



Transit Trends in Performance Measurement

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Introduction



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Presentation Overview

- Performance Measurement for Microtransit
- Equity in Performance Measurement
- Multimodal Transportation Systems



Performance Measurement for Microtransit

Microtransit versus Traditional DR

- Microtransit provides an elevated level of service from traditional demand response
- Ideally, performance standards fit in-between traditional DRT and FRT
- Zones have distinct operational purposes and goals
- Capital Metro (Austin, TX) developed service guidelines for Pickup microtransit service



Performance Measurement - Groundwork

- Start with the goals and objectives of the microtransit service
 - Who are the intended customers for the service?
 - Where should the service connect customers to?
 - How are microtransit zones different and distinct?
- Think beyond traditional transit ridership and cost metrics
- Establish a baseline of information about the service: strengths, weaknesses, important considerations
- Think about how performance measurement can feed into service adjustments and planning considerations

Performance Measurement - Needs

- Data capabilities are critical for good performance measurement
- Data availability should be an explicit part of agreement with contractor
 - Specify the data fields, delivery, and frequency
- Connections between microtransit data and other transit data systems
 - Measuring FR connections, system performance

Performance Measurement - Example

Sample Measures	Fixed Route Baseline	ADA Paratransit Baseline	Microtransit Standard	First/ Last-Mile Service	Transit Coverage Gap Service	Fixed-Route Replacement
Arrival time within 15 minutes of request	N/A	90% of trips in 30-minute window	90% of trips within 15 minutes	n/a	X	X
Trips for Non-Emergency Health Services	N/A	40% of trips per week	20% of trips per week	X	X	n/a
Returning Riders	25% riders per week	N/A	25% riders per week	n/a	X	X

Performance
Measurement
Example
—
Capital Metro

- Three topical areas:
 - Community Characteristics
 - Service Quality
 - Sustainability
- Each area with a set of measures or key performance indicators
 - Measured by criteria and assigned point values
 - Maximum points for each measure
 - 90 total points (30 for each topical area)
- Total scoring determines whether to:
 - Keep the neighborhood zone
 - Adjust the zone
 - Discontinue the zone

Performance
Measurement
Example Area
—
Capital Metro

- Sustainability
 - Cost Effectiveness (10 points)
 - Compared to generalized cost per passenger trip benchmark
 - Starting at \$31/hour, then going down
 - MetroAccess Customers (10 points)
 - Percent of disability assistance request trips in the neighborhood zone
 - Starting at 0%, then going up
 - Shared Rides (10 points)
 - Percent of trips shared with other passengers
 - Starting at 15%, then going up

Keep	60 plus
Adjust	41 - 59
Discontinue	40 or less



Equity in Performance Measurement



Equity in transit is the fair and just distribution of the benefits and burdens associated with transit services and infrastructure across communities to address the needs of the people in a manner that acknowledges and accounts for historical and current disparities, considers and supports people's unique circumstances and abilities, and continues to evolve as these factors change. At minimum, transit benefits are presumed to include sufficient access to destinations and opportunities.

What gives Equity In Performance Measurement Power?



Performance measurement is a decision-making tool



Performance measurement is a repair tool



Equity information helps the community hold agencies accountable



Equity information helps agencies maintain compliance

What is equity-first performance measure Development?



Question based



Iterative



Prioritizes people

Data Considerations



Specific



Context-sensitive



Representative



Timely

Current Synthesis Project

- TCRP Synthesis J-07/Topic SB-37 - Transit Agency Goals and Non-Traditional Performance Indicators Focused on Equity
- How goals and performance metrics are used to improve equity in service planning and the customer experience
- Currently collecting information about agencies' experience with equity-focused goals and performance indicators
 - Share relevant documents with the research team
 - Schedule a research chat with the team
 - Respond to an online survey



Multimodal Transportation Systems

Connections with On-Demand Mobility

- Introduction of mobility innovations have challenged traditional transportation services
 - Goods delivery, TNCs, micromobility
- Transit is evolving to become more integrated with other modes and mobility options
- Through integrated mobility, transit agencies can innovate within the existing mobility ecosystem as users evaluate their options
- Methods for measuring the performance of such systems also should evolve

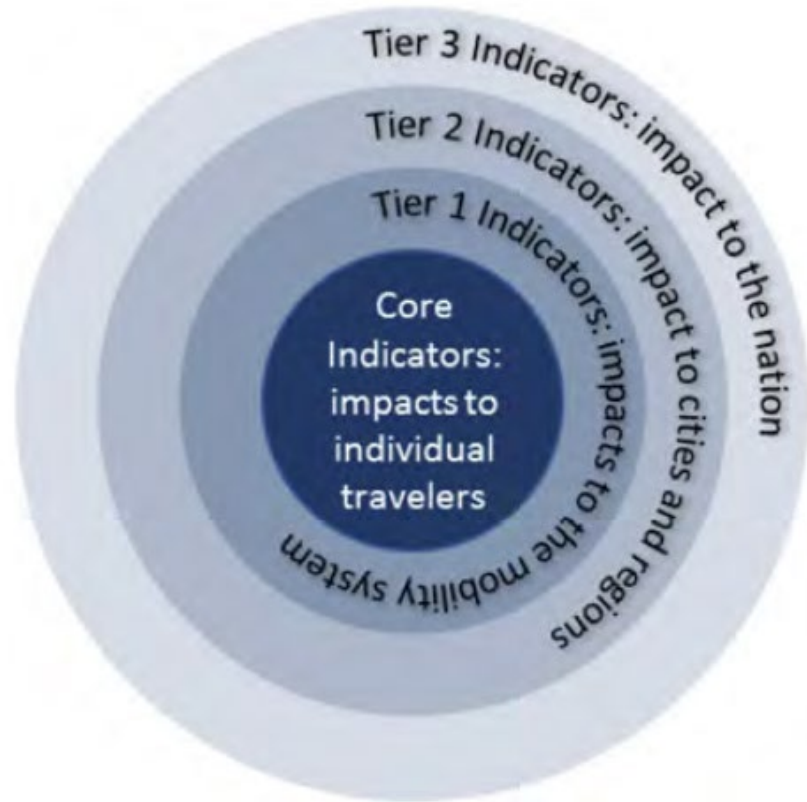
Connections with On-Demand Mobility

- Travelers are looking for opportunities to maximize every utility available to get around quickly and affordably
- Agencies must determine if changes to their systems are contributing to the broader public good
- How can integrated public-private mobility services help achieve broader transport goals



Metrics at Different Levels

- Core: how an individual traveler views trip experience
- Tier 1: impact MOD has on the transportation system and how well the system serves travelers
- Tier 2: impacts of the transportation system at the regional level
- Tier 3: impacts of all jurisdictions and regions collectively.



Developing Mobility Performance Metrics

- FTA Report *Mobility Performance Metrics (MPMs) for Integrated Mobility and Beyond*
- 65 candidate MPMs identified (examples shown below)
 1. Wait time
 2. Standard deviation of wait time
 3. Median wait time
 4. Total journey time
 5. Trip cost
 6. Median trip cost
 7. Trip price
 8. Option availability
 9. Revenue miles (or hours) per year
 10. Crime rate
 11. Crash rate
 12. Injury rate

Performance Measurement for Different Journeys

- Demand response service feeding to fixed route service?
- TNC trip as first/last mile connection to transit?
- Micromobility as a first/last mile connection?
- Dockless micromobility as the primary mode?
- Walking trip legs and wait time?
 - For fixed-schedules or on-demand service?



Contact

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