2050 Multimodal Long-Range Transportation Plan

Round 3 Stakeholder Meetings
April 20 – 21, 2021

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Agenda

- 2050 LRTP Schedule & Status
- Needs Assessment Findings
- Revenue Forecast/Alternative Findings
- Gap Assessment
- Portfolios and Strategies
- Next Steps

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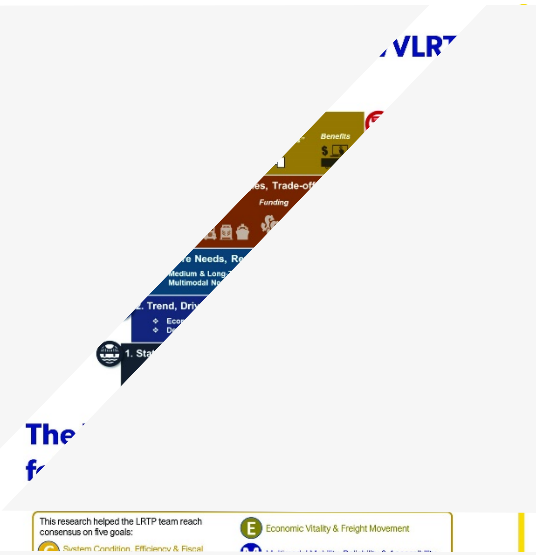
2050 LRTP Accomplishments
Work Completed Since February



- ✓ **Finance Plan***
- ✓ **Gap Assessment**

* Posted to 2050 LRTP website

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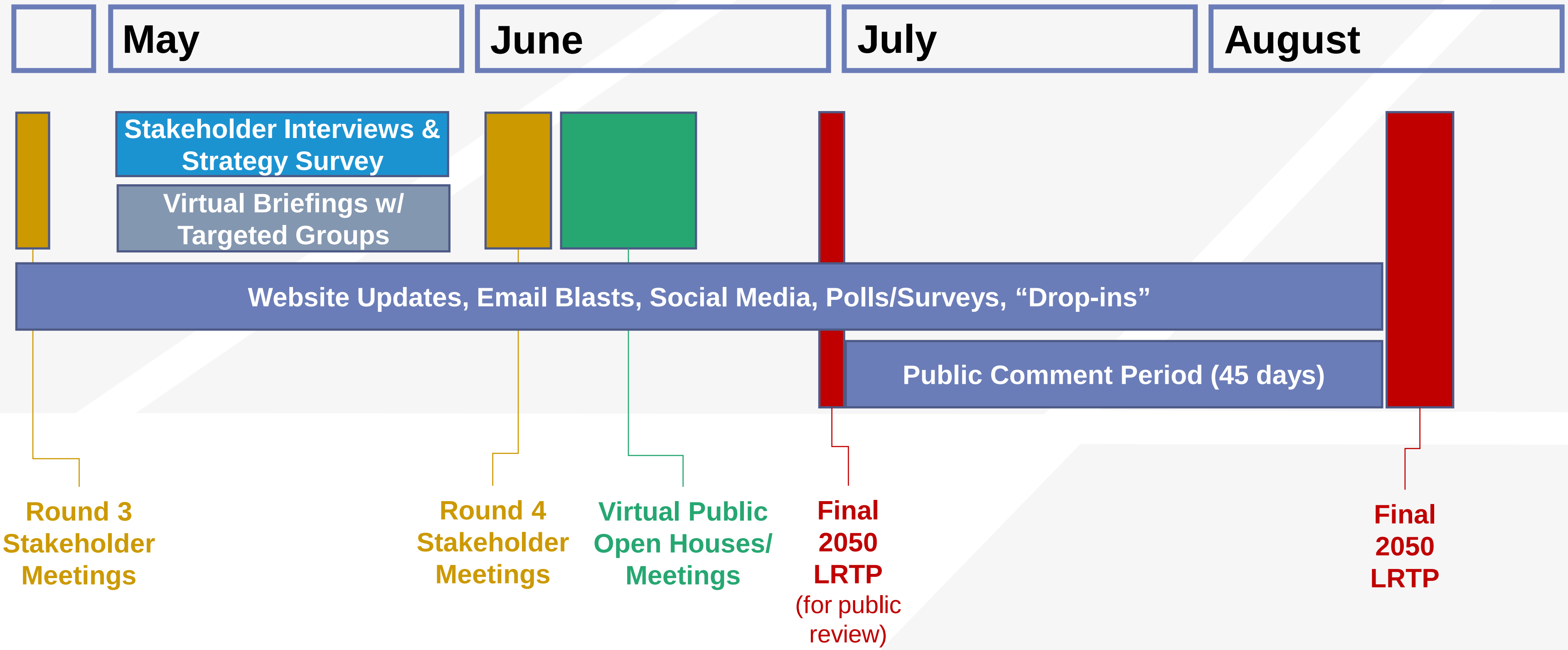
2050 LRTP Outreach
April – August



