

2050 Multimodal Long-Range Transportation Plan (2050 LRTP)



Virtual Public Meeting
June 15, 2021

Welcome

Mission Statement:

It is the mission of the West Virginia Department of Transportation to create and maintain for the people of West Virginia, the United States and the world a multi-modal and inter-modal transportation system that supports the safe, effective and efficient movement of people, information and goods that enhances the opportunity for people and communities to enjoy environmentally sensitive and economically sound development.

The **Aeronautics Commission** fosters and assists in the development of aeronautics in West Virginia and encourages the establishment of airports and air navigation facilities.

The **Division of Highways** is responsible for planning, engineering, right-of-way acquisition, construction, reconstruction, traffic regulation and maintenance of more than 34,000 miles of state roads.

The **Division of Motor Vehicles** provides driver information and education through twenty-four (24) regional offices.



The **State Rail Authority** promotes the beneficial use of rail transportation and works to protect essential rail service across the state.

The **Division of Public Transit** is the state administering agency for all federal and state programs relating to public transportation.

The West Virginia **Parkways Authority** fosters economic development and tourism through a safe and efficient mountain transportation system, the West Virginia Turnpike, and accessible tourist information centers.



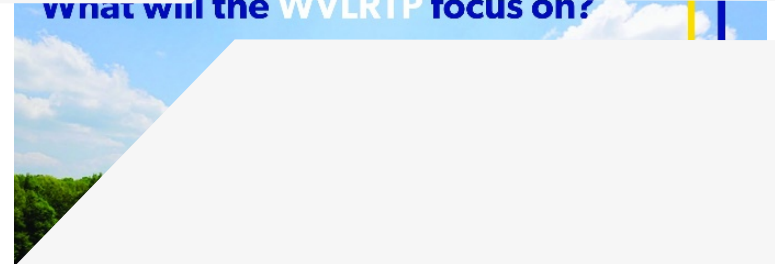
Introduction

- The 2050 Long Range Multimodal

**What is the West Virginia
Long Range Transportation**



What will the WVLRTP focus on?



improving the state multimodal
transportation system

- **WVDOT representatives and
consultant team members are
available to answer questions
and receive comments**



Meeting Logistics

- Everyone will be muted for the length of the meeting
- The presentation is being recorded and will be posted to the LRTP website later this week
- The project team will share details on the 2050 LRTP process to date through a <40 minute presentation
- Throughout the presentation, we encourage you to enter questions through the webinar chat window
- After the presentation is complete, we will repeat each question entered via the chat and respond verbally
- If you join by phone, please send questions by email to DOT2050@wv.gov

For More Information...

<https://transportation.wv.gov/highways/programplanning/LRTP/Pages/default.aspx>

2050 Multimodal Long-Range Transportation Plan (LRTP)

West Virginia DOT's new statewide long-range transportation plan will help position WVDOT and the multimodal system it manages to further support WV's economy, enhance quality of life, foster safe and reliable transportation options, and better connect WV residents and businesses to opportunities.

The WVDOT is conducting an update to its statewide multimodal long-range transportation plan to help guide future transportation policies and investments. The plan will provide a 30-year blueprint to fund and improve the preservation, management, and expansion of West Virginia's multimodal transportation system. To build this blueprint, WVDOT will work with transportation stakeholders, coordinate with Federal partners, and seek input from West Virginia residents across five study phases throughout 2020 and 2021.

To build this blueprint, WVDOT will work with transportation stakeholders, coordinate with Federal partners, and seek input from West Virginia residents across five study phases throughout 2020 and 2021.

For more information on each phase, please click the icons below, or use the links under [2050 LRTP Resources](#).



Stakeholder and Public Engagement - Updated on June 04, 2021

Stakeholder and Public Engagement will occur throughout the plan process through a variety of outreach opportunities. Engagement will ensure that the Plan remains transparent and accessible to stakeholders, residents, and businesses and enables input to steer plan outcomes.



Implementation Plan - Updated on October 13, 2020

The 2050 LRTP Implementation Plan highlights the key Plan outcomes and recommendations and identifies near term steps that WVDOT and its partners can take to propel and manage plan implementation forward over the next decade.



Policies, Strategies, Trade-offs - Updated on June 04, 2021

Policies, Strategies, and Trade-offs considers the differences between future transportation revenues and multimodal investment priorities to



Future Needs, Revenues, Priorities - Updated on May 19, 2021

Trend, Drivers, and Opportunities focus on trends shaping transportation through 2050, including demographics, economics, technology, education, equity, public health, and resiliency will also be considered.



Trends, Drivers, and Opportunities - Updated on April 19, 2021

Trends, Drivers, and Opportunities focus on topics shaping WV's future like demographics, economics, technology, and equity are also important to WV's transportation future. This information will help WVDOT develop strategies in the



State of the System - Updated on January 8, 2021

The State of the System builds a platform for the rest of the Plan by detailing the status and performance of the system for preservation, operations, and expansion over the coming years.

Participating in the Plan

- Follow WVDOT on social media
- Visit the LRTP website
- Email ideas, comments, and questions to DOT2050@wv.gov
- Mail comments:
Planning Division,
West Virginia Division of Highways
1900 Kanawha Boulevard
Building 5, Room 740
Charleston, West Virginia 25305
- **Open public comment period now through August 14th**

Why Are We Doing This?



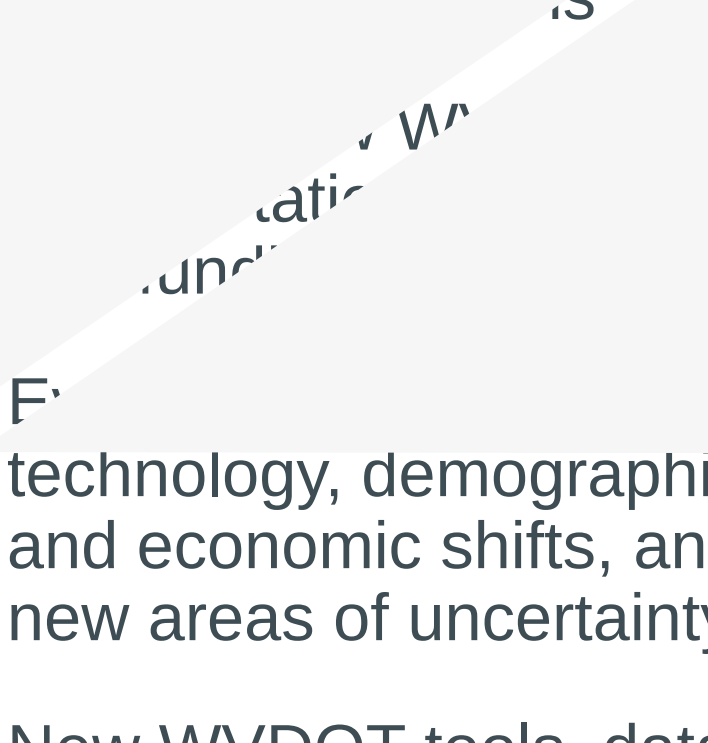


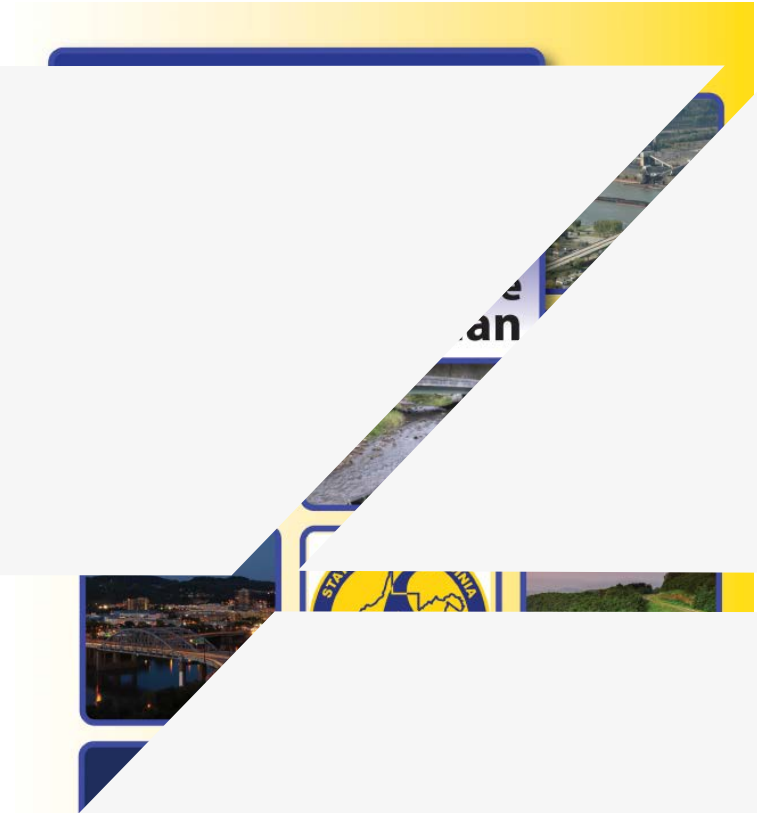
Why Plan for the Future?

The future is hard to predict...



What Has Changed?

- 
- Transportation Work
- Funding
- technology, demographic and economic shifts, and new areas of uncertainty
- New WVDOT tools, data, and priorities



How Are We Doing This?



How Do We Do Statewide Planning?



