



COMMONWEALTH of VIRGINIA
Office of the
SECRETARY of TRANSPORTATION

Transportation Performance Management

February 15, 2022

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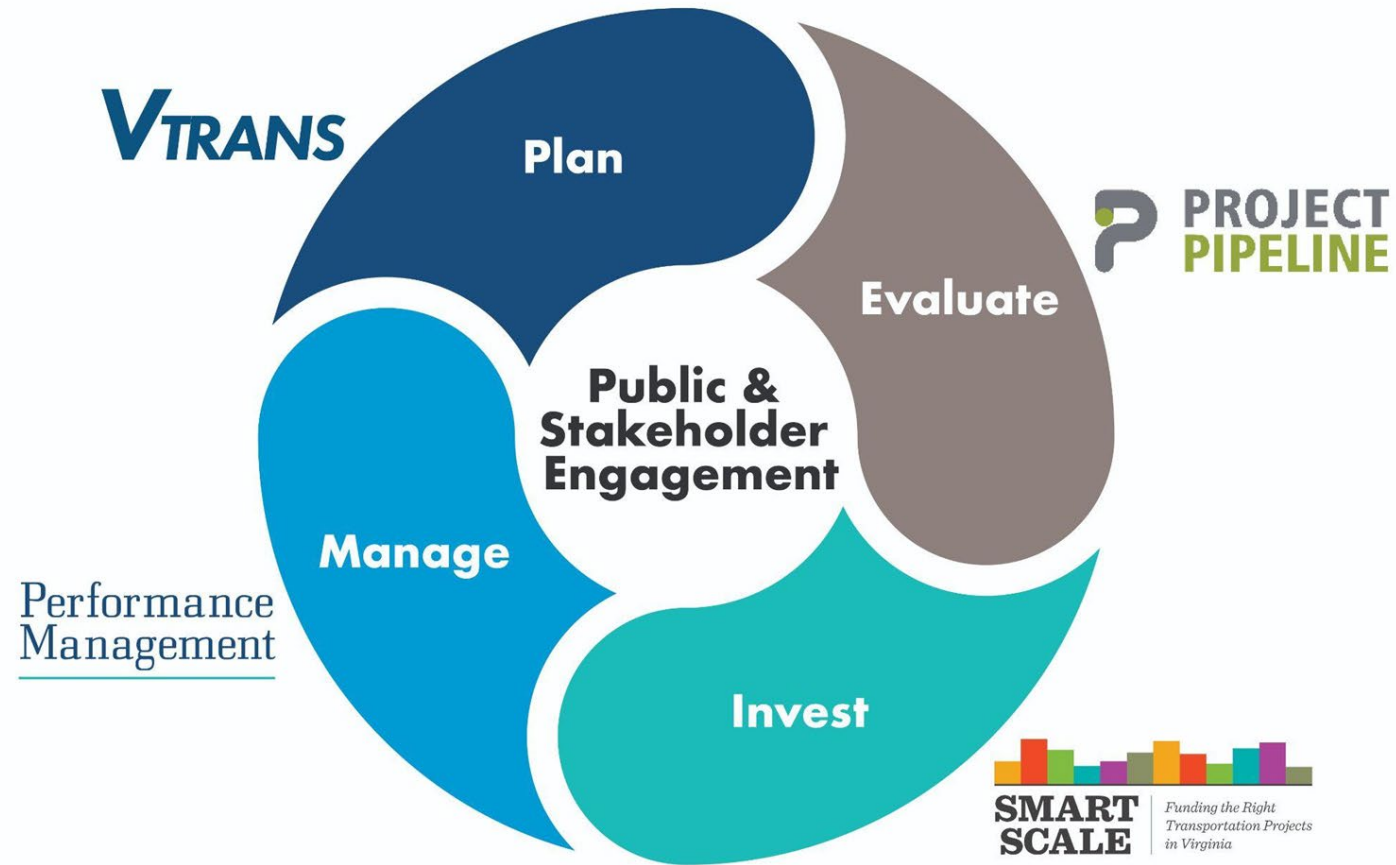


Agenda

- **Performance Management Background**
- **Target Setting Strategy**
- **Federal Performance Measures Requirements**
 - **Safety**
 - **Infrastructure Condition**
 - **System Performance**
- **Next Steps**

