

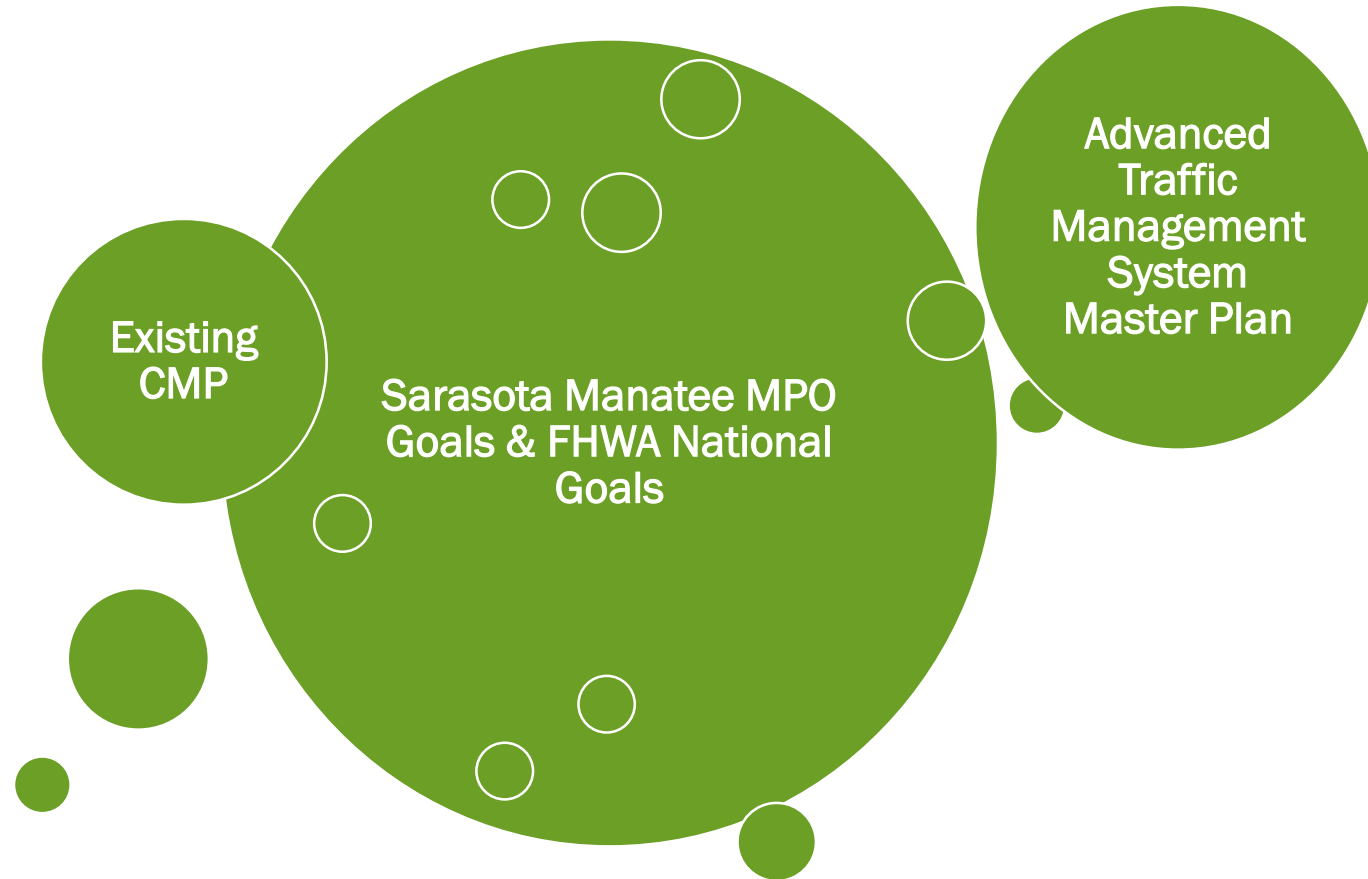
# CONGESTION MANAGEMENT PROCESS UPDATE



# Congestion Management Process TASK 1

1. Review of existing goals, objectives, and strategies
2. Identification of existing data sources
3. Prioritized performance measures

