

Transit Service Delivery advisory committee

Funding allocation concepts and items
July 1, 2013

Overview

- ▶ Diminishing improvement potential
- ▶ Sizing factor
- ▶ Rewarding high performance
- ▶ Fluctuation potential
- ▶ Next Steps

Overview

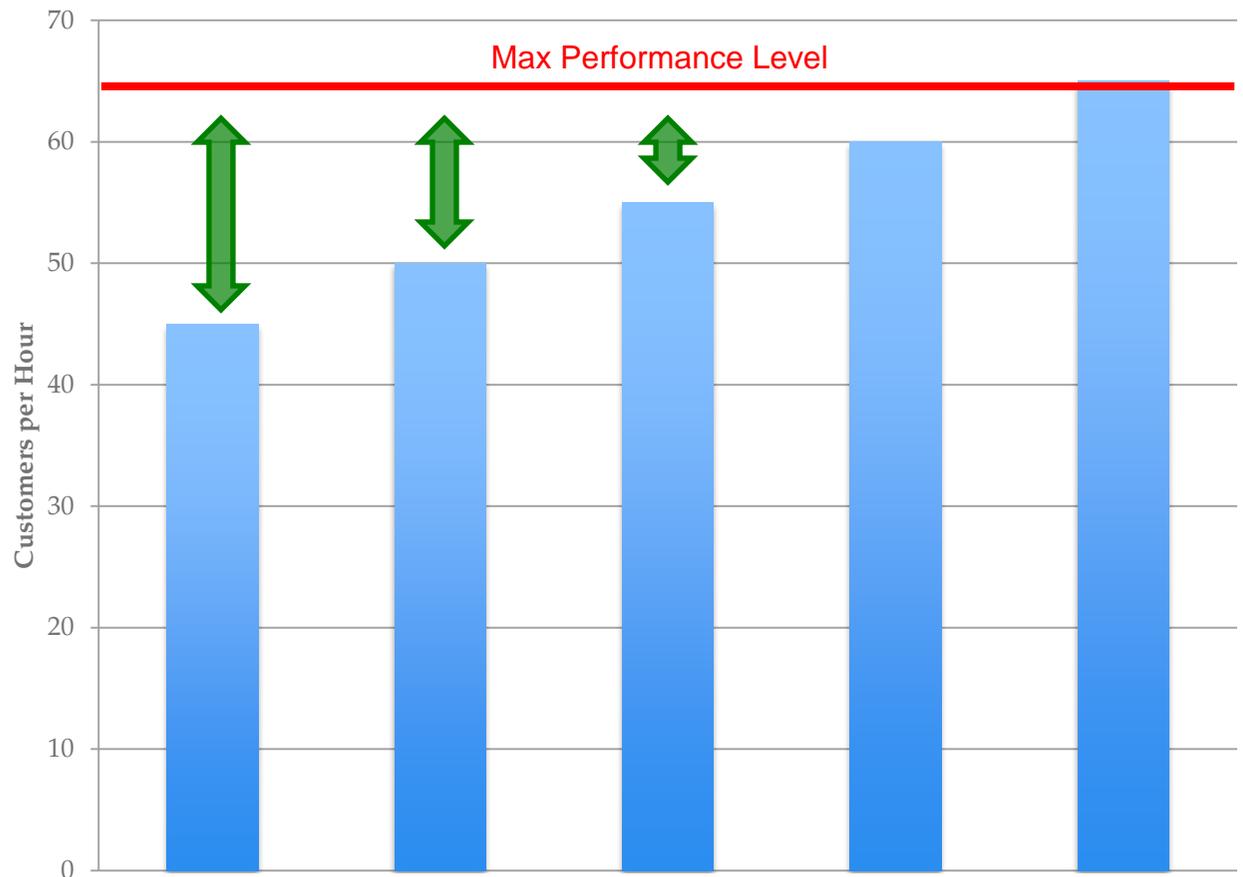
- ▶ **Diminishing improvement potential**
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Diminishing Improvement Potential: Customers per Hour Example

Customers per Hour Improvement Potential			
Performance Level	Max Level	Margin	% Margin
45	65	20	44%
50	65	15	30%
55	65	10	18%
60	65	5	8%
65	65	0	0%

► Potential for improvement decreases as performance increases

Customers per Hour Improvement Potential



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Sizing factor: Analysis of current options

- ▶ Operating Cost

- ▶ Agencies with higher operating costs have potential for higher funding

- ▶ Could reward inefficiency and excessive costs

Sizing factor: Analysis of current options

- ▶ Total Annual Passenger Trips
 - ▶ Agencies with higher ridership per operating unit have potential for higher funding
 - ▶ Increased passengers does not necessarily cause increased operating cost. Thus, it may not need to result in a potential for increased funding.

Sizing factor: Analysis of current options

- ▶ Cost-Passenger Hybrid

- ▶ Operating Cost and Annual Ridership are 92% correlated. Thus, combining them carries a certain level of redundancy.