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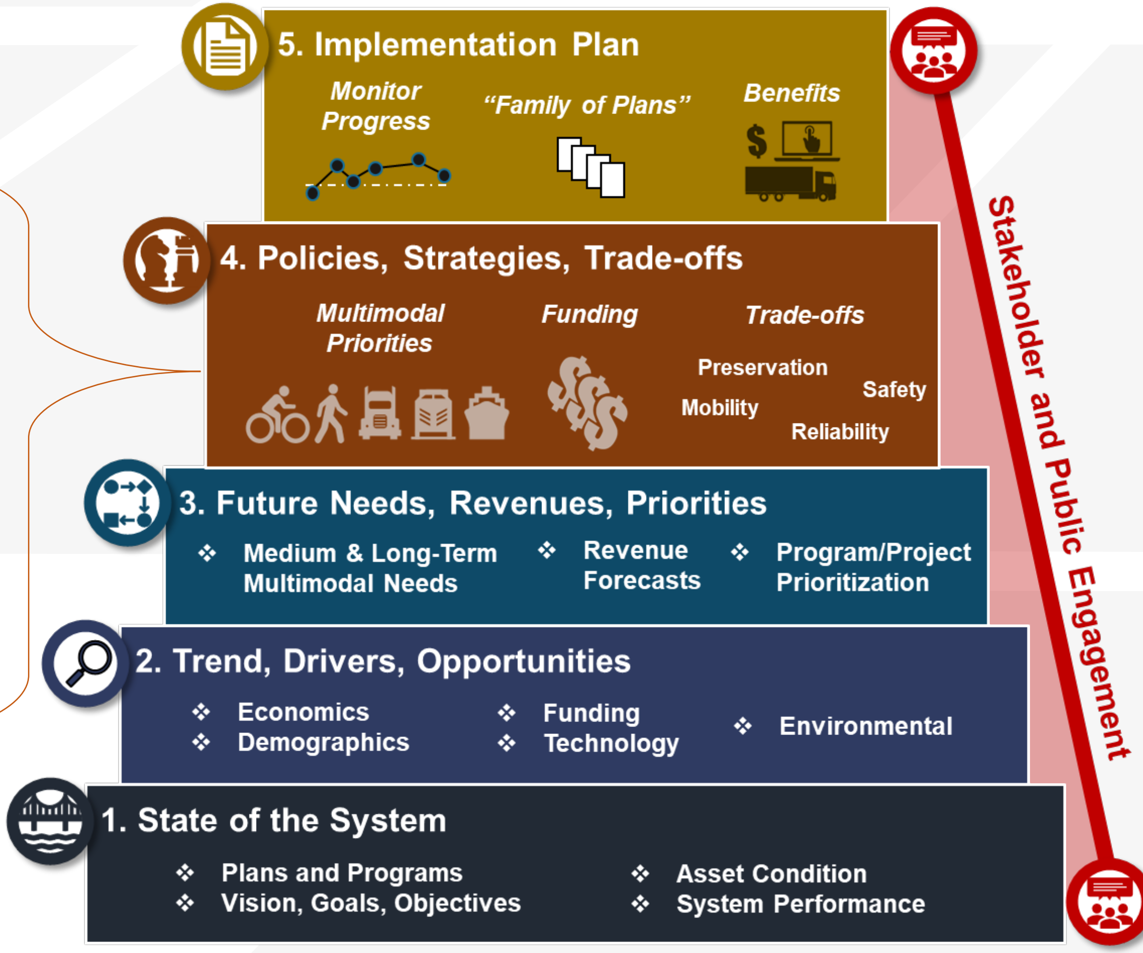
2050 LRTP
Phase 4