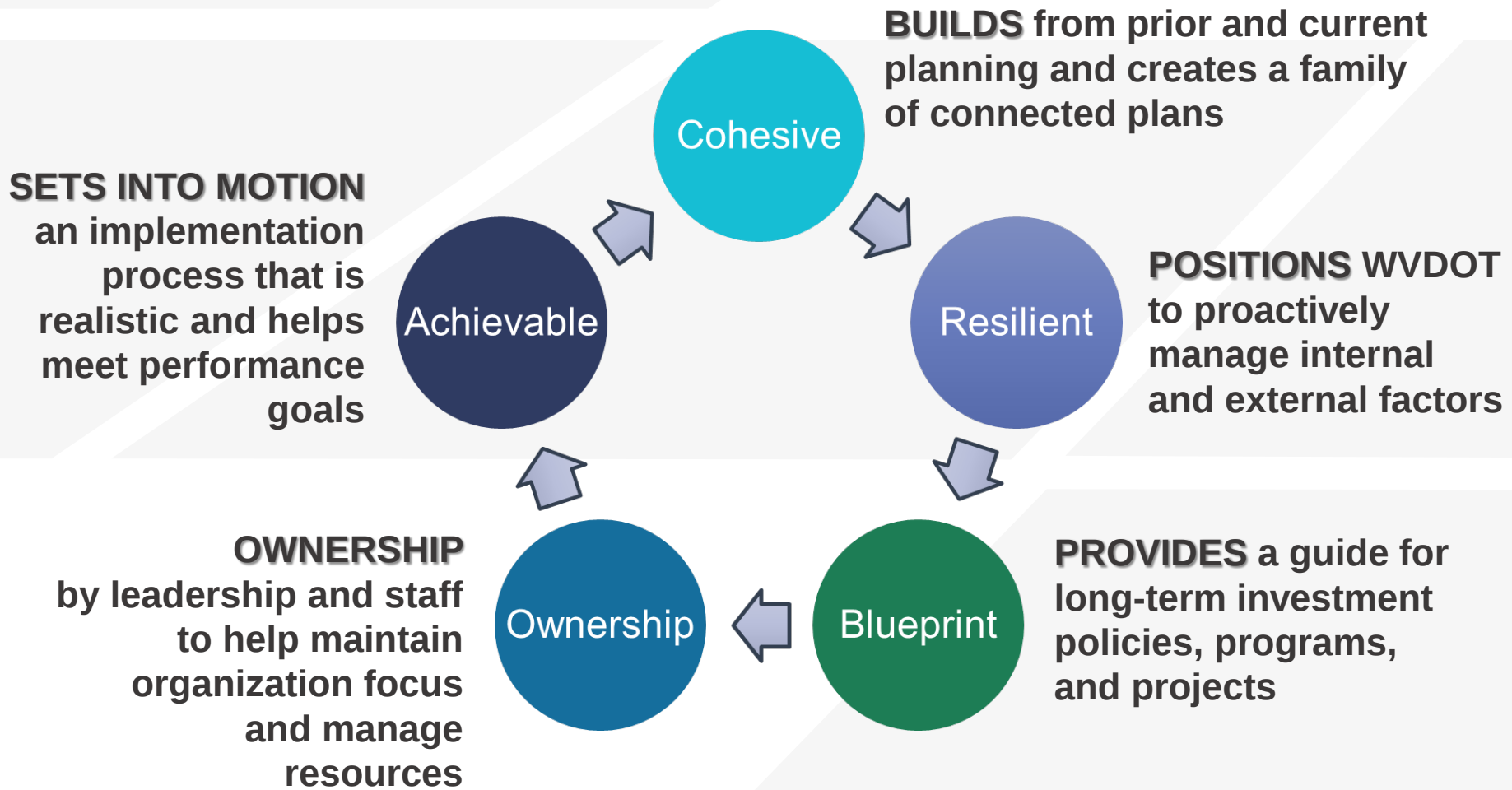
**Address the
current condition
of the multimodal
transportation
network**



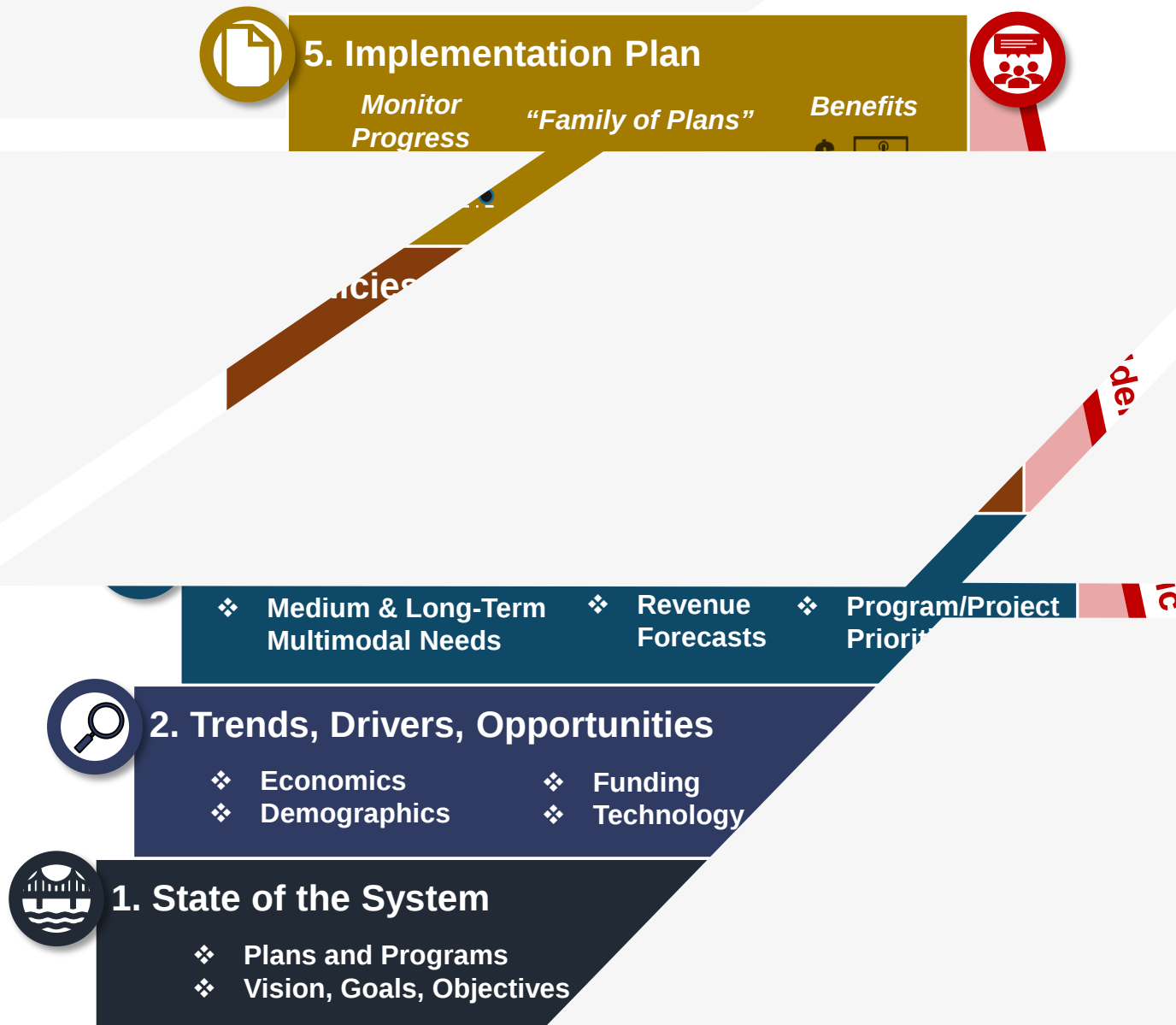
**Blueprint for
future multimodal
transportation
investments**

- **Support the movement of all people and goods**
- **Deliver a transparent and accessible planning process**

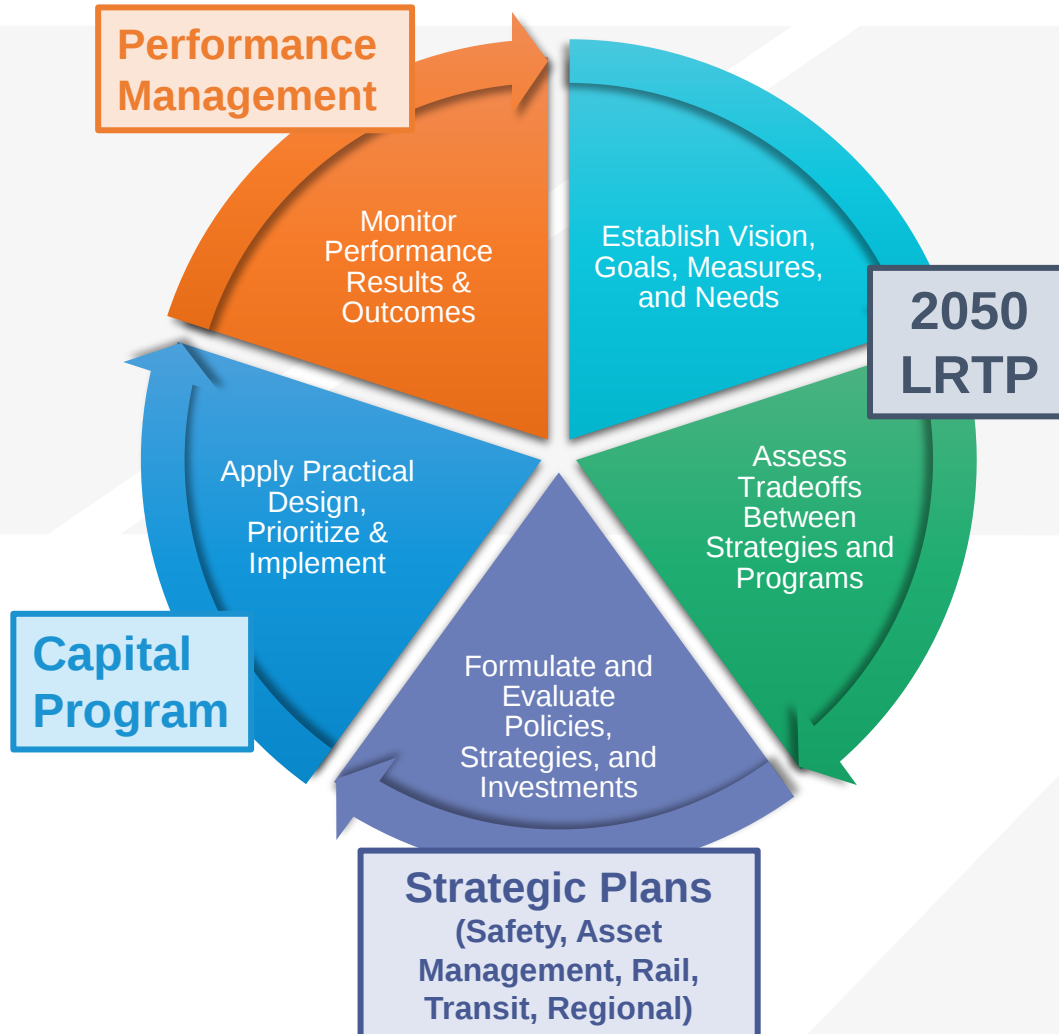
What Do We Want to Accomplish?



Our Approach



Transportation Planning 101



LRTP helps connect...

- » Long-range plan goals, measures, and needs
- » Long-range plan strategies and programs

With WVDOT...

