

**TSM&O Focus Area: Operations/ITS**

Planning	PD&E/Design
<ul style="list-style-type: none"> <li>• Current status for planning/prioritizing ITS improvements is reactive, primarily done in the short-term (&lt;5 years) as part of work program; better coordination or master planning needed in the long-term</li> <li>• ITS is a tool considered during project/corridor planning, rather than vice versa – may indicate a high level of maturity for ITS deployment</li> <li>• Need to move from champion driven to process driven with respect to ITS/TSM&amp;O consideration or project integration</li> <li>• ITS master plan in need of updating taking into account application to all modes</li> <li>• Would also benefit from an ITS action plan for resource deployment that goes beyond traditional LRTP</li> <li>• May be beneficial to implement (long-term) a single shared database and one communication network</li> <li>• Focus for Miami-Dade County (signals) would be upgrading to fiber optic to improve communications</li> <li>• Lack of adequate ROW for ITS improvements necessitates a reexamination of Miami-Dade zoning code</li> </ul>	<ul style="list-style-type: none"> <li>• TSM&amp;O can be integrated into preferred alternatives and not be a standalone alternative during PD&amp;E</li> <li>• Re-examine data collection efforts to better focus on TSM&amp;O outcomes (Central Office initiative currently adopting Maryland's RITIS for data archiving)</li> <li>• D6 would like to be better engaged and included in initiatives like RITIS</li> <li>• Guidance and standards on managed lane operation would be helpful; who makes the decision on exceptions if needed?</li> </ul>
Traffic Operations/ITS	Construction
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Road Rangers made part of construction contracts when needed to augment baseline</li> <li>• Active public information program – website and social media</li> <li>• Modeling of MOT has been done for some projects to improve upon proposed project plans</li> <li>• Attempting to establish a research project to look at before and after of MOT modeling application</li> </ul>

**Maintenance**

- Coordinate on responsibility sharing with ITS during IM

**TSM&O Focus Area: Modal Management**

Planning	PD&E/Design
<ul style="list-style-type: none"> <li>• 2035 LRTP update included corridor studies that could benefit from operational improvements</li> <li>• D6 ITS manager sits on committee for LRTP development</li> <li>• Operational improvements traditionally have been difficult to evaluate: two different evaluation processes have had to be performed resulting in the comparison of qualitative and quantitative results</li> <li>• Revisiting this process for improvement in 2040 LRTP update</li> <li>• No systematic process for evaluating improvements post-implementation to verify ROI/B-C</li> <li>• Post-evaluation takes place only if there is a federal requirement to do so</li> <li>• Prioritization of operational improvements occur at a high level; they follow federal programming categories (safety, maintenance, resurfacing, volumes)</li> <li>• Planning for transit operations requires looking at many different factors/options (compared to highways); it's a much "finer grain" – there is a lack of appreciation of this from the highway development side</li> <li>• Long-term, Regional Concept of Traffic Operations and transit operations decisions need to support one another</li> <li>• Action items: examine roadway functions with a finer grain; incorporate municipalities' considerations</li> <li>• Integrate Port of Miami into TSM&amp;O strategic planning – hold conversation that they are properly considered in draft TSM&amp;O Strategic Plan</li> <li>• Consider short-term formalized planning process (6 months – 2 years) which necessarily would consider small operational improvements in a coordinated fashion – identify group of players and guidelines for developing such a list of projects</li> <li>• One roadblock to this is that funding in the short-term (&lt;2 years) is already earmarked in the TIP</li> <li>• FIU initiatives: web-based application for data</li> </ul>	<ul style="list-style-type: none"> <li>• Regularly consider programs in LRTP and TIP, also look at existing deficiencies</li> <li>• No existing obstacles to TSM&amp;O consideration</li> <li>• But projects/issues NOT identified in plans cannot be examined when using federal funds</li> <li>• Is the LRTP too prescriptive and what is the level of existing flexibility to examine options identified in LRTP?</li> <li>• May need greater consideration of related improvements (e.g. along a corridor) on a piecemeal or integrated basis</li> <li>• Not all modal design decisions or considerations would be found in the LRTP (e.g. considering 60' articulated buses vs. 40' or port truck traffic dependent upon private fleet operators)</li> <li>• PD&amp;E process, however, is designed to look at wide range of alternatives (LRTP is not too prescriptive), which should capture TSM&amp;O options</li> </ul>

<p>integration and impact analysis; B-C analysis of ITS improvements using multiple data sources</p>	
<p><b>Traffic Operations/ITS</b></p>	<p><b>Construction</b></p>
<ul style="list-style-type: none"> <li>• Greater integration among partners needed to implement operational solutions on arterials</li> </ul>	<ul style="list-style-type: none"> <li>• Modal considerations take place primarily during design considerations (MOT, e.g.)</li> </ul>
<p><b>Maintenance</b></p>	
<ul style="list-style-type: none"> <li>• Many in-place plans to respond to weather and emergency incidents</li> <li>• May need an improved process for information sharing with other functional areas</li> </ul>	