# Review of Existing Goals



**Federal Highway Administration  
MAP 21/FAST Act**



<b>NATIONAL GOALS</b>	<b>PLANNING FACTORS</b>	<b>2040 LRTP GOALS</b>	<b>SYSTEM OBJECTIVES</b>
<p><b>Safety—</b> Significant reduction in traffic fatalities and serious injuries on all public roads.</p>	<ul style="list-style-type: none"> <li>• Increase the safety of the transportation system for motorized and non-motorized users</li> <li>• Increase the security of the transportation system for motorized and non-motorized users</li> </ul>	<p><b>Safety/Security</b> Improve the safety and security of the transportation system for all users</p>	<ul style="list-style-type: none"> <li>• Reduce traffic fatalities and serious injuries</li> <li>• Reduce pedestrian and bicycle fatalities and injuries</li> <li>• Improve security</li> </ul>
<p><b>Congestion reduction—</b> Significant reduction in congestion.</p>	<ul style="list-style-type: none"> <li>• Increase the accessibility and mobility of people</li> </ul>	<p><b>Mobility/Congestion/Reliability</b> Promote economic vitality and viability through regional coordination of intermodal system</p>	<ul style="list-style-type: none"> <li>• Reduce congestion</li> <li>• Preserve the existing transportation system</li> <li>• Improve system efficiency</li> </ul>
<p><b>System reliability—</b> Improve efficiency of surface transportation system.</p>	<ul style="list-style-type: none"> <li>• Emphasize the preservation of the existing transportation system</li> <li>• Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation</li> </ul>	<p><b>Economy/Freight</b> Improve accessibility and multimodal connectivity by promoting proximity to jobs and efficient movement of freight and goods</p>	<ul style="list-style-type: none"> <li>• Improve freight movement</li> <li>• Support economic development</li> </ul>
<p><b>Freight movement and economic vitality—</b> Improve national freight network, strengthen rural communities access to national and international trade markets, support regional economic development.</p>	<ul style="list-style-type: none"> <li>• Increase accessibility and mobility for freight</li> <li>• Enhance the integration and connectivity of the transportation system, across and between modes, for freight</li> <li>• Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency</li> <li>• Enhance travel and tourism</li> </ul>	<p><b>Environment/Livability</b> Improve environmental sustainability and community livability in coordination with local government comprehensive plans</p>	<ul style="list-style-type: none"> <li>• Protect the environment</li> <li>• Increase accessibility, mobility, and connectivity</li> </ul>
<p><b>Environmental sustainability—</b> Enhance performance of the system while protecting and enhancing the natural environment.</p>	<ul style="list-style-type: none"> <li>• Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns,</li> <li>• Enhance the integration and connectivity of the transportation system, across and between modes, for people</li> </ul>		

# Review of Available Data

- Roadway Characteristic Inventory (RCI) to Traffic Message Channel (TMC) look up tables
- 2017 HERE speed data
- 2017 NPMRDS speed data
- 2017 RCI data and factors
  - Posted speed limit
  - Number of lanes
  - Area type
  - Functional classification
  - Bike lanes
  - Sidewalks
  - Other roadway geometry (e.g. lane width and median)
- Vehicle occupancy rates
- Data for developing LOS for bike and pedestrians
- Accessibility measures from University of Minnesota
- Shapefiles for developing safety measures
- Population data, urban area data, crash data, public road mileage data, state and national highway system data
- 2017 Traffic Characteristics Inventory data and factors
  - Vehicle Volumes
  - Vehicle classifications
  - Truck Volumes
  - Peak hour factors
  - Directional factors