- » Strategic Plans
- » Capital Program
- » Performance Management



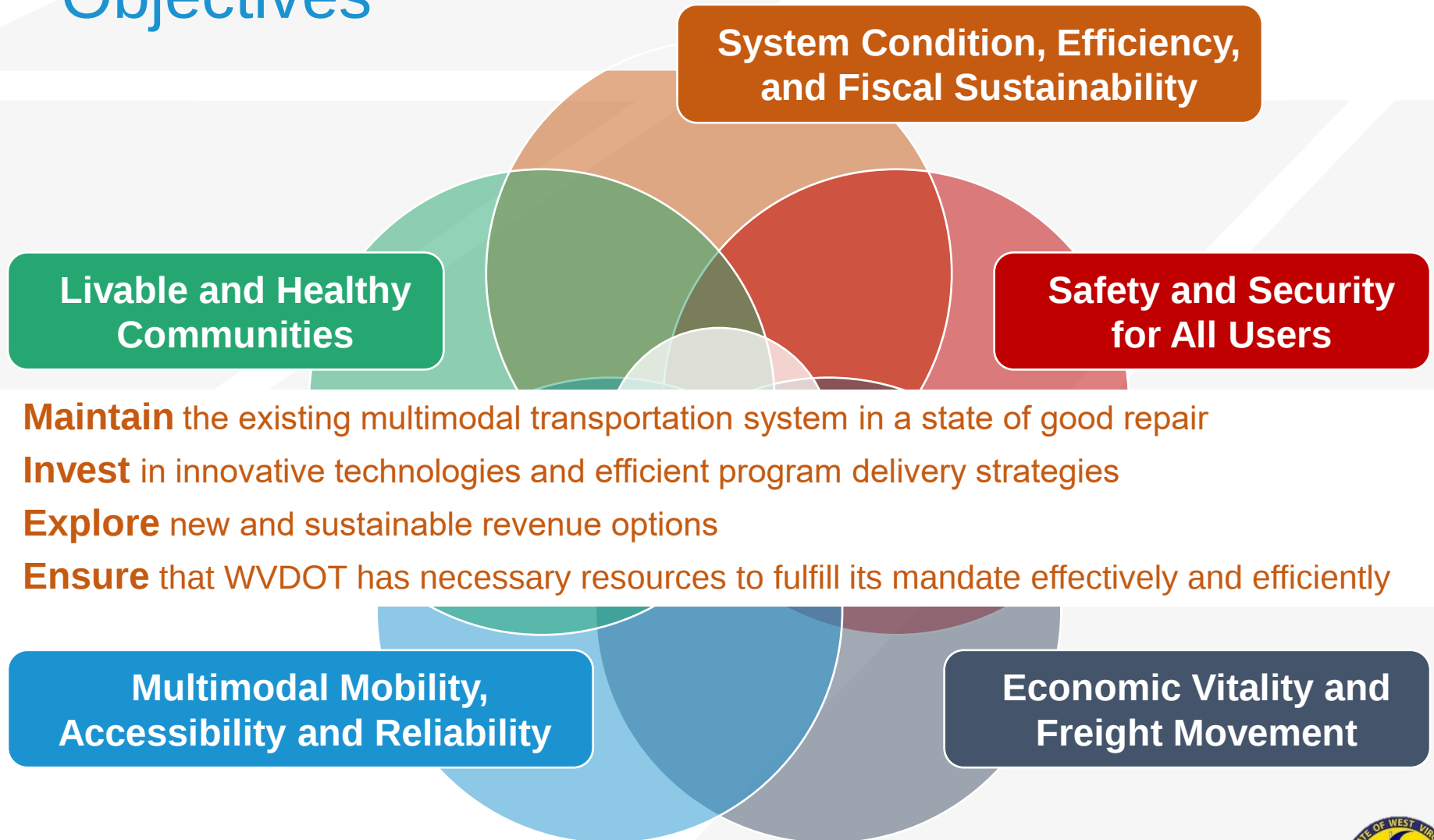
2050 LRTP Goals

**System Condition, Efficiency,
and Fiscal Sustainability**

**Multimodal Mobility,
Accessibility and Reliability**



2050 LRTP Objectives



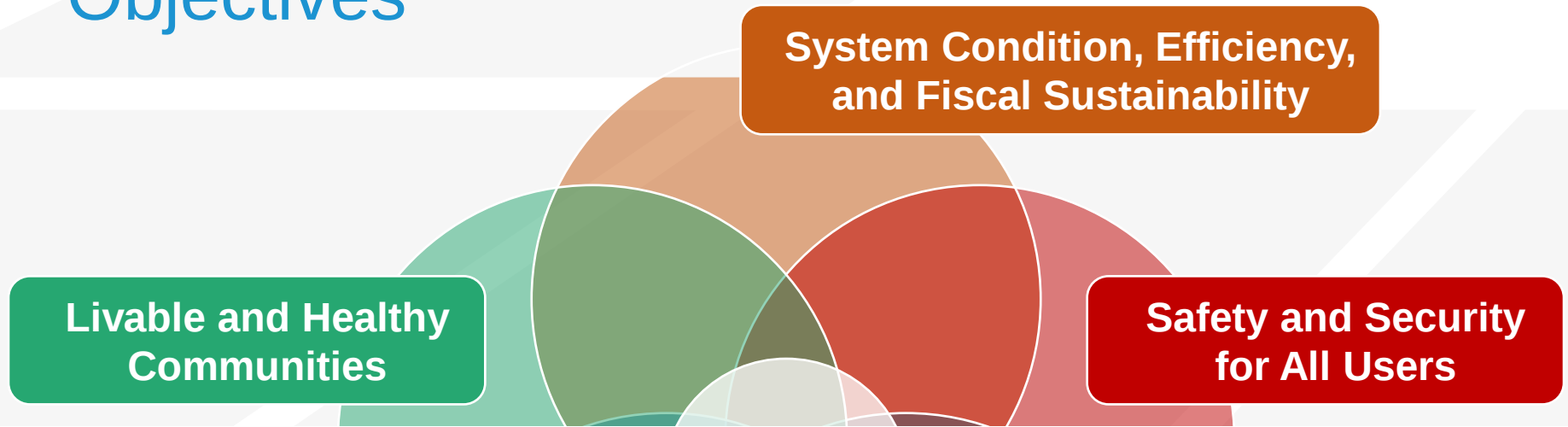
Maintain the existing multimodal transportation system in a state of good repair

Invest in innovative technologies and efficient program delivery strategies

Explore new and sustainable revenue options

Ensure that WVDOT has necessary resources to fulfill its mandate effectively and efficiently

2050 LRTP Objectives



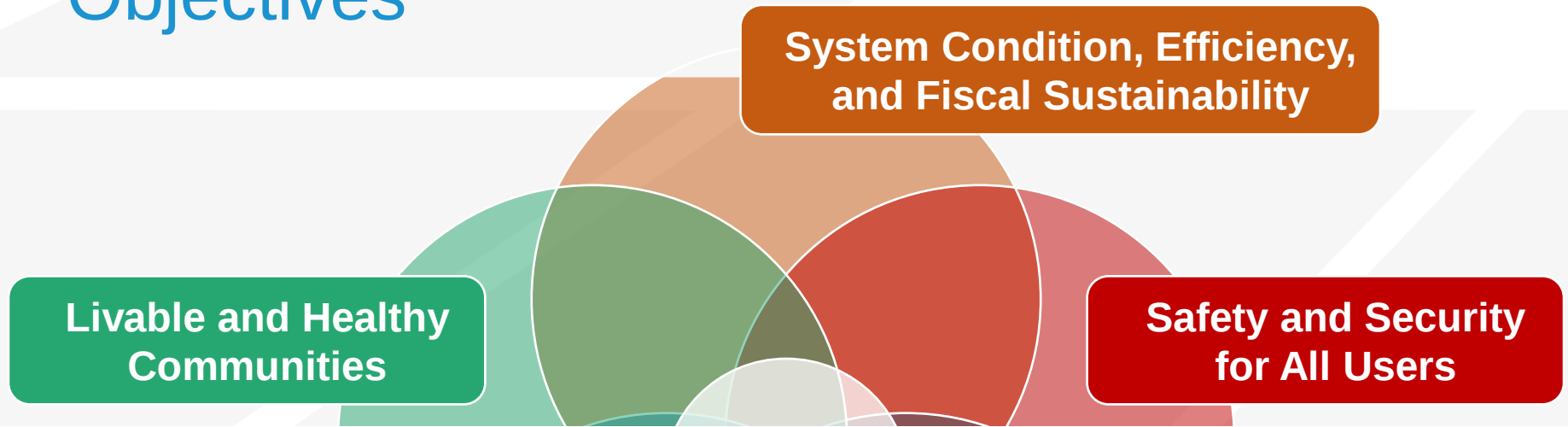
Reduce fatalities and serious injuries on the multimodal transportation system