1. **Gap Assessment**
2. **Draft and Final Portfolios**
3. **Portfolio Assessment** (trade-off tool, alignment with plan goals, stakeholder input, benefits)
4. **Priority Portfolio** (strategy/program prioritization and stakeholder input)
5. **Portfolio Summary and Funding Implications**



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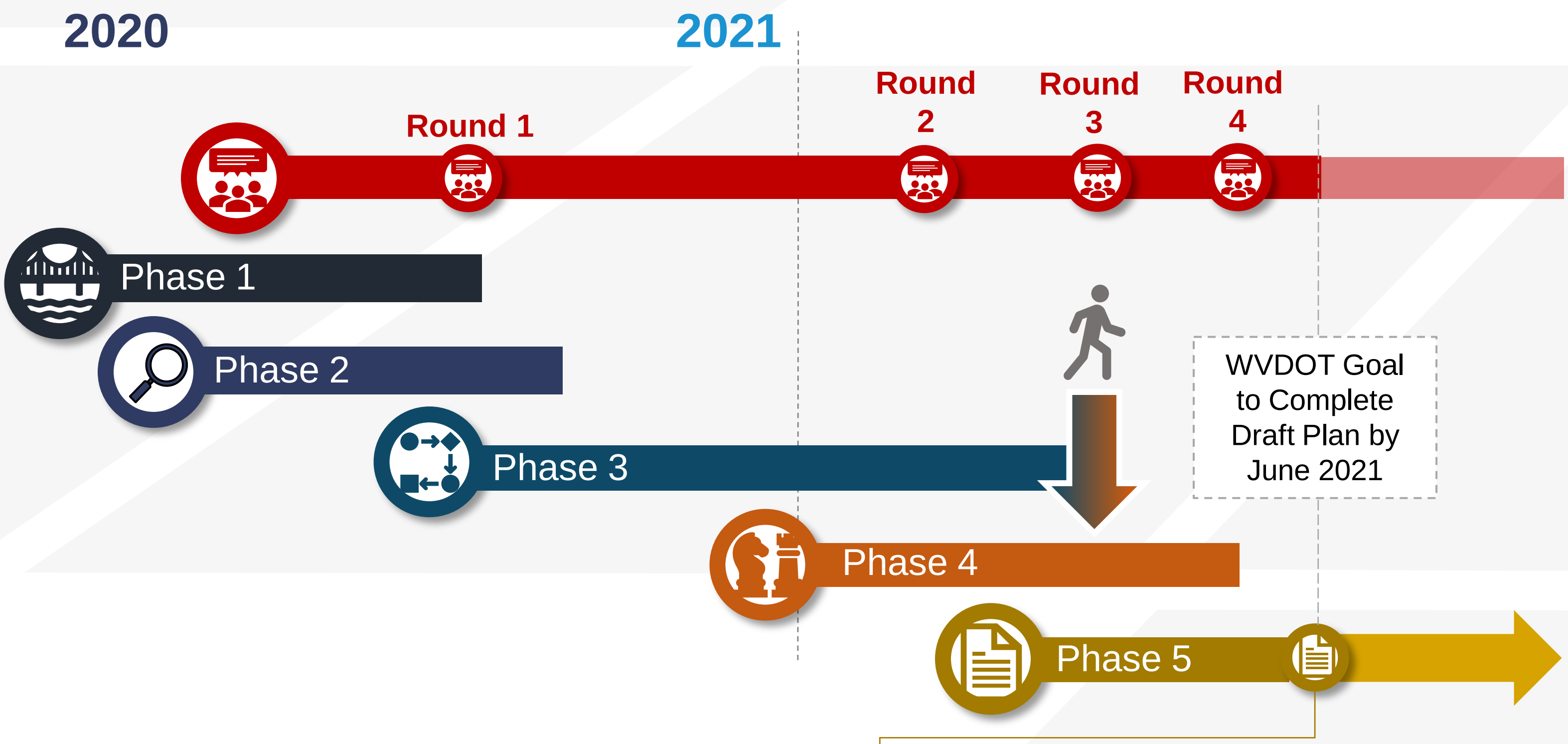
2050 LRTP
Plan Schedule



