ITS Work at MPOs

Hillsborough MPO
Tampa, Florida

planhillsborough.org
The Role of MPOs

- Forum for agencies to coordinate on ITS initiatives
- Provide info to decision-makers on the impact ITS investments can have on the transportation system
- Identify unmet needs for ITS and help decision-makers set priorities among all multimodal needs
- Track area-wide performance, and benefits of ITS investments, over time
MPO as a forum: What should be on the agenda?

Planners need:

• Familiarity with elements of ITS (sensors, controllers, communication systems...) & their limitations and benefits

• Understanding of how ITS deployments can help achieve community multimodal goals

• Awareness of trends as technology continues to rapidly evolve
MPO as a storyteller re: benefits of ITS

2040 Transportation Plan =
Many Kinds of Investments

Preserve the System
Reduce Crashes & Vulnerability
Manage Traffic for Drivers & Shippers
Real Choices When Not Driving
Grow Economic Activity Centers

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MPO as a storyteller re: benefits of ITS

What can we get if we invest in Managing Traffic for Drivers & Shippers ....

Level 1 – CURRENT SPENDING
- Peak-hour travel time is how much less reliable than today?
- Hours of truck delay

Level 2 – ATMS FULLY FUNDED
- Travel time % more reliable on major roads
- Reduced truck “hot spots” by %

Level 3 – FREEWAY ATMS FUNDED TOO
- Level 2, plus increased reliability on freeways

Travel Time Variability: How much longer could it take you at rush hour?

- 7 Largest Counties in FL
- Hillsborough - Arterials
- Hillsborough - Freeways

- 2.5x
- 2x
- 1.5x
- 2010 2013 Level 1 Level 3

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MPO as a storyteller re: benefits of ITS

Imagine 2040.

Org Public Engagement website
MPO as a storyteller re: benefits of ITS

To tell the story, planners need:

• Ability to use new travel demand modeling tools/ post-processors that can estimate the benefits of ITS projects, at the long-range, macrosimulation scale
MPO: identifying & prioritizing needs

San Francisco MTC: Benefit-Cost vs. Achieving Goals

Bay Area Plan

Treasure Island Congestion Pricing
Congestion Pricing Pilot
Freeway Performance Initiative
ITS Improvements in Santa Clara and San Mateo Counties
Better Market Street

Road Project

Bubble size represents the project benefits.

MTC Express Lanes Network
Fremont/Union City East-West Connector
SR-239 Expressway (Brentwood to Tracy)
SR-84/1-680 Interchange Improvements and Widening
New SR-152 Alignment
SR-4 Bypass Completion

Silicon Valley Express Lanes Network
US-101 HOV Lanes (Whipple to Cesar Chavez)
I-80 Auxiliary Lanes (Airbase Parkway to I-680)
SR-29 HOV Lanes and BRT
Bay Bridge Contraflow Lane

 Marin-Sonoma Narrows (Phase 2)

Adverse Impact on Targets
Supports Targets
MPO: identifying & prioritizing needs

San Francisco MTC: Benefit-Cost vs. Achieving Goals
MPO: identifying & prioritizing needs

1. The best performers are pricing projects and transit and road efficiency projects in the central Bay Area.

2. Transit expansion projects achieve the highest target ratings but many have B/C less than 1.
   - Results are mixed for Resolution No. 3434 projects.
   - Many projects have high operating costs.
   - Many have large benefits but also have very large costs.

3. Roadway expansion projects are middle of the pack for B/C but rate lowest for targets.
MPO: identifying & prioritizing needs

Planners should have a general understanding of where ITS strategies fall on various scales, such as cost per mile, cost/benefit ratio, environmental and community impact, public opinion, in order to help their communities choose the right tool from the multimodal transportation toolbox.

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**Preserve the System**
- High: 33%
- Medium: 51%
- Low: 16%

1964 responses

**Min. Traffic for Drivers & Shippers**
- High: 34%
- Medium: 40%
- Low: 26%

1920 responses

**Real Choices When Not Driving**
- High: 34%
- Medium: 32%
- Low: 34%

1886 responses

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Public engagement survey says the right level of investment is...
## MPO performance targets: monitoring progress

### Travel Time Reliability

<table>
<thead>
<tr>
<th>Performance Targets</th>
<th>Actual, 2018</th>
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<tbody>
<tr>
<td>≥75%</td>
<td>71%</td>
</tr>
<tr>
<td>≥50%</td>
<td>62.5%</td>
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<tr>
<td>≤2.00</td>
<td>2.08</td>
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</table>

**Note:** Good data available from FHWA on the interstate highway system.
MPO performance targets: monitoring progress

Segment-level data on average speed by time of day is available on most roads of interest ..... for a price

What about sharing data among TMCs? Requires data business planning:

- Inventory of datasets and formats
- Interlocal agreements for data-sharing
- Software to manage enormous data sets (beyond Excel’s capacity)
- Programming of analysis functions
MPO performance targets: monitoring progress

Planners need:

- Strong data management and statistical analysis skills
- Capacity to interpret data and create data visualizations that convey key messages
Thank you!

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