Decrease incident clearance time and recovery

Manage a resilient and redundant transportation network



2050 LRTP Objectives



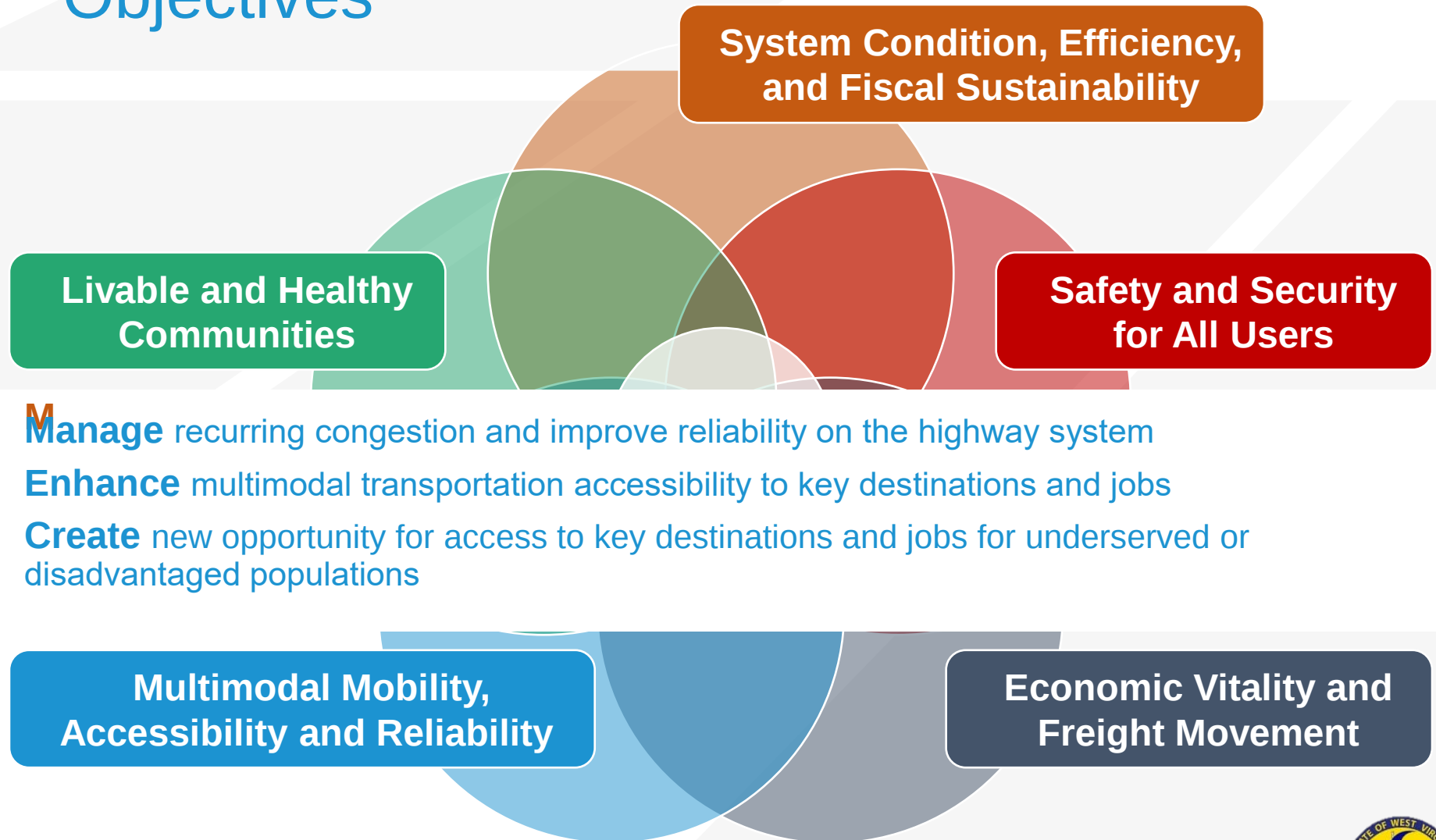
Improve intermodal freight connections

Address bottlenecks and first-mile/last-mile access

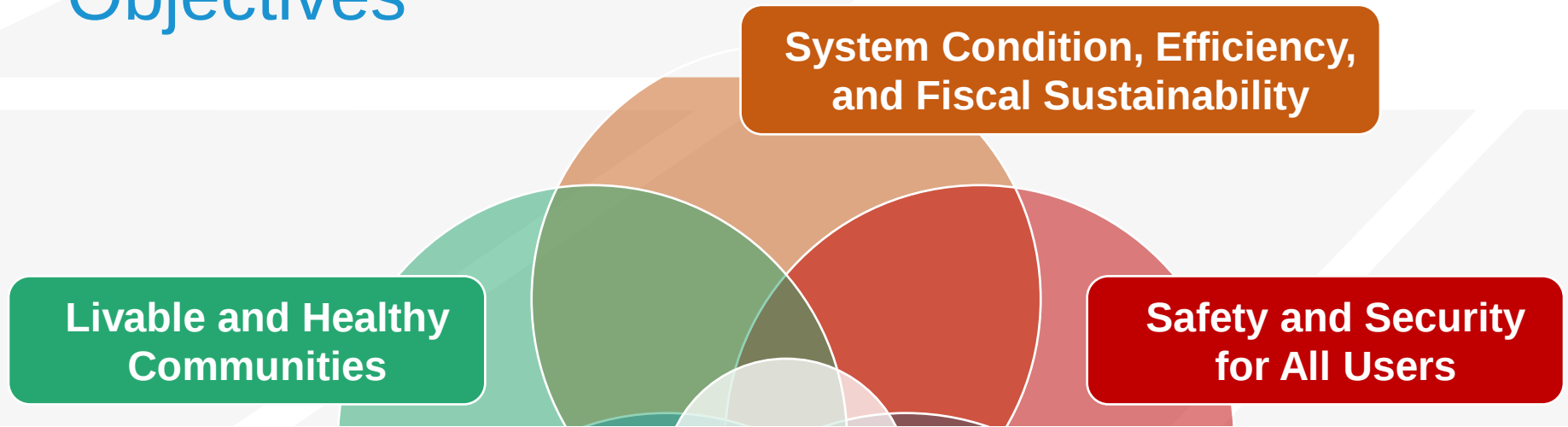
Expand access to economic activity centers and emerging industries/clusters



2050 LRTP Objectives



2050 LRTP Objectives



Reduce emissions and mitigate environmental impacts

Coordinate land use and transportation decisions

Promote and improve bicycle and pedestrian infrastructure



Where Are We Today?



2050 LRTP

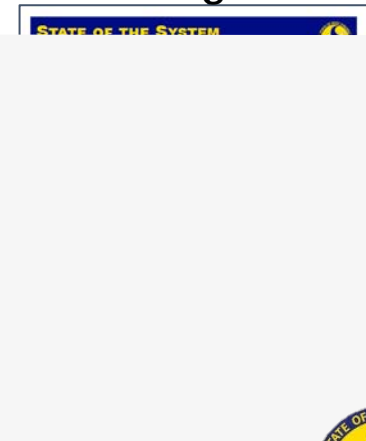
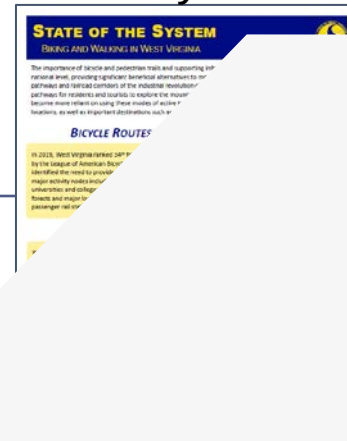
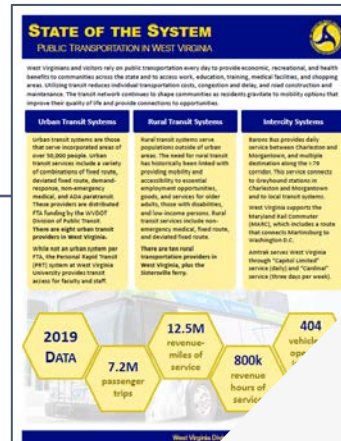
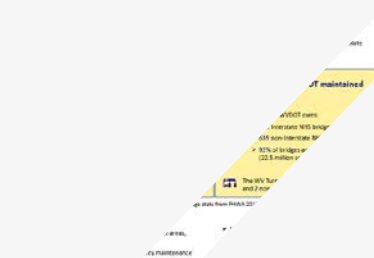


State of the System

Partners

Aviation

Highways



2050 LRTP

State of the System



» **38,850 miles of public roads**

- WVDOT owns **35,038 miles** of those (90% of the total system)

Including:

468 Interstate miles (WVDOH)

1,433 non-Interstate National Highway System (NHS) miles (WVDOH)

10,477 Federal aid eligible miles (WVDOH)

87 West Virginia Turnpike miles (WV Parkways Authority)



» **7,269 WVDOT maintained bridges**

- Representing **92%** of all bridges

Including:

556 Interstate bridges (WVDOH)

639 non-Interstate NHS bridges (WVDOH)

95 Interstate bridges and 2 non-Interstate NHS bridges
(WV Parkways Authority)

2050 LRTP

State of the System



- **13 freight railroads and 274 miles of navigable waterways**
 - » 299.8 million tons of freight (\$140.0 billion in value) moved in 2018
 - » 2,310 miles of pipeline and 2,312 miles of railroad



- **7,200,000 public transportation passenger trips in 2019 on services with access to 37 of 55 WV counties**



- **34 public-use airports and 7 commercial service airports**
 - » 417,925 passengers boarded a commercial flight at WV airports in 2019



- **Over 5,000 miles of trails to support recreation**

Where Are We Going?



2050 LRTP

Trends, Drivers, Opportunities

» Introduction/Context

Why is this relevant to WV's transportation and economic future?

» Where Are We Today?

What is WV's current position relative to our peers and the nation?

» Where Are We Going?

Where might the future take us, both in WV and through regional and national perspectives?

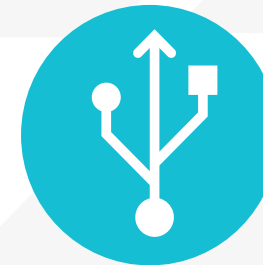
» Future Direction and Opportunities

How might WV create opportunities from these trends and how can it avoid or mitigate possible risks?



Demographics

Economics



Technology

Environment



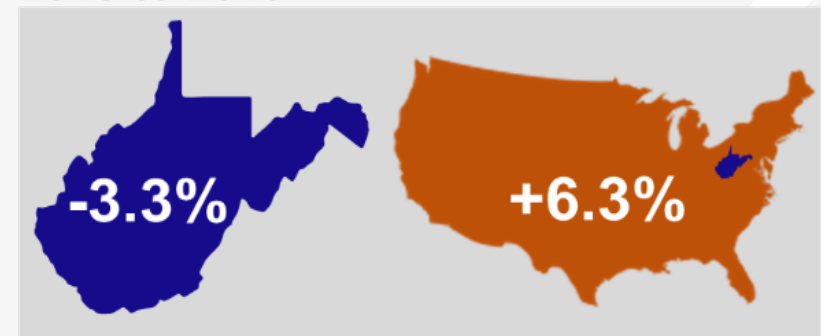
2050 LRTP

Trends, Drivers, and Opportunities

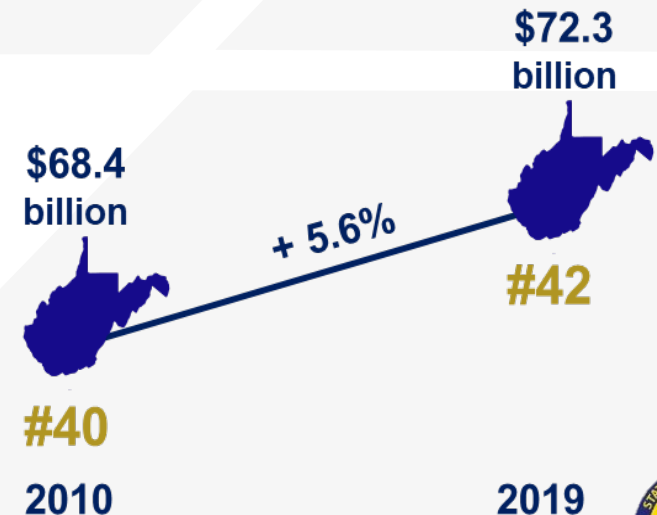


- » Population Change + More Seniors
- » Travel Pattern Shifts
- » Public Education and Public Health

2010 to 2019

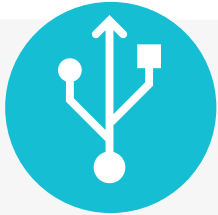


- » Enhance Job Creation & Workforce Development
- » Support Freight Movement
- » Access for Emerging Industries
- » Diversify Energy Sources



2050 LRTP

Trends, Drivers, and Opportunities



- » Bridge the Digital Divide
- » Expand Partnerships
- » Assess Capabilities, Roles, and Responsibilities
- » Advance Technology Across Project Life Cycles