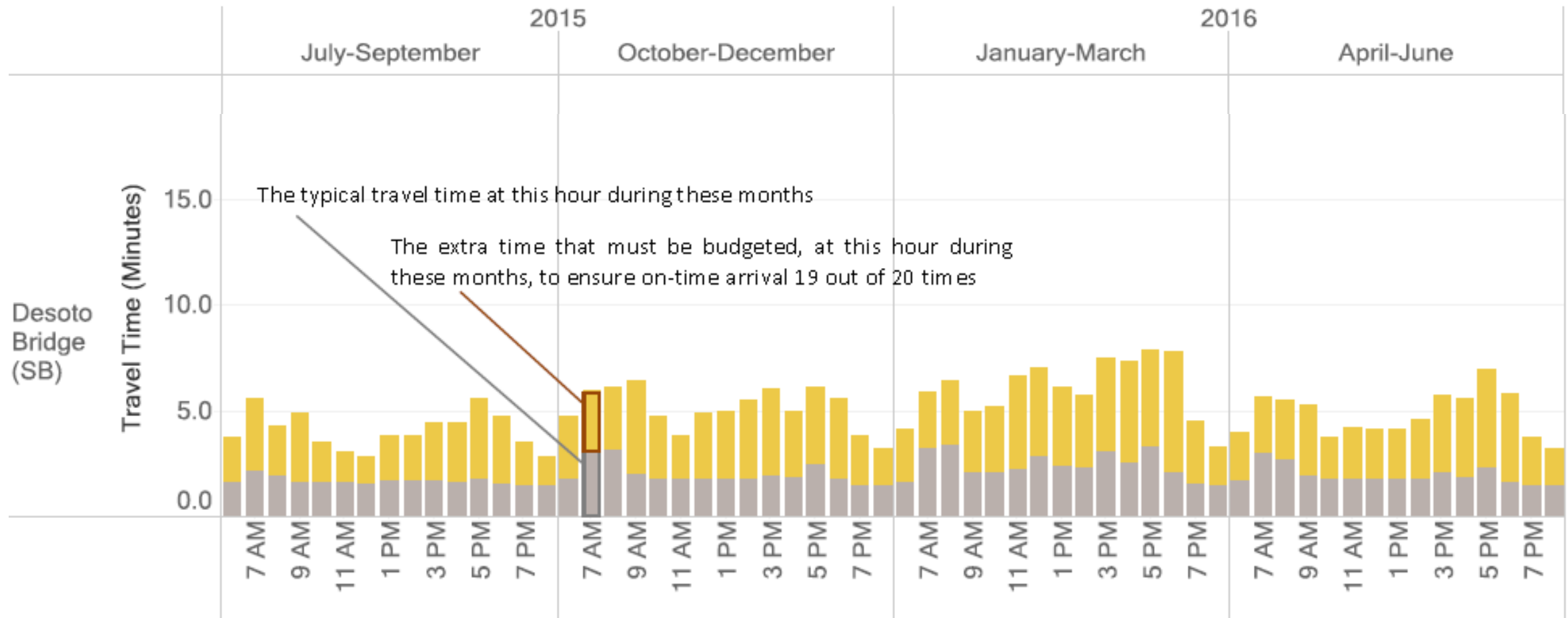
# Recommended Performance Measures

Average Travel Speed	
Definition	Average travel speed can be obtained from detector data, vehicle probe data, or through modeling. Travel demand models estimate free flow and congested travel speeds for each individual network link. Average travel speed is a metric easily understood by travelers.
Reporting Period	Speed can be reported for the peak period, off peak, or daily average.
Appropriate level for Application	This measure could be reported for facilities, corridors, and systemwide.
Federal Guidance	The FHWA planning factor to increase mobility of people and freight can be measured through average travel speed.
Person Hours of Delay	
Definition	Vehicle delay is calculated as the product of directional hourly volume and the difference between travel time at a threshold speed and travel time at the observed speed. The resulting vehicle delay is multiplied by a vehicle occupancy factor to arrive at person hours of delay; travel demand models in Florida typically include this calculation.
Reporting Period	Person hours of delay can be reported for the peak period, daily, or annually.
Appropriate level for Application	This measure could be reported at points, facilities, corridors, and systemwide.
Federal Guidance	The FHWA planning factor to increase mobility of people can be measured through person hours of delay.