Performance Management Background

How it all fits

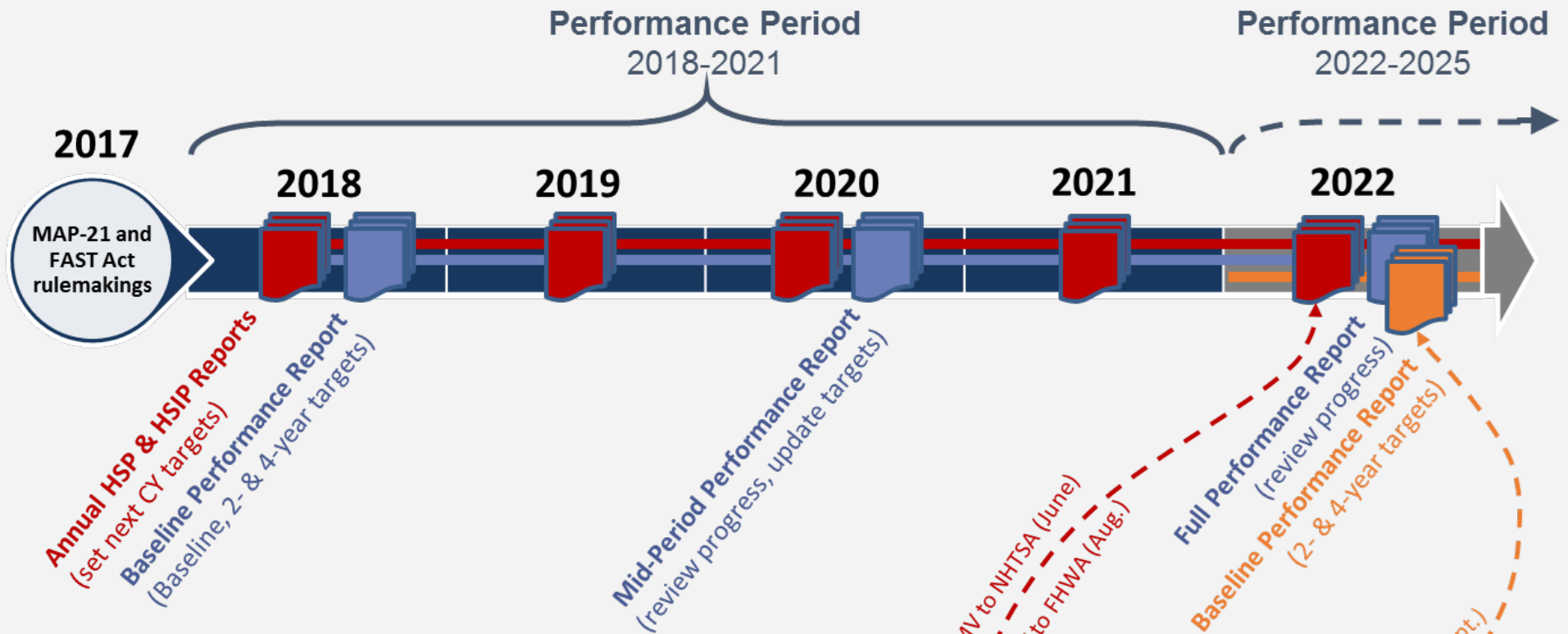





Performance Management Background

- **MAP-21 Federal Law – establish performance targets for:**
 - **Safety**
 - **Infrastructure Condition (Bridge and Pavement)**
 - **System Performance**
 - Highway and Freight Reliability
 - Traffic Congestion
 - Emission Reduction
- **Code of Virginia § 2.2-229 – Board to establish performance targets for surface transportation**