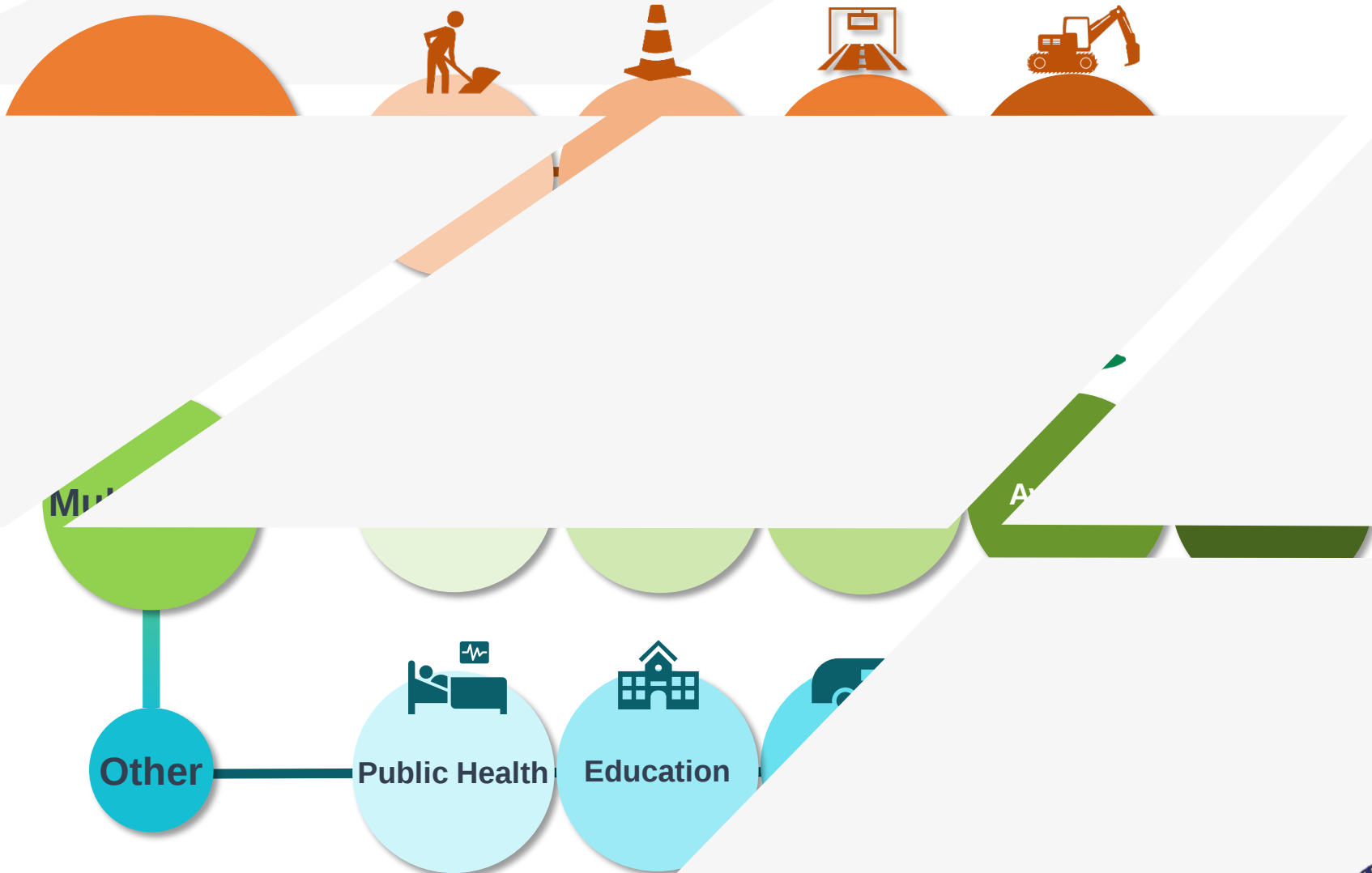
- » Prepare for Environmental Resiliency
- » Operations and Maintenance of Infrastructure
- » Increase Environmental Tourism
- » Enable New Technology



What Are Our Transportation Needs?



Needs Assessment



2050 LRTP

Summary of Needs

Constrained and Aspirational Needs



Expansion – what is reasonable to deliver by 2050?

Targets – what level of asset performance to achieve by 2050?



Gaps – what resources to address rural and urban mobility and enhance site access and intermodal connections by 2050?



Opportunity – what project decisions best align to statewide issues by 2050?

Constrained
\$21.3 B

\$19.9 B

\$1.1 B

\$0.3 B

Aspirational

**Up to
\$87 B**

Full accounting of needs from plans and programs regardless of cost of feasibility.

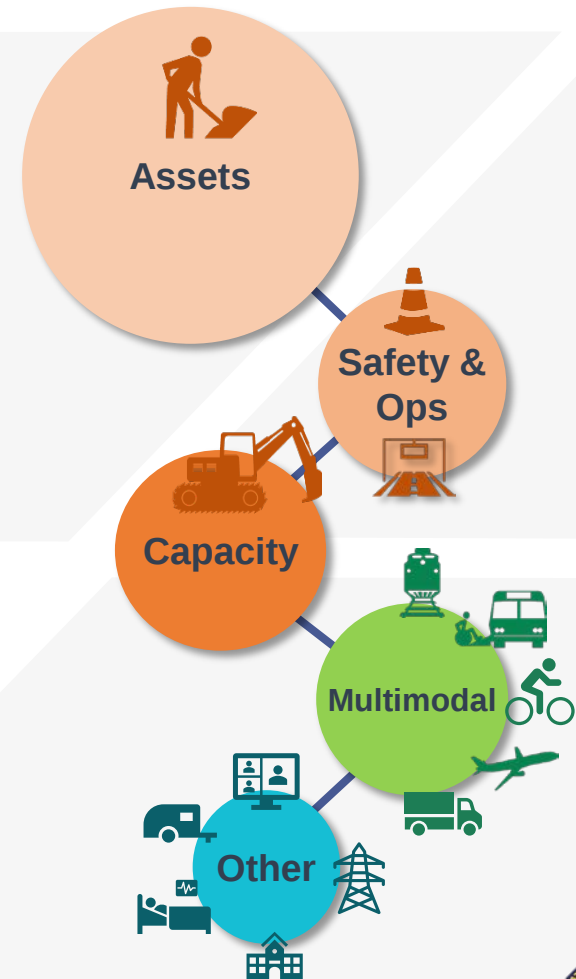
For bridge and pavement, the total funding required to maintain asset condition at 10% poor or better was analyzed



2050 LRTP

Needs Assessment – Takeaways

- Maintain & modernize highway assets
- Sustain statewide programs (highway operations, tolling, safety)
- Targeted bottleneck needs
- Address multimodal system gaps, new connections
- Align with public health, economic development, and tourism goals
- Inform future planning

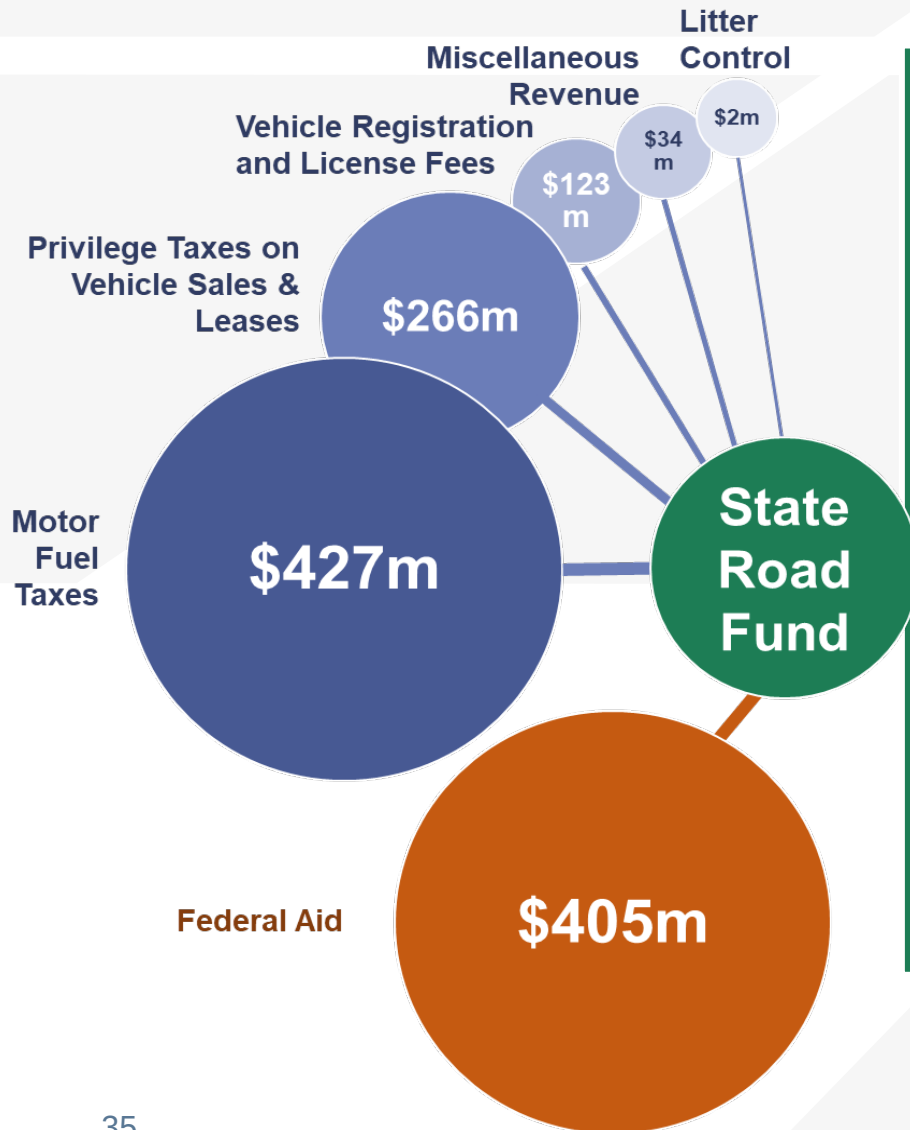


What Are Our Transportation Revenues?