**TSM&O Focus Area: Traffic Management**

<p><b>Planning</b></p> <ul style="list-style-type: none"> <li>• Most planning activity is devoted to coordination and reviewing plans – so, for example, there’s no specific program devoted to “do TDM planning”</li> <li>• Especially within past 2 years, this has been taking place by virtue of current project mix</li> <li>• Look for or create opportunities to lead planning efforts focused on traffic management strategies</li> <li>• Improvements in modeling (dynamic traffic assignment) underway at MPO to better capture traffic management strategies (it’s a CO-led effort with assistance from FIU)</li> <li>• FIU starting new project to examine dynamic traffic assignment on managed lanes</li> <li>• Current project: Downtown CBD parking study – highlights importance of multiple modes and impacts on corridor congestion</li> </ul>	<p><b>PD&amp;E/Design</b></p> <ul style="list-style-type: none"> <li>• Proposed detours are test driven</li> <li>• Traffic consultants being used to examine necessary detour operational changes (turn lanes, signal timing) for work zone traffic management plans</li> <li>• PD&amp;E and design requirements strongly dictated by CO – may need greater flexibility</li> </ul>
<p><b>Traffic Operations/ITS</b></p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p><b>Construction</b></p> <ul style="list-style-type: none"> <li>• Traffic management considerations incorporated into construction contracts</li> <li>• Areas for improvement: greater use of cameras and surveillance, detectors</li> </ul>
<p><b>Maintenance</b></p> <ul style="list-style-type: none"> <li>•</li> </ul>	

<b>Key Focus for Improved Traffic Management Capability: COLLABORATION</b>	
<b>Current Level of Capability</b>	<b>Target Level of Capability and Actions</b>
<ul style="list-style-type: none"> <li>• Level 2</li> </ul>	<ul style="list-style-type: none"> <li>• Level 3</li> <li>• Identify an area (e.g. signals) where process improvement can take place and move toward formalization</li> <li>• Identify and agree on mutual goals on corridor specific basis and what/how will be measured and who is responsible</li> </ul>

**TSM&O Capability Level Criteria Used Operations/ITS and Modal Management Key Focus Area Actions**

	<b>LEVELS OF CAPABILITY TO SUPPORT CONTINUOUS IMPROVEMENT TOWARDS FULL EFFECTIVENESS</b>			
	Level 1	Level 2	Level 3	Level 4
<b>Criteria for level</b>	<ul style="list-style-type: none"> <li>• Ad hoc</li> <li>• Fragmented</li> <li>• Informal</li> </ul>	<ul style="list-style-type: none"> <li>• Identified</li> <li>• Understood</li> <li>• Rationalized</li> </ul>	<ul style="list-style-type: none"> <li>• Organized</li> <li>• Standardized</li> <li>• Utilized</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated</li> <li>• Mainstreamed</li> <li>• Routinized</li> </ul>

**Additional Notes**

1. Elizabeth Birriel gave the executive-level overview for TSM&O after self-introductions.
  - a. NOTES: some discussion that facilities considering buses on shoulders (as part of Active Traffic Management) should instead consider managed lanes. Also should include Bus Rapid Transit as a TSM&O strategy – priority treatment for certain types of vehicles at ramps. Toll facilities have concerns with “tolls within tolls” so that is why MDX went with buses on shoulders. TSM&O strategies/focus areas need to include more about multi-modal. Not all strategies are appropriate for all areas, and they need to be customized to best fit the needs of a certain area (urban areas will have different focus areas than rural because of mix of traffic, types of trips, infrastructure, etc.). Need to be less DOT-/highway- centric and take a look at the entire transportation network. Also want to provide a feedback loop back to consider if project investments realized the outcomes they were intended to deliver (before- and after-studies). Want to make decisions based on performance outcomes. Need to more collaboratively share data that is available from SunGuide and other sources. Brought up bringing additional information to customers about parking availability at park-and-ride lots. Regarding transit, this is a much more real-time environment than highways that typically use historical data. Transit has unique data to offer. Need to follow up and discuss how to best leverage assets and information.
  - b. ACTION ITEM: FDOT and Miami-Dade Transit to follow up and talk further about data sharing.
2. Steve Lockwood gave the national TSM&O overview presentation.
  - a. NOTE: lots of diversity when looking at details of how various TSM&O strategies are being applied.
3. Ingrid Birenbaum introduced the soon-to-be-published FHWA TSM&O Cost-Benefit Desk Reference.
  - a. NOTES: a copy of the draft guidebook should be placed on the TSM&O Workshop notes web pages, and a copy of the final report once it is published. There will be opportunities for FHWA-workshops to introduce the new tools.
4. Debora Rivera spoke about District 6-specific TSM&O initiatives.
  - a. NOTES: TSM&O approach in South Florida needs to be multimodal and multi-agency. Some of the nation’s most congested corridors (6 of 328 per TTI’s 2011 corridor report) and unreliable facilities (5 of 328) are in Miami/South Florida. D6 has prepared a TSM&O strategic plan draft.

- b. 3 MPOs (Miami-Dade, Broward, and Palm Beach) are developing a regional long-range transportation plan (LRTP) – will identify networks, look at transportation issues regionally. TSM&O will provide a good framework to help this plan move forward.
  - c. Regional Concept of Operations (RCoO) – being led by Rory and Dat, study underway – plan will be presented to multiple groups.
  - d. Option is there to have a regional TSM&O workshop to include D4, D6, and FTE as well as other local partners.
5. Ingrid Birenbaum facilitated the TSM&O workshop which led to a lot of interactive discussions that were captured in tabular format by Reno Giordano.
  6. Steve Lockwood asked about D6’s self-evaluation for where they are with respect to Collaboration. General consensus for Level 2.
  7. Elizabeth Birriel closed the workshop by outlining action items and speaking about the need to identify TSM&O focus areas and champions.
    - a. KEY ACTION ITEMS: need to bring partners into TSM&O strategic planning process (continue outreach and communications efforts to build engagement of local partners), look at LRTP to determine what flexibility is available (or not) and explore options, get guidance from Central Office that district SP is in line with statewide efforts, follow up with partners and learn more about their roles/desired roles in TSM&O efforts (transit, MPO, Port, Miami-Dade Signals, others), find a way to separately fund TSM&O initiatives