# Recommended Performance Measures

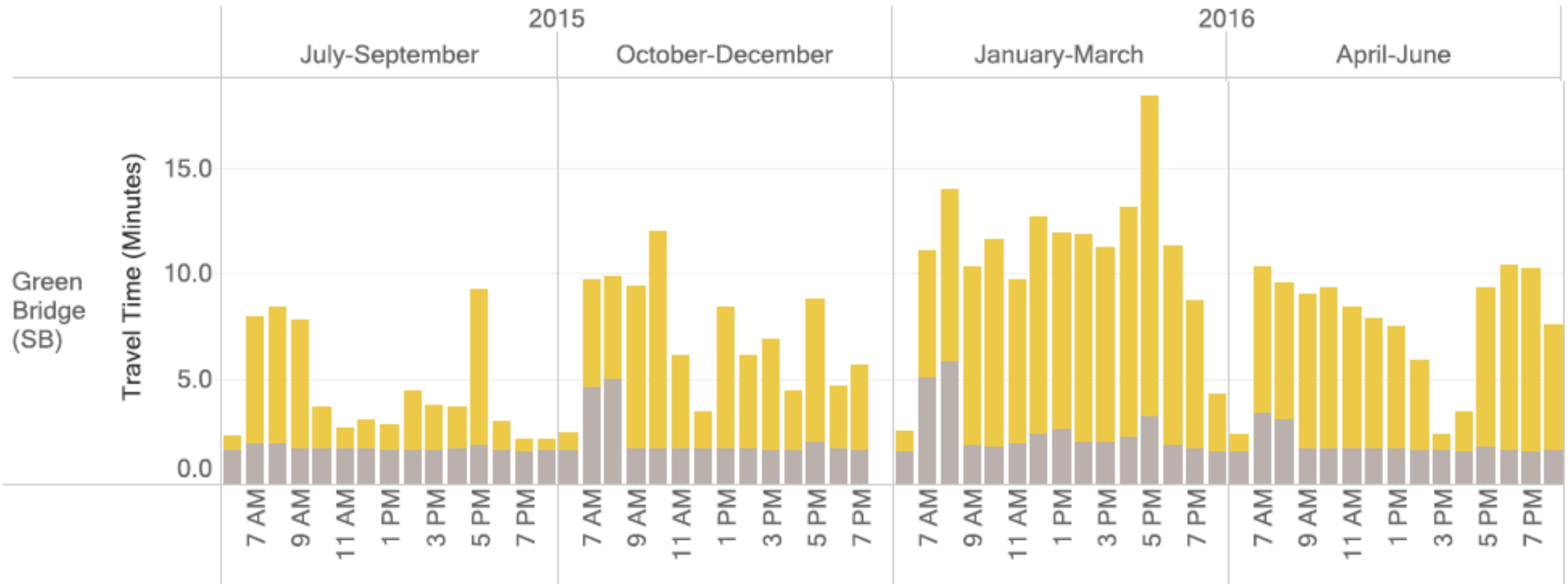
Level of Travel Time Reliability (LOTTR)	
Definition	LOTTR is a metric for measuring the travel time reliability of the system. LOTTR is a ratio of the 80 <sup>th</sup> percentile travel time to the 50 <sup>th</sup> percentile travel time for all vehicles. This measure is applied for the NHS separately for Non-Interstates and Interstates.
Reporting Period	Four time periods: AM Peak, Midday, PM Peak, and Weekend
Appropriate level for Application	The LOTTR measure is calculated for each directional road segment (for example, eastbound is one segment and westbound is another segment).
Federal Guidance	The worst ratio of the 4 time periods represents the roadway section. Above 1.50 is unreliable. The annual person miles on the road are placed into a category of reliable or unreliable.
Truck Travel Time Reliability (TTTR)	
Definition	TTTR is a metric for measuring truck travel time reliability on the Interstate system. It is a ratio of the 95 <sup>th</sup> percentile travel time to the 50 <sup>th</sup> percentile travel time - this measure is applied for the NHS Interstates.
Reporting Period	Five time periods: AM Peak, Midday, PM Peak, Overnight, and Weekend
Appropriate level for Application	The TTTR measure is calculated for each directional road segment (for example, eastbound is one segment and westbound is another segment)
Federal Guidance	The worst ratio of the 5 reporting periods is selected to represent the roadway section. The worst time period TTTR value is multiplied by the segment length.