2050 LRTP

Transportation Revenue Sources



Federal Aid

Motor Fuel Taxes – Includes flat rate (\$0.205/gal) + variable rate (\$0.152/gal) based on 5% of average wholesale price

Privilege Taxes – Applied at time of sale/lease of vehicles registered in state; charged on vehicle net sale price (6% on purchased vehicles, 5% on leased vehicles)

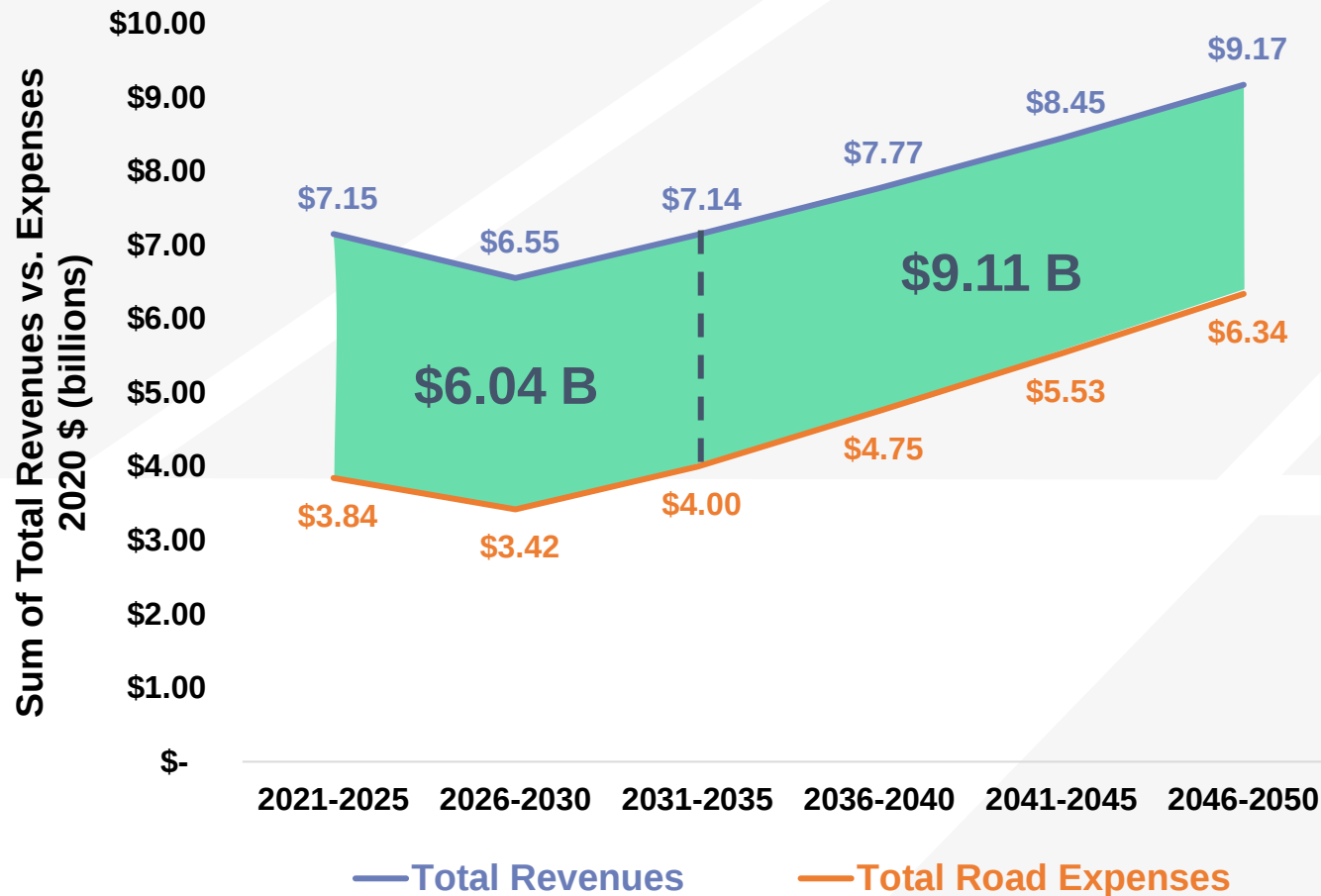
Vehicle Registration & License Fees – Annual fee: \$51.50 registration, \$200 EV fee, \$100 plug-in-hybrid

Miscellaneous & Litter Control – From map and permit sales, tonnage fees, interest earned on investments, and litter control fee



2050 LRTP

Expenses vs. Revenues – Baseline



Growth in revenue driven by 2% annual growth in auto privilege and registrations and growth at CPI for federal sources, offset by stable/declining revenue from MFT

Available revenue for capital highway expenses slowly declines relative to total revenue and increase in other expenses

Growth in expenses driven by assumed 4% annual maintenance cost increase and 4% annual admin cost increase, including debt service schedule



2050 LRTP

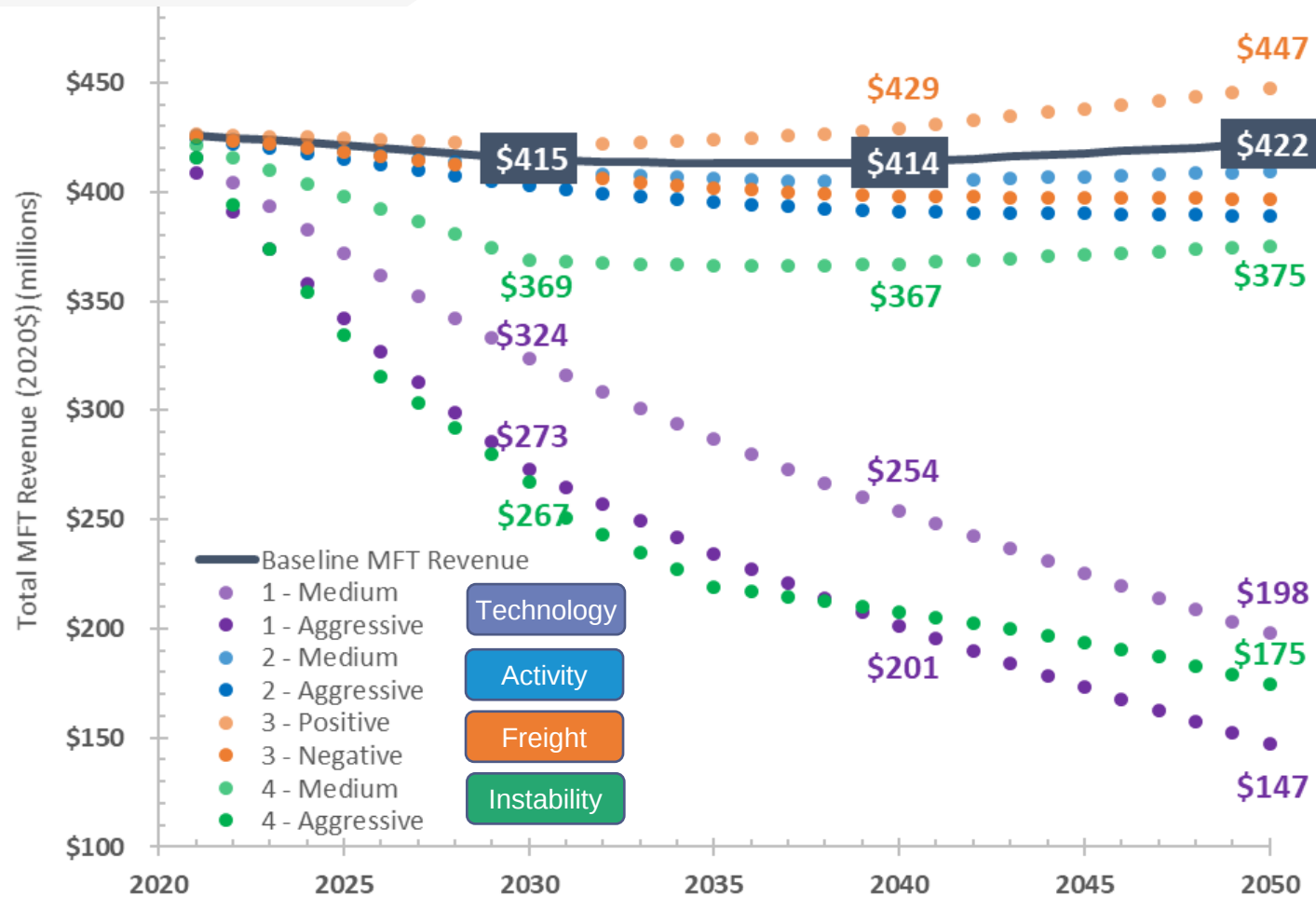
Revenue Scenarios

High EV market share
(up to 40% by 2050)
has large effect on
Motor Fuel Tax revenue

Changing travel activity
may lead to revenue
decreases (uncertainty)

Freight traffic growth
can provide added
revenues

Unexpected events and
high inflation impacts
both revenue and costs

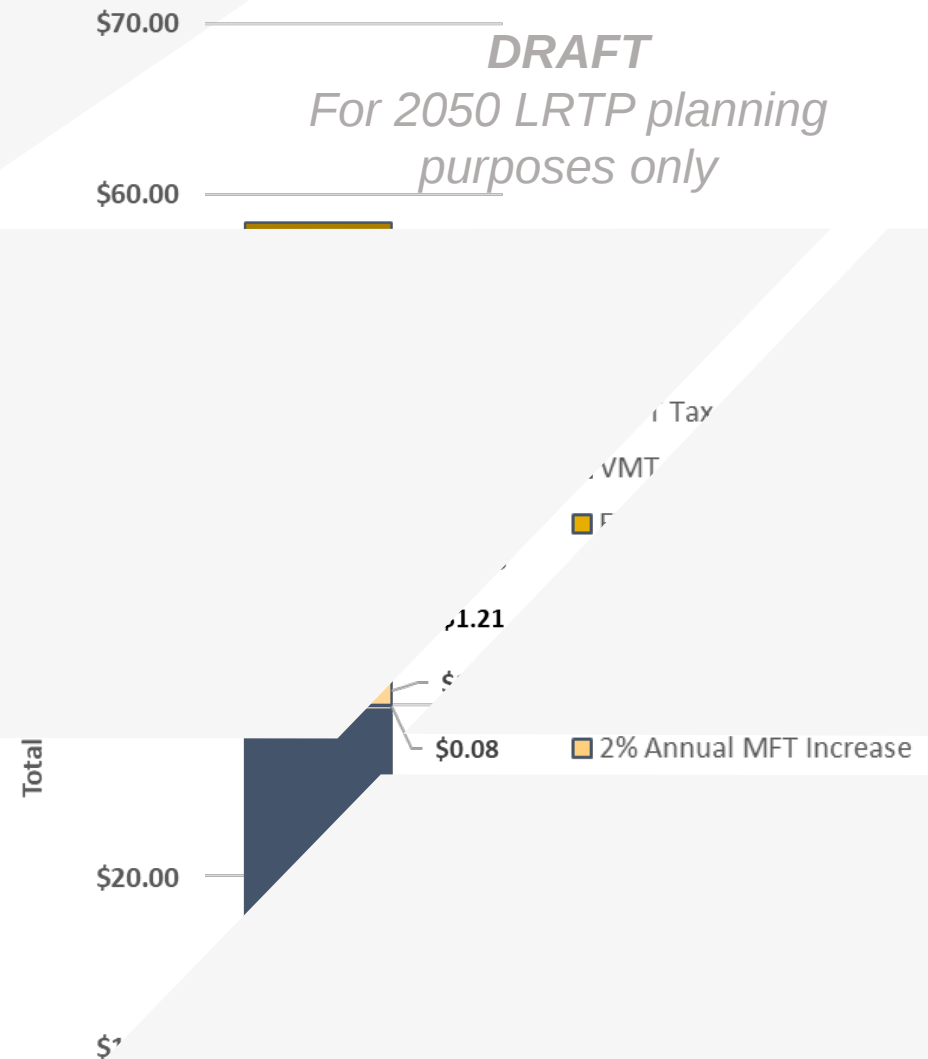


2050 LRTP Revenue Options

Increasing Existing Taxes

generates additional revenue for roads being used and could eventually replace MFT

Introducing new taxes outside transportation diversifies revenue sources and provides significant yield



Where Does this Leave Us Today and In the Future?