2050 LRTP

Addresses Federal requirements and documents the LRTP process, recommendations, and prioritized strategies and projects

Implementation

WVDOT approach to put the 2050 LRTP into motion

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Needs Assessment

4/20/2021

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2050 LRTP
Overview – How This All Connects

Phase 3 – compare revenues against multimodal needs

NEEDS
define through models, experts, plans, studies

REVENUES
forecast from current investment plans and changing revenue futures and risks

GAPS
grow by system deterioration, material cost, future uncertainties

OPTIONS
vary by alternate revenue scenario

TRADE-OFFS & PRIORITIES
- Asset performance
- System efficiency, reliability & safety
- Technology supportive opportunities
- Multimodal & intermodal connections, access
- Transportation importance to jobs, healthcare, education

PORTFOLIOS
Basis to inform policies, programs, initiatives and outcomes for LRTP implementation

Phase 4 – identify policies, programs and projects to meet WV transportation goals

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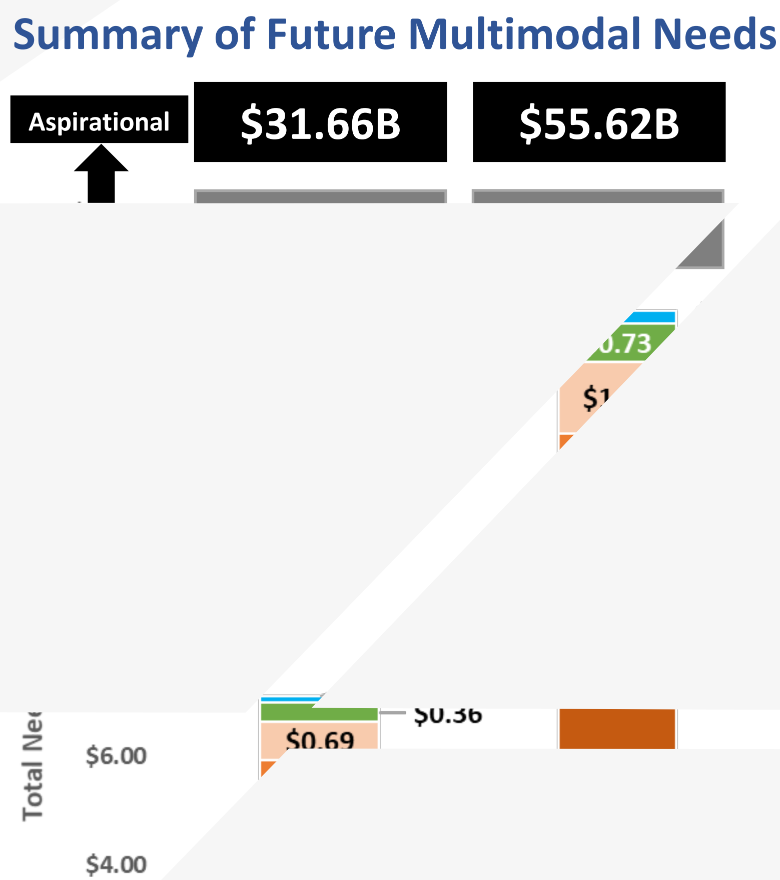
2050 LRTP
Needs Assessment



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constrained and vision projects.

Subject Matter Experts (SMEs)

WVDOT staff who helped “ground truth” information.

Stakeholder Survey

Perspectives of 106 participants representing WVDOT, MPOs, Regional Planning and Development Councils, and other agencies.