# Travel Time Reliability on the Desoto Bridge

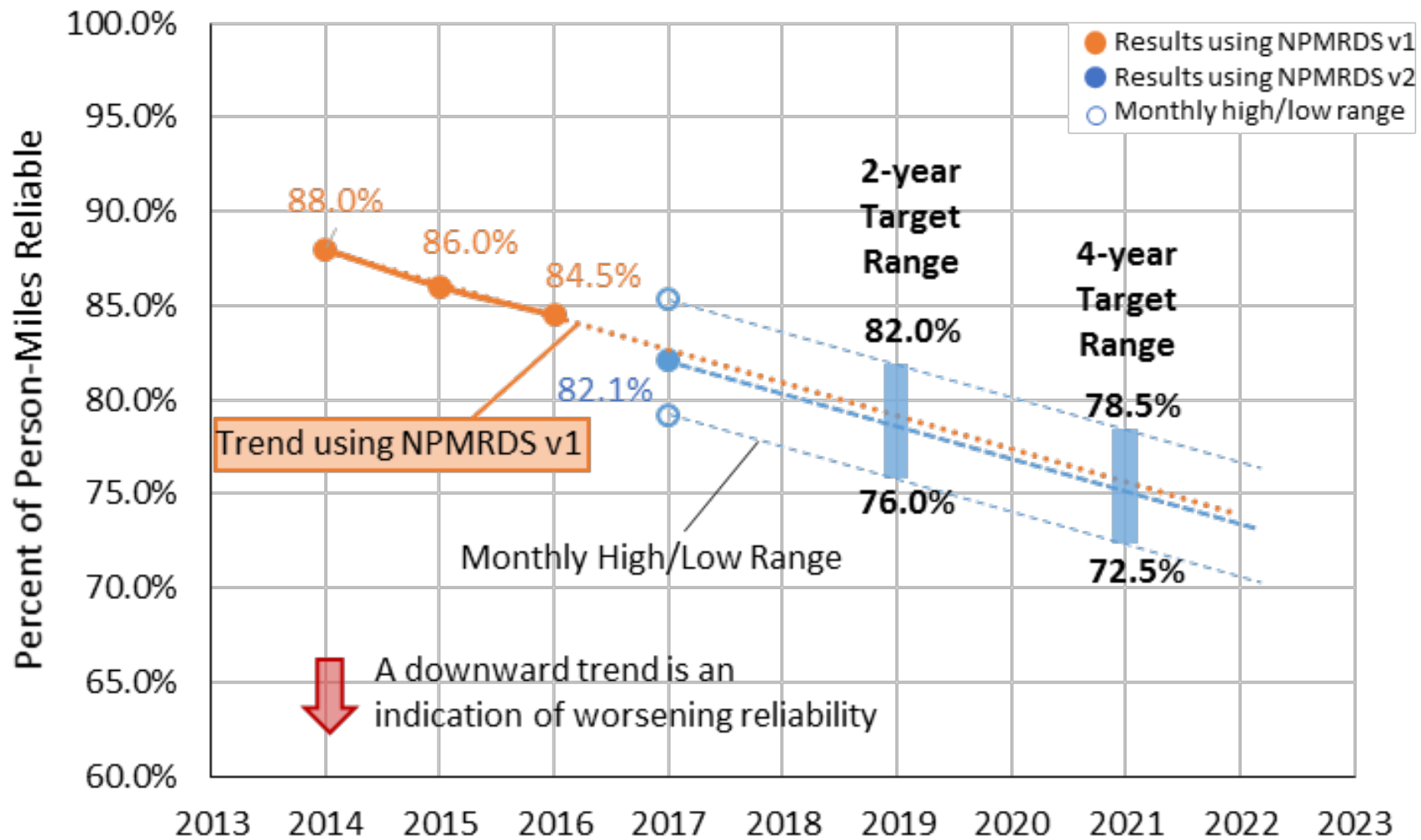




# Travel Time Reliability on the Green Bridge

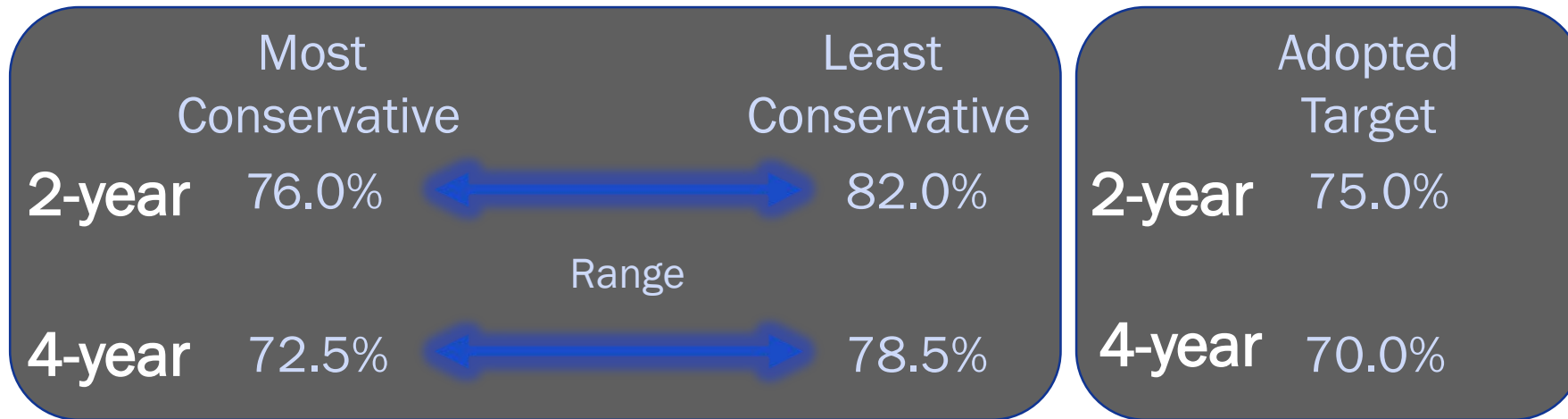


# Interstate Reliability Measure



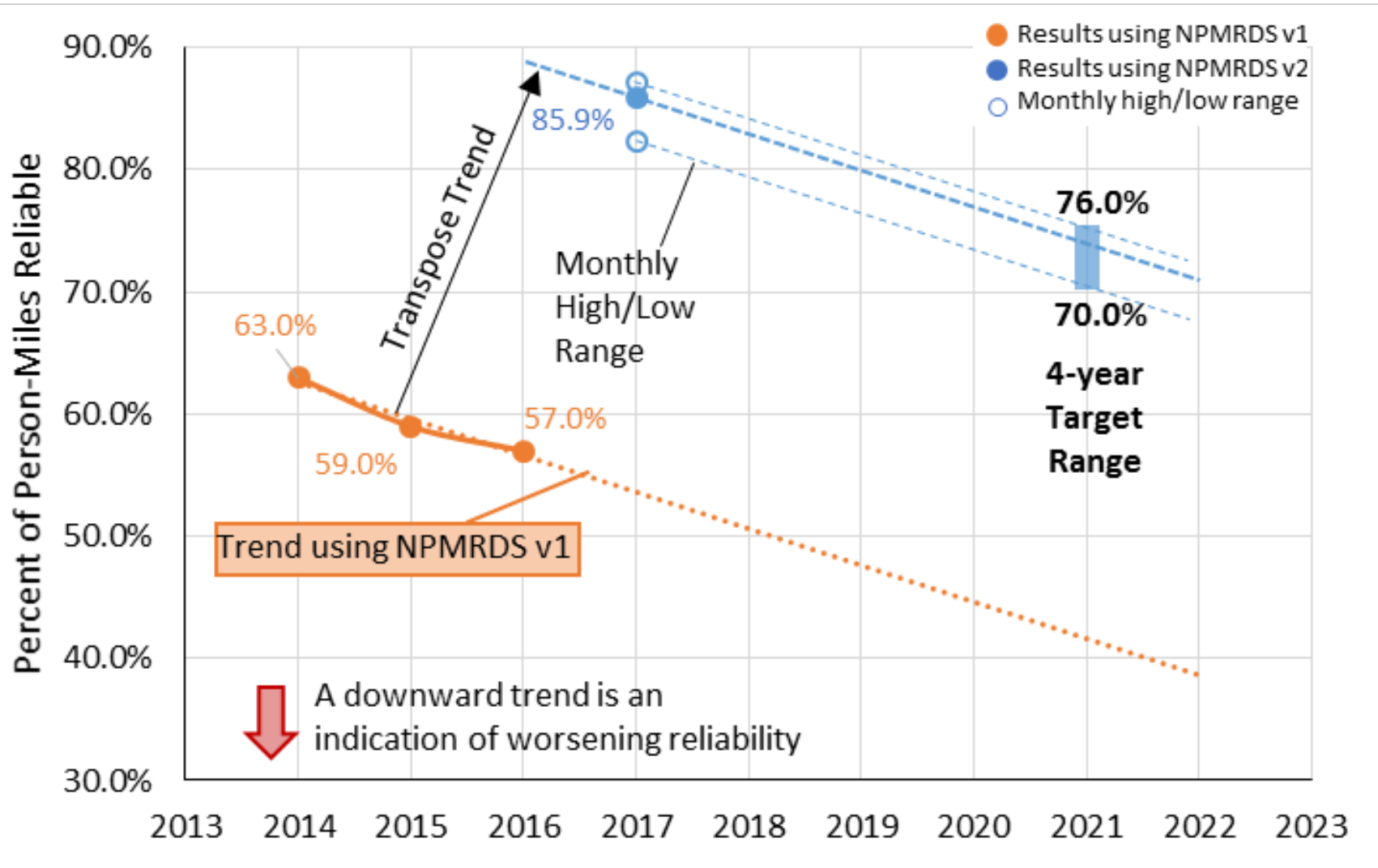
# Interstate Reliability Measure

## % Person Miles Traveled that are Reliable



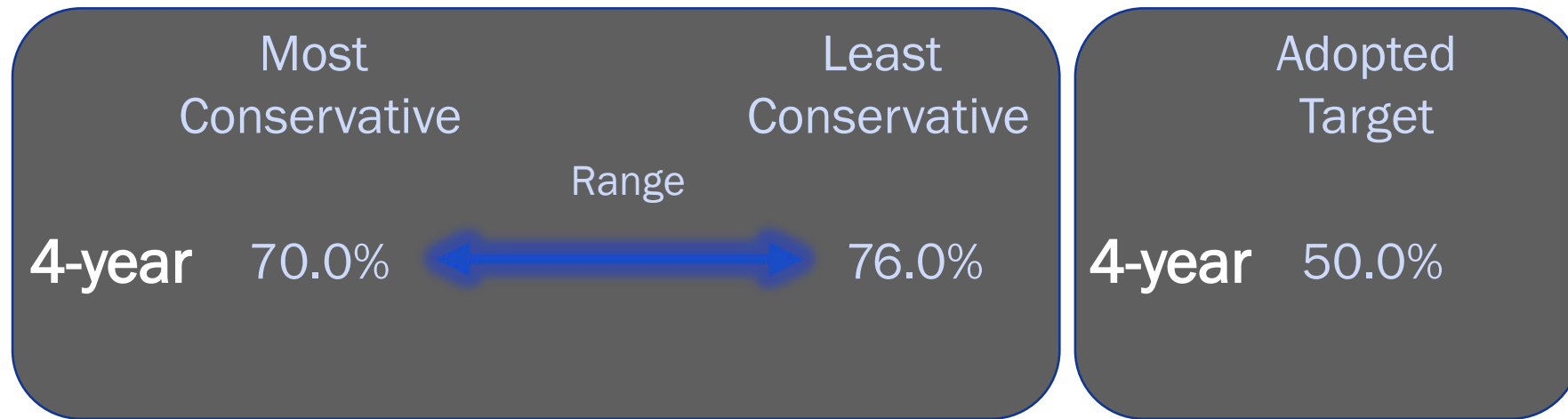
- Trend through 2022 is consistent with the past 4-year trend range
- Maintain conservative stance given external factors (VMT growth)

# Non-Interstate Reliability Measure



# Non-Interstate Reliability Measure

## % Person Miles Traveled that are Reliable



- Continued VMT growth will challenge changing trend direction
- Challenge created by land use and development

- **Important Dates in 2018\*:**
  - 5/20 - State DOTs establish 1st Performance Period targets
  - 6/15 - State DOTs submit baseline metric data (2017) to FHWA via HPMS
  - 8/2 - State DOTs submit hourly traffic volume estimate and percent share of traffic volume methodologies for CMAQ PHED measure
  - 10/1 - State DOT Baseline Performance Report and MPO CMAQ Performance Plans (as applicable)
  - 10/1 – State DOT/MPO requests for NPMRDS-equivalent data sets for 2019 due
  - 11/16 - MPOs establish 1st Performance Period targets and report to respective state DOTs