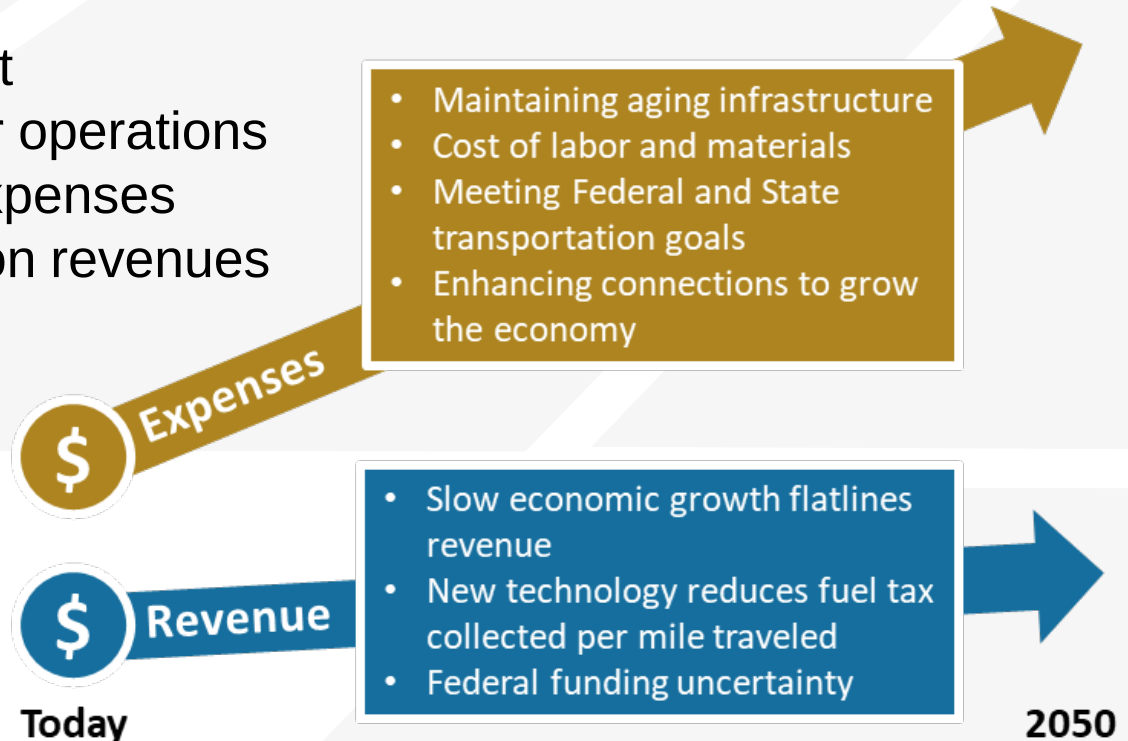


2050 LRTP

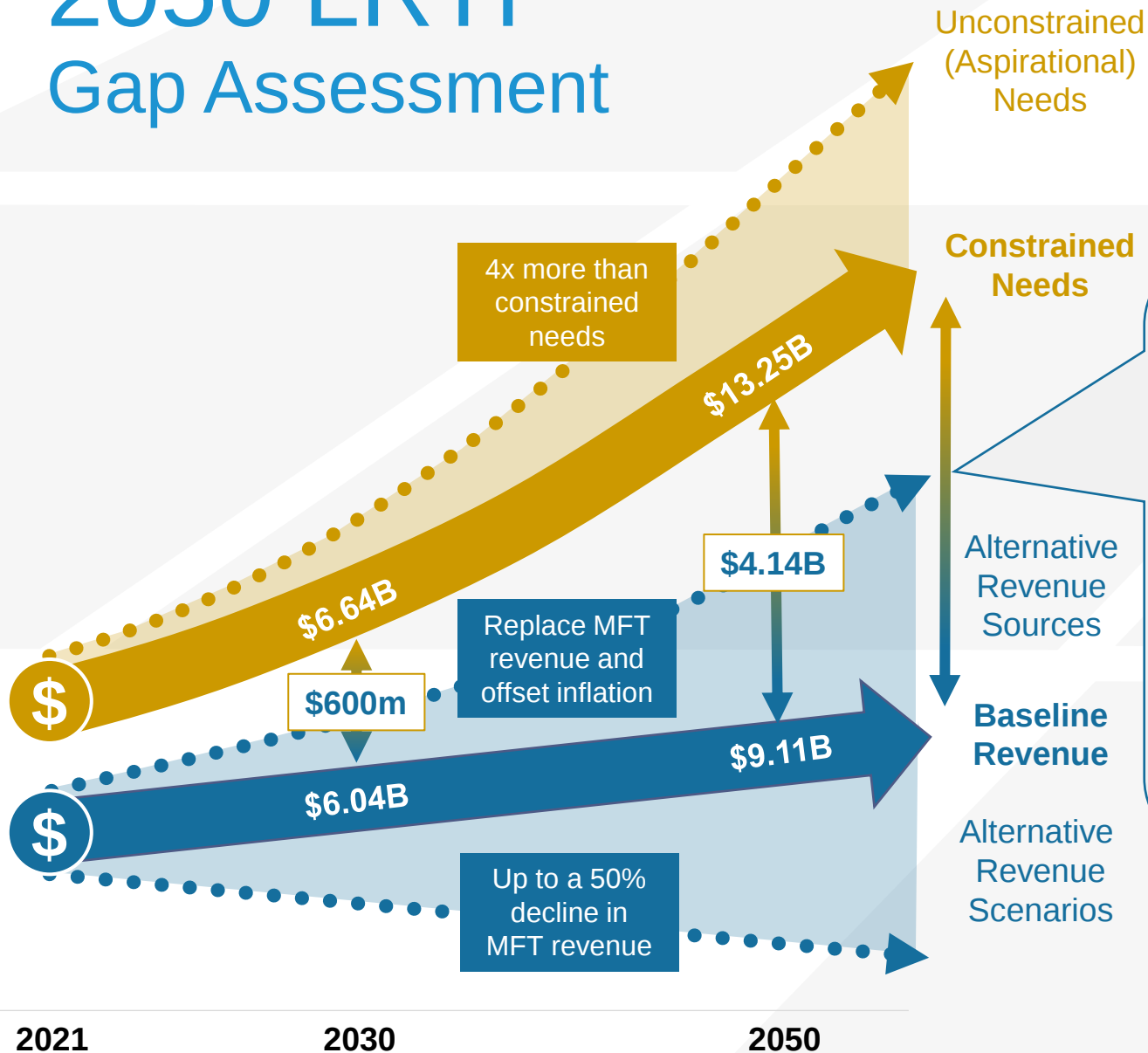
Gap Assessment

➤ **Expenses** are more than **Revenues**

- » Capital improvement needs PLUS regular operations and maintenance expenses exceed transportation revenues
- » Increasing gap is due to traditional revenue sources generating less than the ongoing growth in needs and regular system maintenance expenses.



2050 LRTP Gap Assessment

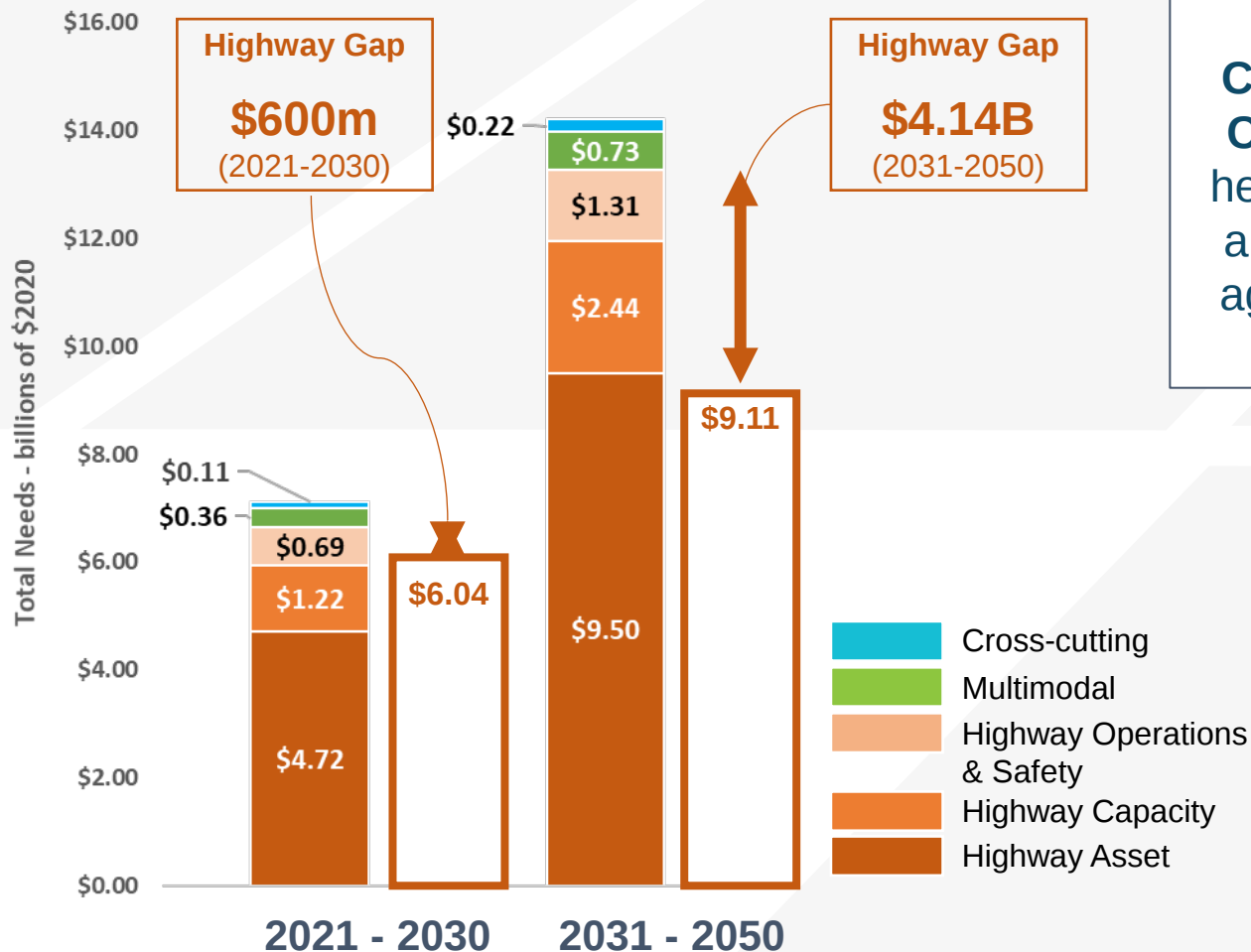


- The gap will continue to increase as needs and costs to do business increase
- The longer that revenue sources remain fixed, the more revenue risks increase from inflation and other external drivers
- More efficient spending and new revenue sources can reduce the gap

2050 LRTP

Gap Analysis

Constrained Needs versus Constrained Revenues



Needs Exceed Revenues

Focusing on **Constrained Needs** and **Constrained Revenues** helps us compare existing and alternative revenues against **constrained** and **aspirational** needs

Platform to develop
Portfolios and Strategies



What Can We Do?