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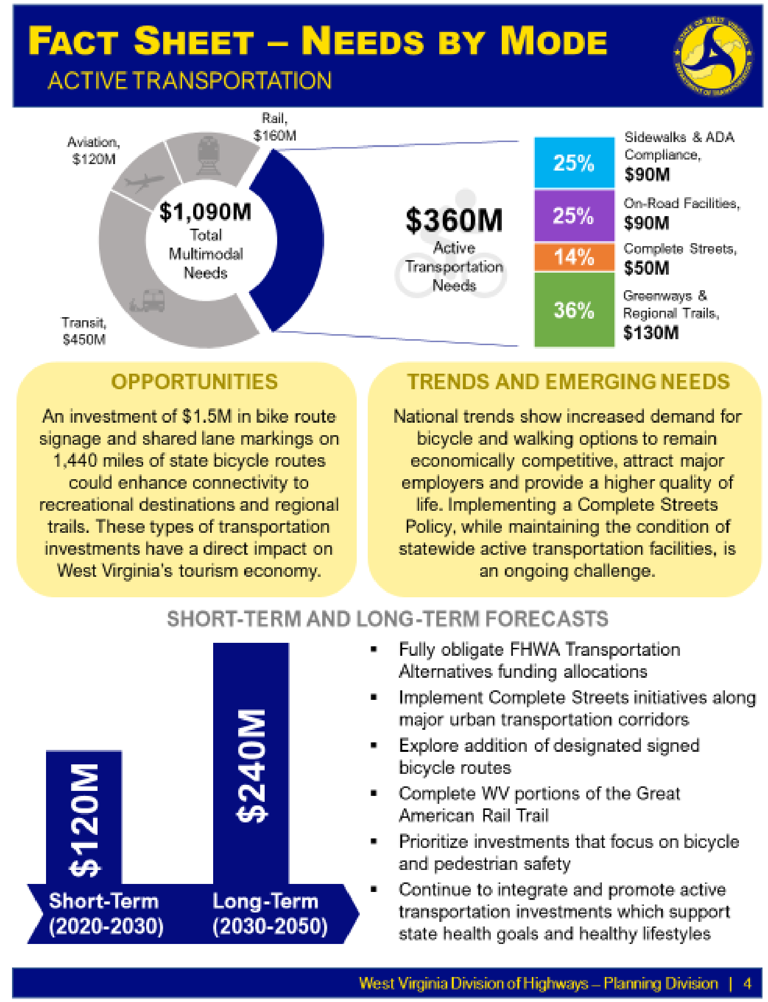
2050 LRTP

Needs Assessment – Report & Fact Sheets

Technical Report
details the complete story, sources, limitations, and outcomes

Fact Sheets (9 total)

- **Technical Summary**
  distilled "at a glance" information in reader friendly format
- **Story Telling**
  highlights mode, asset specific challenges and opportunities facing WV systems through WV data, tools and SME input
- **Resource Material for Partners, Public**
  Packet for distribution to WVDOT planning partners and the public


FACT SHEET – NEEDS BY MODE

ACTIVE TRANSPORTATION

OPPORTUNITIES

An investment of $1.5M in bike route signage and shared lane markings on 1,440 miles of state bicycle routes could enhance connectivity to recreational destinations and regional trails. These types of transportation investments have a direct impact on West Virginia's tourism economy.

TRENDS AND EMERGING NEEDS

National trends show increased demand for bicycle and walking options to remain economically competitive, attract major employers and provide a higher quality of life. Implementing a Complete Streets Policy, while maintaining the condition of statewide active transportation facilities, is an ongoing challenge.

SHORT-TERM AND LONG-TERM FORECASTS

- Fully obligate FHWA Transportation Alternatives funding allocations
- Implement Complete Streets initiatives along major urban transportation corridors
- Explore addition of designated signed bicycle routes
- Complete WV portions of the Great American Rail Trail
- Prioritize investments that focus on bicycle and pedestrian safety
- Continue to integrate and promote active transportation investments which support state health goals and healthy lifestyles

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2050 LRTP
Needs Assessment Platform

Needs Assessment Platform (NAP)

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Filter needs by timeframe, mode, sub-mode, source, goal, program, project type, constrained, aspirational. Forecasts of mode-specific, program-based or deterioration-based analyses.

