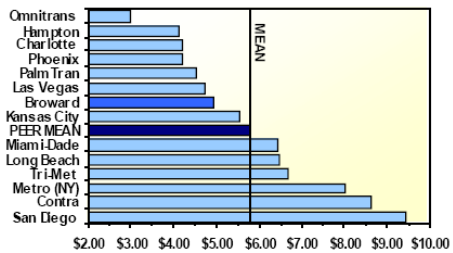


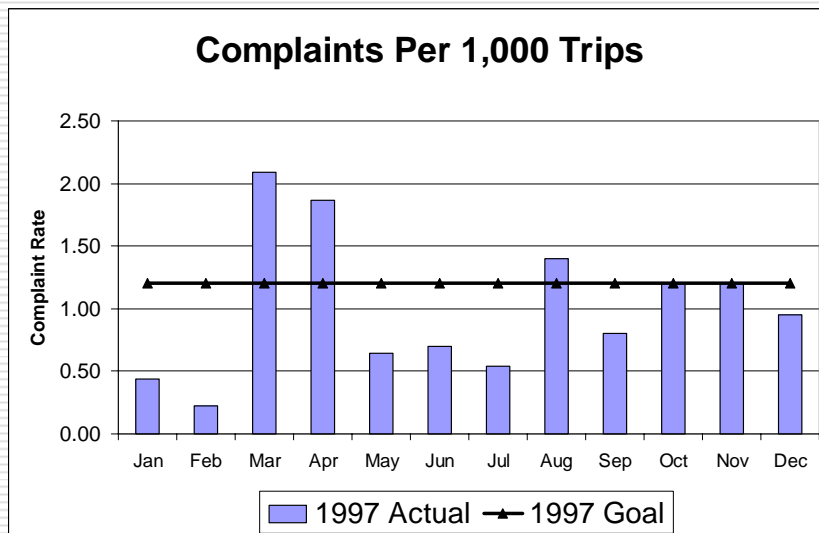
Figure 5-43
Peer Operating Expense



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>Pass revenue/expense Fares/revenue Pass revenue/revenue</p> <p>PRIMARY INDICATORS Revenue/expense Subsidy/vehicle mile Subsidy/vehicle hour Subsidy/pass</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

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- 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.