2050 LRTP

The Road Ahead

Shaped by Goals & Objectives



As needs increase, costs continue to rise, assets continue to age, economy diversifies, and travel patterns change

Gap Increases



As revenues yield less (if sources remain constant) due to inflation, emerging trends and uncertainties



If WVDOT increases efficiency through new technology and best practices leading to lower costs and higher return on investment

Gap Decreases



If modified and new revenue sources can limit the impact of trends that weaken existing revenue sources

Defining Portfolios



Focus on critical asset management needs by balancing asset preservation strategies across the entire system



Focus on highway safety and reliability needs, including behavioral and systemic safety improvements and operations and capacity strategies



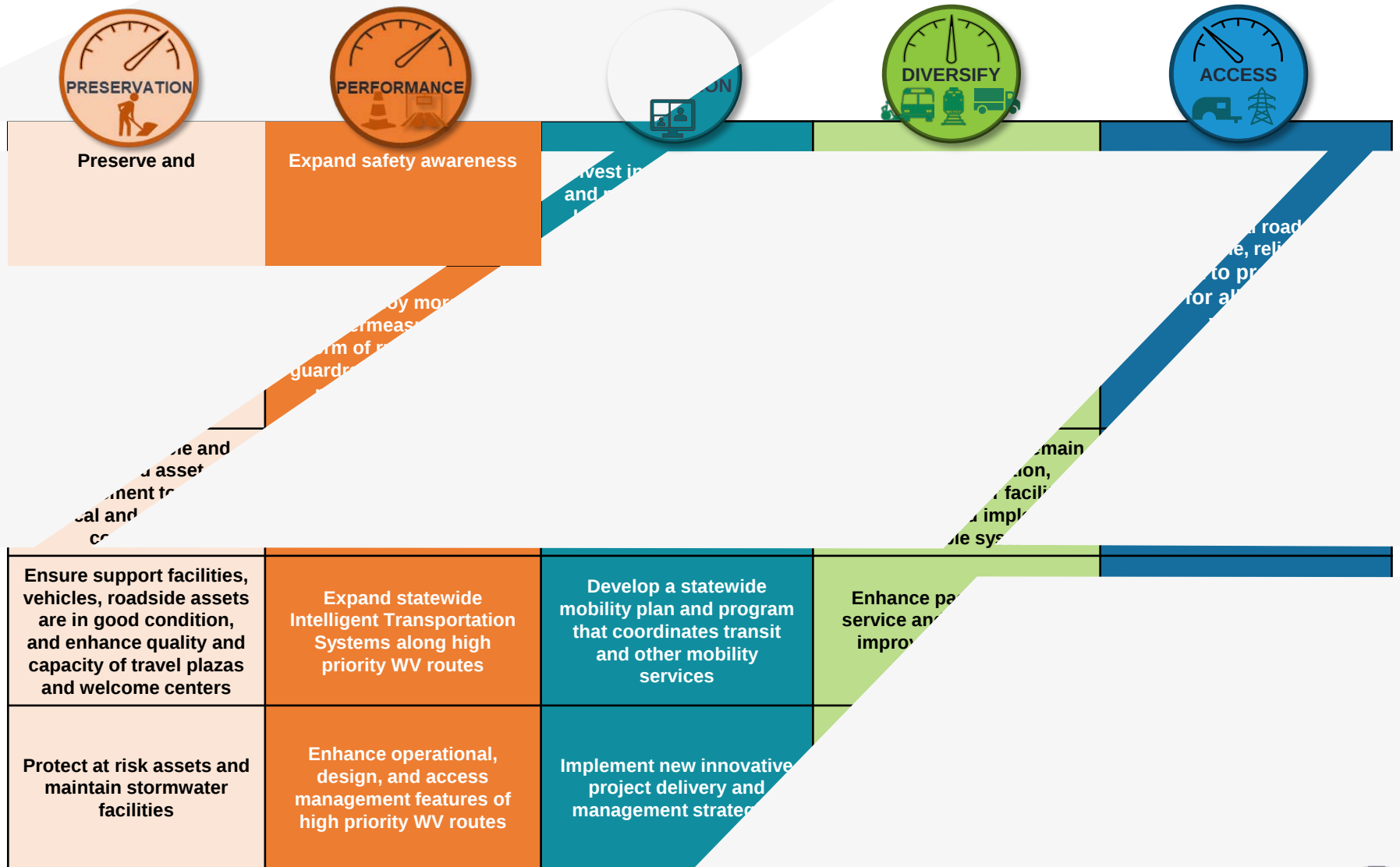
Focus on existing and emerging technology opportunities to optimize program delivery, capitalize on opportunities, build new partnerships, and prepare for new technologies



Focus on increasing investment in multimodal options for passenger and freight trips to improve access to destinations and opportunities



Focus on serving disconnected communities and addressing network gaps to improve access to jobs, health care, recreation, and key industries



How Are We Going To Do It?



Strategies to Actions

Categories



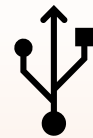
Policies to
guide strategic
decisions,
programs, and
resource
allocation



Practices to
impact
multimodal
asset, safety
and mobility
performance



Partnerships
to *coordinate*
transportation
investments with
state goals and
objectives



Technology
to *enable*
enhanced
program delivery
and asset
management

Strategies to Actions

Timeframe

**Within each strategy
will be targeted short-term actions**
(specific policies, practices, programs, projects)

Incorporate into
future **programming
cycles** (5 years)

Trade-off decisions should consider readiness, resource availability,
implementation barriers (institutional, technology, etc...), and
acceptance/willingness to implement

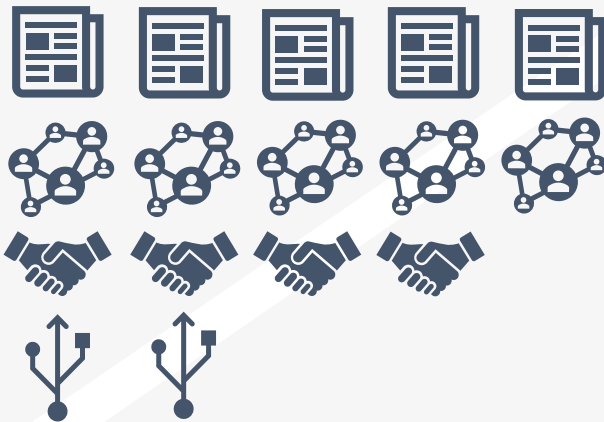
**Within each strategy
will be priority and longer-term actions**
(planning and policy development and other
actions with a longer lead time)

Incorporate into
planning cycle
(6+ years)



Plan Implementation Approach

Next 5 years



Next 6 - 10 years

WVDOT and partners can setup framework in the next 6 – 10 years, but real implementation could be 10 or more years in the future

Beyond 10 years

Some up-front collaboration can occur... a new LRTP may be started before many of these are implemented

19 Highest Priority Actions

CONTINUE AND ACCELERATE

Highest priority for implementation over next 5 years with potential for real benefits. Some actions already being implemented; other actions will require new resources.

21 High Priority Actions

INITIATE AND ESTABLISH

May require additional data, practice changes, enhanced management systems or resource commitments and expanded partnerships to implement.

25 Long Term Actions

LONGER TO LAUNCH

Remain a priority but require more time, resources, partnerships pushing implementation beyond 2030

Plan Implementation

Highest Priority Actions – Next Five Years



NHS and Turnpike Bridge Condition

Integrate bridge management system and roadway data

NHS and Turnpike Pavement Condition

Integrate pavement management system and roadway data

Maintain current projected funding levels to maintain condition

Non NHS Bridge and Pavement Condition

Improve communication between Districts and Central Office

Slides, Stormwater & Roadside Management

Deploy stormwater management and green infrastructure



Traffic safety awareness, education, enforcement

Expand communication tools, education, marketing

Streamline traffic record data management

Traffic safety countermeasures

Expand use of emerging countermeasures to prevent crashes



Asset tools and support systems

Pilot longer lasting, durable construction materials and methods

Agency coordination and partnerships

Improve communication of planning, projects and major initiatives

Mobility services and management

Develop a Statewide Coordinated Transit Plan

Project Delivery and Management

Proactively pursue Federal grant and financing opportunities



Connected active transportation networks

Deliver needed sidewalk Infrastructure and ensure ADA compliance

Freight market access and intermodal opportunities

Improve highway-rail crossings



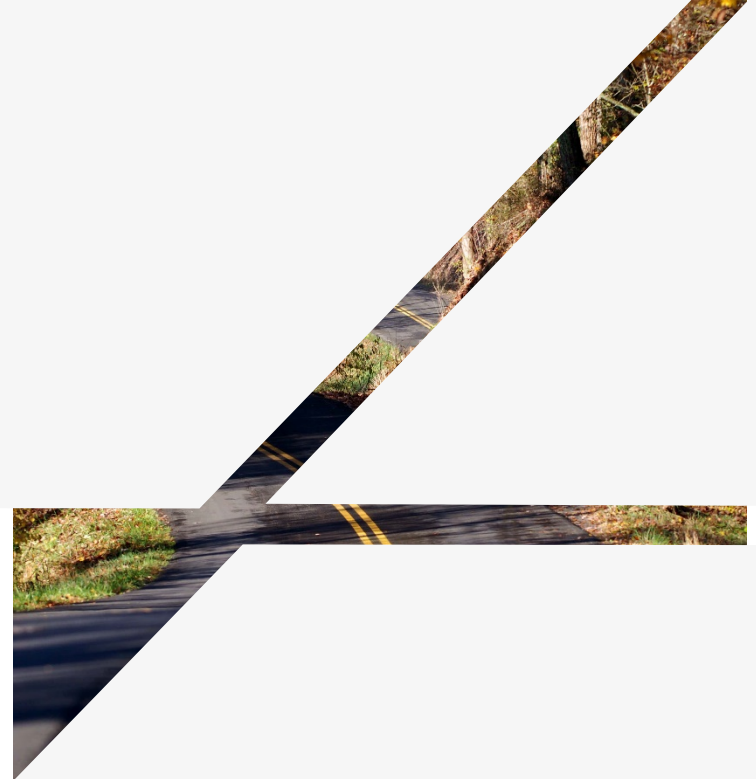
Recreation and heritage access

Enhance assets to promote outdoor tourism

Ensure adequate access to state historic/recreational sites

2050 LRTP

Next Steps



will be ongoing

➔ **Your input is important!**

2050 LRTP

Your input is important to us!

➤ **Review all content here:**

<https://transportation.wv.gov/highways/programplanning/LRTP/Pages/default.aspx>

➤ **Email comments/questions to:** DOT2050@wv.gov

➤ **Mail comments/questions to:**

Planning Division,
West Virginia Division of Highways
1900 Kanawha Boulevard,
Building 5, Room 740
Charleston, West Virginia 25305

Thank you!