Designed to Evolve
Future functionality could add geospatial reference, tailored reporting capabilities to respond to a variety of federal, state, or local partner inquiries.

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Revenue Forecast

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2050 LRTP
Finance Plan

"Real" Population Growth Stakeholder input guided subsequent tests off 1.78M estimated future population by 2050

Constrained Revenues Continued estimating all available revenues for capital investment by excluding basic operating expenses

Alternative Scenarios Analyzed macroeconomic effect on revenue across: **Technology**, **Travel Activity**, **Freight**, and Unstable (**Instability**) scenarios

Alternative Sources Evaluated revenue outcomes from possible modifications and additions to amplify, diversify, and strengthen revenue sources

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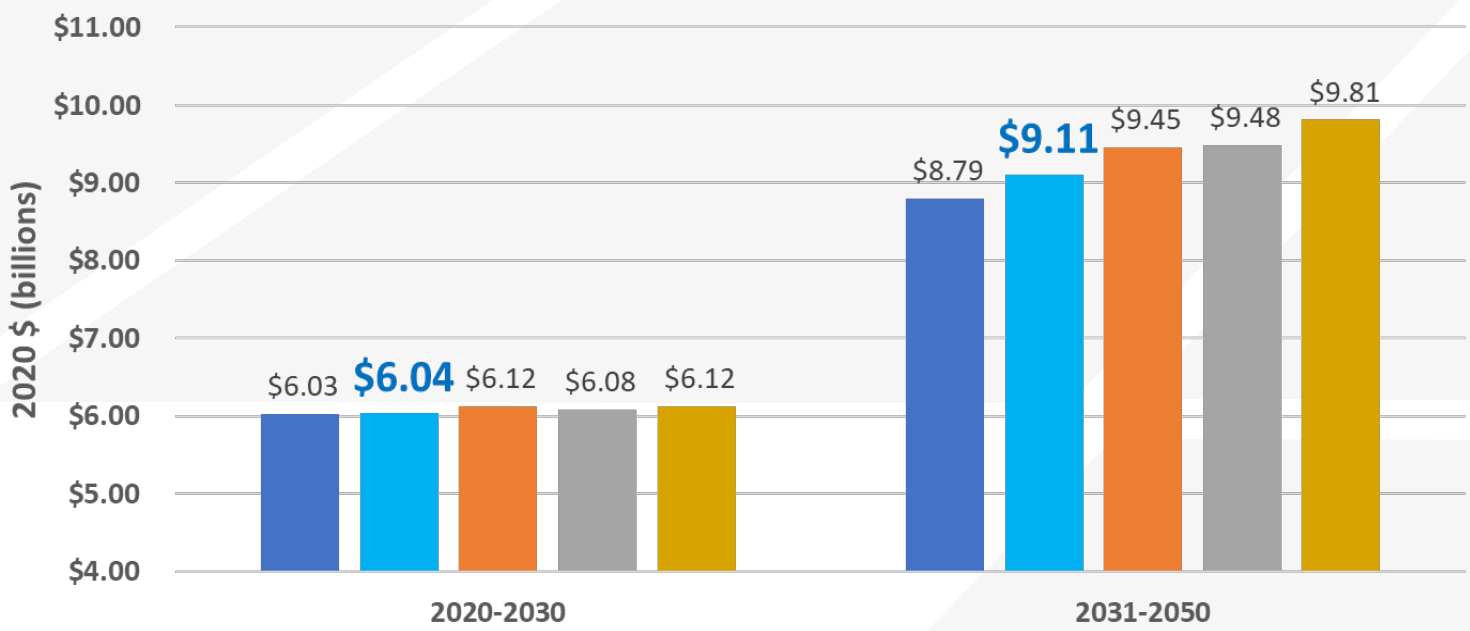
Revenue Forecast – Baseline Results

Total DOH Constr



Baseline Trend based on 2012-2020 and forecasts

Real Gradual economic recovery

Rebuild Return to 2012 population

Return 2000's growth rate

2 million WVs population in 1950

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Revenue Forecast – Scenario Results

