Performance-based Measures using FSUTMS Models

presented to
Florida Model Task Force

presented by
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Performance-based Measures
Presentation Overview

- Genesis and Background of the Florida MPO Workshop
- Workshop Summary
- Workshop Presentations
- Workshop Outcomes

Next Steps

<table>
<thead>
<tr>
<th>LRTP Performance Measures</th>
<th>Study Area</th>
<th>VMT</th>
<th>VHT</th>
<th>V/C</th>
<th>LOS</th>
<th>Mode Split</th>
<th>Transit Riders</th>
<th>Vehicles by Mode</th>
<th>Congested Speed</th>
<th>Vehicle-Hours Delay</th>
<th>Fuel Use</th>
<th>Average Travel Time</th>
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<tbody>
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<td>Broward County (Ft. Lauderdale), FL</td>
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<td>Capital Region (Tallahassee), FL</td>
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Genesis of the Florida MPO Workshop

The Florida Department of Transportation held a one-day workshop to

- Gain input from Florida’s Metropolitan Planning Organizations (MPOs)
- Define performance measures MPOs need the most
- Enhance travel demand models and develop analytical tools to evaluate these performance measures

Performance-based measures provide tools used to

- Evaluate the transportation planning process
- Ensure that identified goals and objectives are met throughout the planning process
Background

- US GAO study of the effectiveness of MPOs in the transportation planning process (2009)
  - Largest constraints MPOs face related to funding, staffing, authority, and technical capacity
  - To improve their effectiveness, MPOs should receive increased federal funds for modeling and focus more on outcomes rather than process
Background

Florida MPOs want to know how models address benefit-cost issues and measure outcomes

MPOAC meeting in November 2009
- MPOs indicated interest in moving towards performance-based planning
- How can models help quantify performance

MTF leadership meeting in December 2009
- MPOAC needs discussed
- MTF leadership suggested a brainstorming workshop
Workshop Summary

Workshop held in Tallahassee on March 31, 2010

Workshop attendees included representatives from Florida DOT and Staff Directors from Florida’s MPOs, as well as invited speakers and an expert panel

- Presentations were given by
  - Harlan Miller, FHWA
  - Denise Bunnewith, North Florida TPO
  - Guy Rousseau, Atlanta Regional Commission

- The expert panel consisted of
  - Tom Rossi, Cambridge Systematics, Inc.
  - Don Vary, Wilbur Smith & Associates
  - Mohammed Hadi, Florida International University
Workshop Presentations

Florida MPO Needs

• Current planning process is very penalty-based
• FHWA, Florida DOT, and the MPOs should decide early and make sure that performance measures are meaningful to the MPO planning process
• Process must translate well to board members and the public
• Process should be kept within MPO control
## Workshop Presentations

### The Federal Perspective

- US DOT approaches performance-based planning as an accountable and transparent system
- Outcome-based and leads to cost effective decision making
- Focus of impacts on system rather than on individual facilities

### Collaborative Decision-Making Framework

<table>
<thead>
<tr>
<th>How?</th>
<th>How are projects developed?</th>
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<tbody>
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<td></td>
<td>Context Sensitive Solutions</td>
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</table>

<table>
<thead>
<tr>
<th>Who?</th>
<th>Who is responsible?</th>
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<tbody>
<tr>
<td></td>
<td>How are tradeoffs made</td>
</tr>
<tr>
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<td>between agencies and actors?</td>
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<table>
<thead>
<tr>
<th>Why?</th>
<th>Fundamental objectives for project?</th>
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<tr>
<td></td>
<td>Are you meeting the goals you identified up front?</td>
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<td>Tracking projects throughout the process</td>
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### Performance Measures Framework

<table>
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<th>When?</th>
<th>What detail resolution is required at each stage of the planning process?</th>
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<table>
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<tr>
<th>What?</th>
<th>What types of project impacts are important to making informed decisions?</th>
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Workshop Presentations

The Federal Perspective (continued)

- To promote an outcome based process, the federal government proposed six national goal areas and will identify performance measures
  - Safety
  - State of Good Repair
  - Mobility and Congestion
  - Environment
  - Freight
  - Livability

- Benefits of performance-based planning include
  - Decisions made directly
  - Support of identified goals and targets
  - Increased accountability
• Atlanta Regional Commission (ARC)
  • ARC has developed modeling and data visualization tools for the development of performance measures
  • ARC runs models with and without projects and groups and ranks projects based on impacts
  • Model outputs are a major component in the decision making process, along with
    - Land use
    - Policy
    - Other related considerations
Workshop Outcomes – Breakout Sessions

- Mobility and Congestion and Safety were ranked with high priority.

- Freight and Livability had medium priority.

- State of Good Repair was deemed low priority.

- Environment received high priority for noise pollution and greenhouse gas emissions, but low priority for all other measures.
Workshop Outcomes - Recommendations

The following recommendations were made by Florida DOT and the MPO team to be considered by the MPO Advisory Council

1. Define measures that all Florida MPO travel demand models can and should produce
2. Identify measures that are relevant to select MPOs (such as MPOs with large transit systems)
Next Steps…

- MTF to review the workshop document and provide input and comments to be incorporated

- Final report to be prepared with recommendations to the MPOAC

- An MPO specific work plan to aid in developing the necessary performance measure outputs using travel demand models to be developed