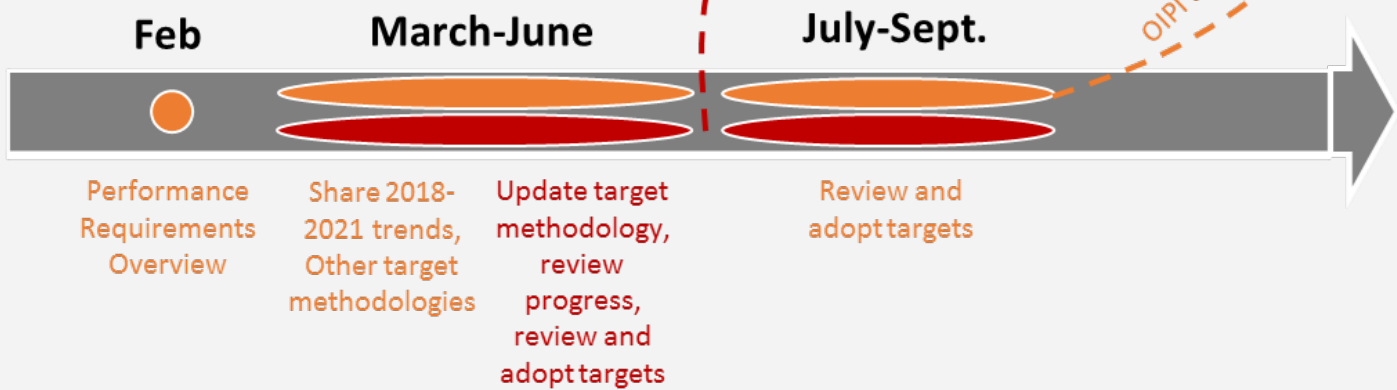
Virginia must set targets for federal measures:

- **June 2022 - Safety**
- **July 2022 - Infrastructure Condition and System Performance**



-  Annual Safety Performance
-  2018-2021 Performance Period
-  2022-2025 Performance Period

2022 CTB Actions



Target Setting Strategy

Challenged staff to develop rigorous data-driven methodology to establish targets

- **Understand how the system is performing**
- **Identify and examine trends**
- **Determine whether current investments and strategies are working**
- **Provide findings to CTB for consideration**

Identify and examine trends

- **Where have performance levels maintained?**
- **Where has performance declined?**
- **Where has performance improved?**

Evaluate trends to draw parallels between similar areas and identify potential strategies

Identify areas where performance can be addressed or maintained through policies

Federal Performance Measure Requirements

Safety

- **MAP-21 Federal law requires performance targets for 5 Safety Measures**
- **Safety targets must be established annually**
- **VDOT and Governor's Highway Safety Office (DMV) must agree to targets for 3 of the 5 performance measures**
- **DMV must report targets to National Highway Traffic Safety Administration (NHTSA) by June 30**
- **VDOT must report targets to Federal Highway Administration (FHWA) by August 31**

- **FHWA Annual Determination of Significant Progress:**
 - **If significant progress is not made, state must:**
 - Document actions to achieve targets
 - Depending on performance measure, may have funding and/or reporting impacts

Federal Performance Measure Requirements

Safety

What do
we
measure?



Measure

Number of Fatalities*

Number of serious injuries*

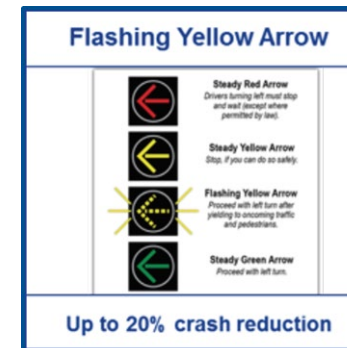
Rate of fatalities per 100M vehicle miles traveled*

Rate of serious injuries per 100M vehicle miles traveled

Number of non-motorized fatalities and serious injuries

*Federal measures requiring coordination with the Governor's Highway Safety Office

- Board adoption:
 - Data-driven targets since 2020
 - Investment strategy to guide investments of HSIP funds - Jan 2022
- General Assembly actions in 2020 and 2021 providing additional funding and requirements for CTB to adopt investment strategies



Federal Performance Measure Requirements

Infrastructure Condition and System Performance

- **MAP-21 Federal law requires performance targets for Infrastructure Condition and System Performance**
 - State establishes 4-year targets (CY 2021) for all measures and 2-year targets (CY 2019) for some measures
- **Each Performance Period requires**
 - **Baseline Report**
 - **Mid-Term Performance Report**
 - States provided opportunity to adjust 4-year targets
 - Requires explanation for 2-year targets not achieved and what will be done to achieve 4-year targets
 - **Final Performance Report**
- **FHWA Biennial Determination of Significant Progress:**
 - **If significant progress is not made, state must:**
 - Document actions to achieve targets
 - Depending on performance measure, may have funding and/or reporting impacts

Federal Performance Measure Requirements Infrastructure Condition

What do
we
measure?