High EV market share

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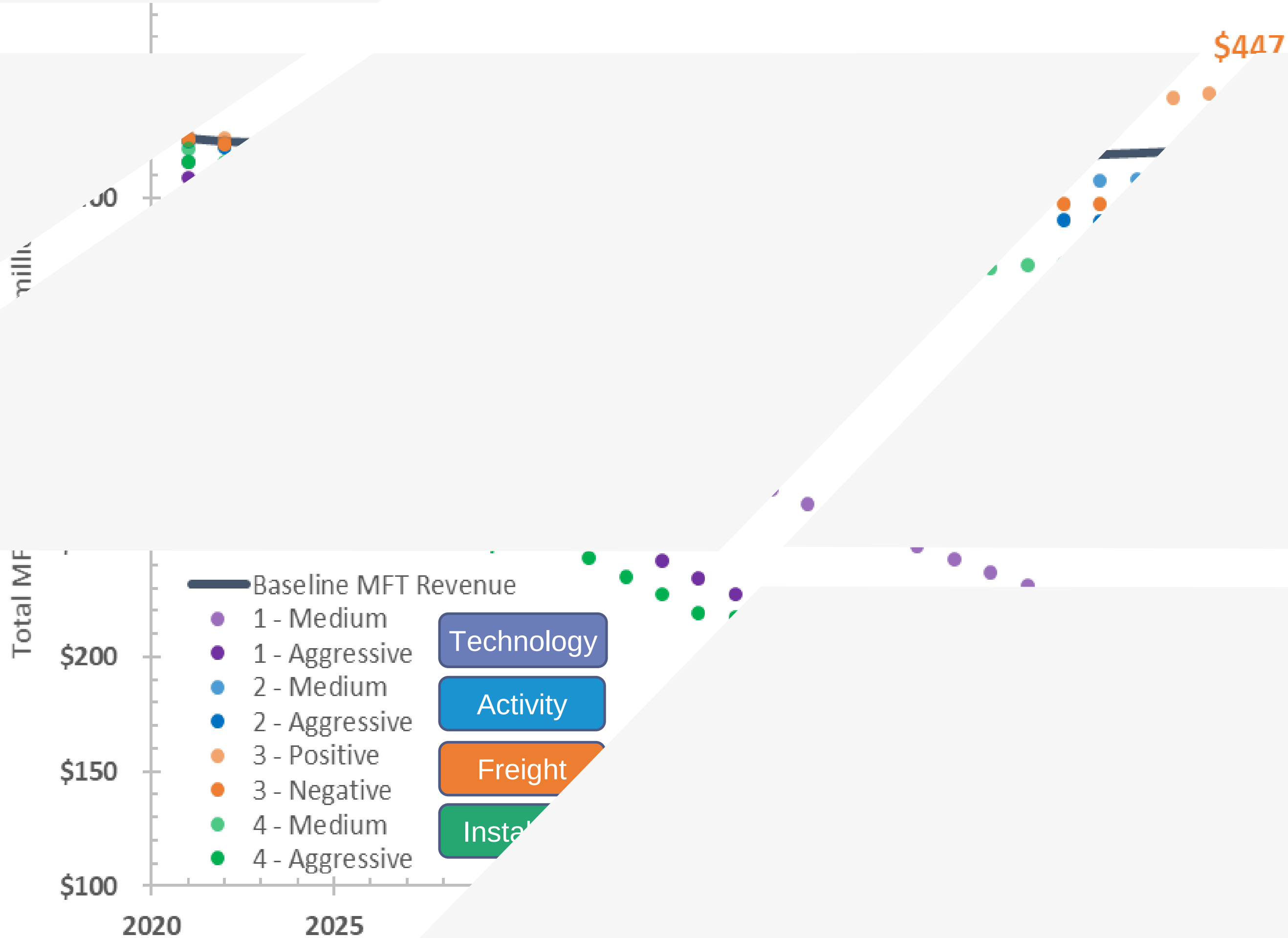

Leveraging freight traffic growth can provide added revenues

Unexpected events and high inflation impacts both revenue and costs

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Revenue Forecast – Sources Results