- ▶ Contains the characteristics of both the Cost and Passenger methods, though the impact of high ridership per operating unit is tempered

Sizing factor: Analysis of current options

- ▶ Common element of three methods
 - ▶ They are outputs, not inputs, of service area dynamics that impact agency cost and performance
 - ▶ They can be influenced by agency actions

Sizing factor: New Options to Explore

- ▶ Goal is to identify service area factors that impact agency cost and performance
- ▶ Possibilities include
 - ▶ Population
 - ▶ Population Density
 - ▶ Service area type
 - ▶ Population growth rate
 - ▶ Low-income population
 - ▶ College population

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Rewarding High Performance: Assessing High Performance

- ▶ Assessing high performance requires a comparison scale
- ▶ Point of comparison is the key component of a funding allocation model that rewards high performance

Rewarding High Performance: Comparison Scale Concepts

- ▶ Three concepts for establishing points of comparison
 - ▶ National benchmarking
 - ▶ Statistical modeling
 - ▶ Virginia-Based Benchmarking

Rewarding High Performance: National Benchmarking

- ▶ Establish a unique national benchmarking group for each agency
- ▶ Compare agency performance to benchmark group performance
- ▶ Allocate funding based on agency performance relative to the range of benchmark group performance

Rewarding High Performance: National Benchmarking

- ▶ TCRP Benchmarking Factors
 - ▶ TCRP Report 141: “A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry” suggests a number of benchmarking factors

Rewarding High Performance: National Benchmarking

TCRP Benchmarking Factors

- ▶ Urban area population
- ▶ Total annual vehicle miles operated
- ▶ Annual operating budget
- ▶ Population density
- ▶ Service area type
- ▶ State capital (yes/no)
- ▶ Percent college students
- ▶ Population growth rate
- ▶ Percent service purchased
- ▶ Percent low-income population
- ▶ Annual roadway delay hours per traveler
- ▶ Freeway lane miles per capita
- ▶ Percent service demand-responsive
- ▶ Distance from benchmarking agency

Rewarding High Performance: National Benchmarking

Sample Benchmark Groups

GRTC	Lynchburg	Petersburg	Danville
Indianapolis, IN	Athens, GA	Milford, CT	Queensbury, NY
St. Petersburg, FL	Bloomington, IN	Jonesboro, GA	Dubuque, IA
Columbus, OH	Clarksville, TN	Poughkeepsie, NY	Jefferson City, MO
Cincinnati, OH	Lafayette, IN	Washington, PA	St. Augustine, FL
Nashville, TN	Huntington, WV	Gloucester, MA	Cumberland MD
			Anderson, IN

Rewarding High Performance: National Benchmarking

Sample Funding Allocation

FY2011 Allocation	Customers per Revenue Hour					
Agency	Benchmark Group Min	Benchmark Group Max	Agency Performance	Agency Performance as % of Benchmark Group Range	Agency Base Share (Hybrid Model used as Sizing Factor)	Agency Allocation
GRTC	15.2	24.5	15.72	5.6%	\$766,943	\$42,883
Lynchburg	9.2	37.3	23.79	51.9%	\$149,680	\$77,716
City of Petersburg	3.6	19.7	12.62	56.0%	\$51,991	\$29,128
Danville Transit System	6.1	16.4	11.36	51.1%	\$20,862	\$10,654

FY2012 Allocation	Customers per Revenue Hour					
Agency	Benchmark Group Min	Benchmark Group Max	Agency Performance	Agency Performance as % of Benchmark Group Range	Agency Base Share (Hybrid Model used as Sizing Factor)	Agency Allocation
GRTC	15.2	24.5	16.05	9.1%	\$766,943	\$70,097
Lynchburg	9.2	37.3	24.07	52.9%	\$149,680	\$79,208
City of Petersburg	3.6	19.7	16.28	78.8%	\$51,991	\$40,947
Danville Transit System	6.1	16.4	10.26	40.4%	\$20,862	\$8,426

Rewarding High Performance: Statistical Modeling

- ▶ Develop a statistical model to establish an agencies expected range of performance based on its unique service area environment
- ▶ Compare agency performance to its expected expected performance range
- ▶ Allocate funding based on agency performance relative to its expected range of performance

Rewarding High Performance: Statistical Modeling

- ▶ Build a regression model using the TCRP benchmarking elements as input factors and the agreed-upon performance metrics as output factors
- ▶ Enter each agency's unique characteristics into the model to calculate a range of expected performance specific to each agency
- ▶ Compare actual performance to expected performance

Rewarding High Performance: Virginia-Based Benchmarking

- ▶ Establish a unique Virginia-based benchmarking group for each agency
- ▶ Compare agency performance to benchmark group performance
- ▶ Allocate funding based on agency performance relative to the range of benchmark group performance

Rewarding High Performance: Virginia-Based Benchmarking

- ▶ Develop benchmark groups for each agency using same methodology as the National Benchmarking concept
- ▶ Calculate allocation amounts using same methodology as the National Benchmarking concept

Rewarding High Performance: Common Elements of Concepts

- ▶ Improvement and high performance are both rewarded
- ▶ Each agency is evaluated against a performance expectation unique to the agency and reflective of its service area dynamics
- ▶ Funds will remain after the first allocation iteration. A methodology for allocating remaining funds would need to be developed.

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Fluctuation Potential

- ▶ In a performance and/or improvement-based model, funding will vary in approximate proportion to variation in performance and/or improvement
- ▶ Performance/improvement-based funding variation only impacts allocation of supplemental funding

Fluctuation Potential: National Benchmarking Example

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Fluctuation Potential: Test Model 9 Example

- ▶ Sample FY13 data created by applying % change from FY11 to FY12 to the FY12 Agency operating statistics and performance metrics
- ▶ Sample FY13 Customers per Revenue Hour Allocation generated by using the process defined by Test Model 9
- ▶ Variation impacted by interaction of performance change and sizing factor change

Summary of Sample FY11 to FY12 Funding Fluctuation	
% Variation (+/-)	# of Agencies
0-3	24
4-6	7
7-9	6
10+	4
Total	41

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Next Steps: Key Questions

- ▶ What is our long-term ideal for A performance-based allocation model?
- ▶ What near-term issues impact the pursuit of our long-term ideal?
- ▶ What can we achieve between now and September?
- ▶ Should we consider a two-step phase-in process?
 - ▶ Step 1: year 1 transitional allocation model
 - ▶ Step 2: Building of long-term allocation model

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