Measure (Percentage of)	Scope
<ul style="list-style-type: none"> Bridges in Good Condition Bridges in Poor Condition 	NBI on NHS
<ul style="list-style-type: none"> Pavements in good condition Pavements in poor condition 	Interstate
<ul style="list-style-type: none"> Pavement in Good Condition Pavement in Poor Condition 	Non-Interstate NHS

Board adoption:

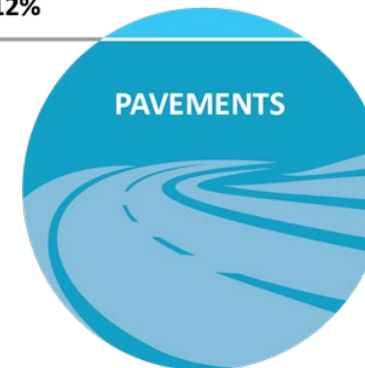
- Initial federal targets in 2018, based on trend analysis
- Statewide performance measures and targets in 2019 based on Maintenance and Operations Comprehensive Review
 - Modified investment strategy for a more balanced approach
- Revised federal target for Bridges in Good Condition in 2020

Note: Bridge targets and performance includes bridges “owned by others” i.e. Federal and Border Bridges

NHS – National Highway System
NBI – National Bridge Inventory

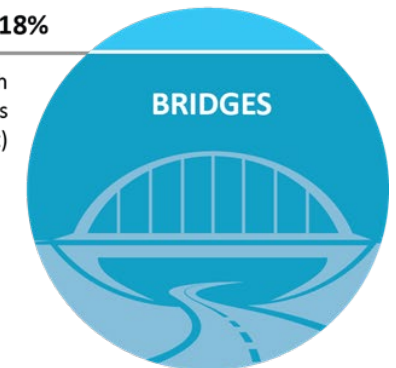
NHS Lane Miles, **12%**

Commonwealth
Non-NHS Lane
Miles



NHS NBI Bridges, **18%**

Commonwealth
Non-NHS Bridges
(by count)



Federal Performance Measure Requirements

System Performance

What do
we
measure?



Measures	Scope
Percentage of Person-Miles Traveled that are Reliable	Interstate and Non-Interstate NHS
Truck Travel Time Reliability Index	Interstate
Annual Hours of Peak Hour Excessive Delay Per Capita*	NHS
Percentage of Non-Single Occupancy Vehicle (SOV) Travel*	NHS
Total Emission Reductions for Volatile Organic Compounds (VOC) and Nitrogen Oxides (NOx)*	CMAQ Projects
Greenhouse Gas Emissions	Pending***

Board adoption:

- Initial federal targets in 2018
 - Based primarily on trend analysis (measure dependent)
 - Insufficient time to develop using data-driven methodology

Significant Progress Determination

- 2-year targets for Truck Travel Time Reliability and Percentage of Non-SOV Travel were not achieved. No changes to 4-year targets but additional reporting requirements

* These measures only apply to the National Capital Region.

** Only required for new projects for National Capital Region.

***Proposed rulemaking to establish a method for the measurement and reporting of GHG emissions associated with on-road transportation as part of identified performance measures expected in February 2022.

Next Steps - Safety

February - May 2022

- Update safety target model to predict future performance
- Estimate safety benefits of SMART SCALE and HSIP funded projects

May 2022

- Present updated model results and proposed 2023 safety targets
- Present on findings of FHWA Significant Progress Determination for 2020 targets

June 2022

- CTB adoption of safety targets
- DMV submission of safety targets to NHTSA

August 2022

- VDOT submission of safety targets to FHWA

Next Steps – Infrastructure Condition and System Performance Targets

March - June 2022

- Present proposed methodology for Interstate Reliability measure
- Present results of first performance period and baseline data
- Present methodology and proposed targets

June 2022

- Final CTB review of targets

July 2022

- CTB adoption of targets

September 2022

- Submission of Final Performance Report (1st period) and new Baseline Performance Report and targets (2nd period) to FHWA



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Thank you.