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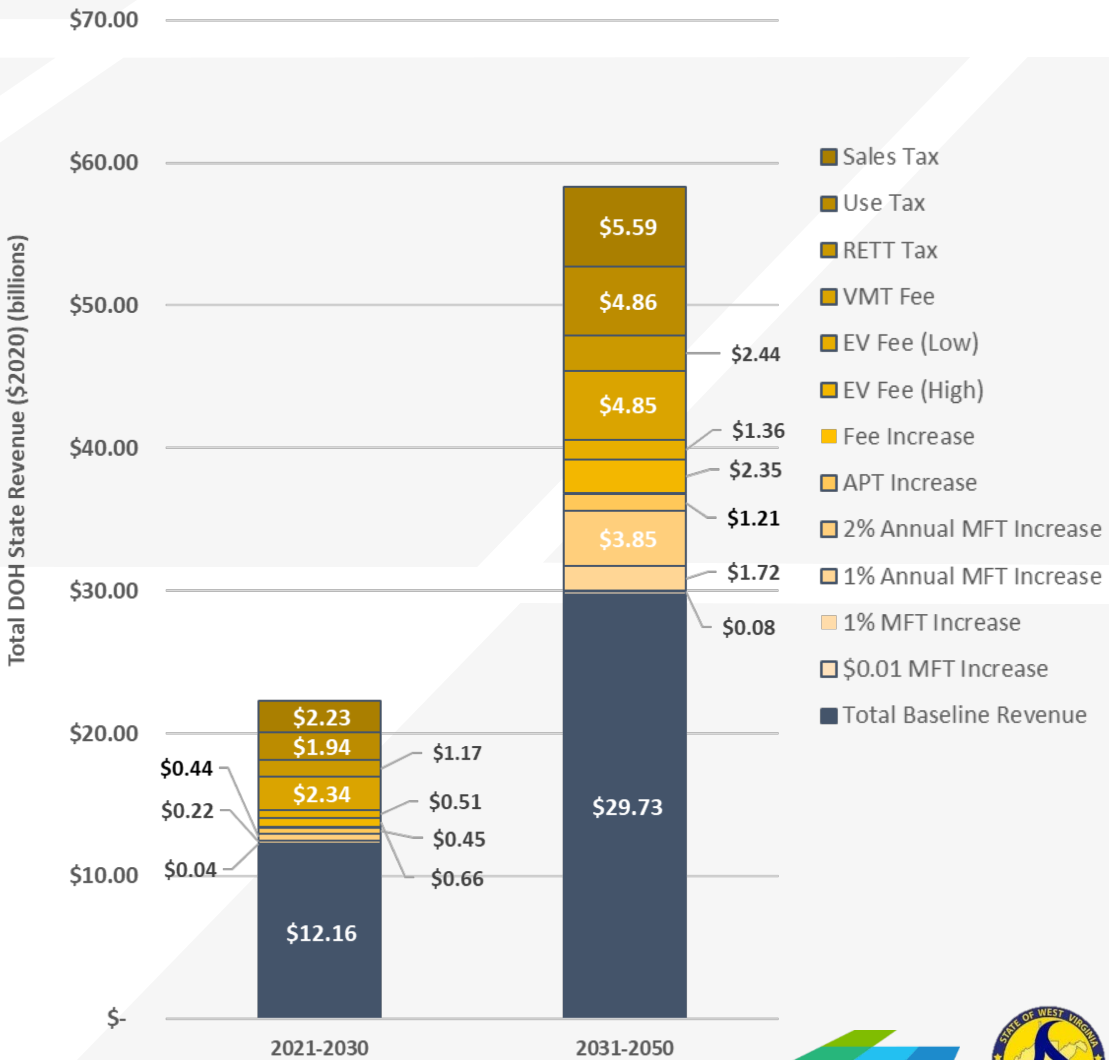
Increasing Existing Taxes enables revenue to keep pace with cost increases

Adding New Fees offsets tax burden

EV fees offset losses to fuel taxes from fleet changes

Implementing VMT Fee generates direct revenues for roads being used and could eventually replace MFT

Introducing new taxes outside transportation diversifies revenue sources and can provide significant yield



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Gap Assessment

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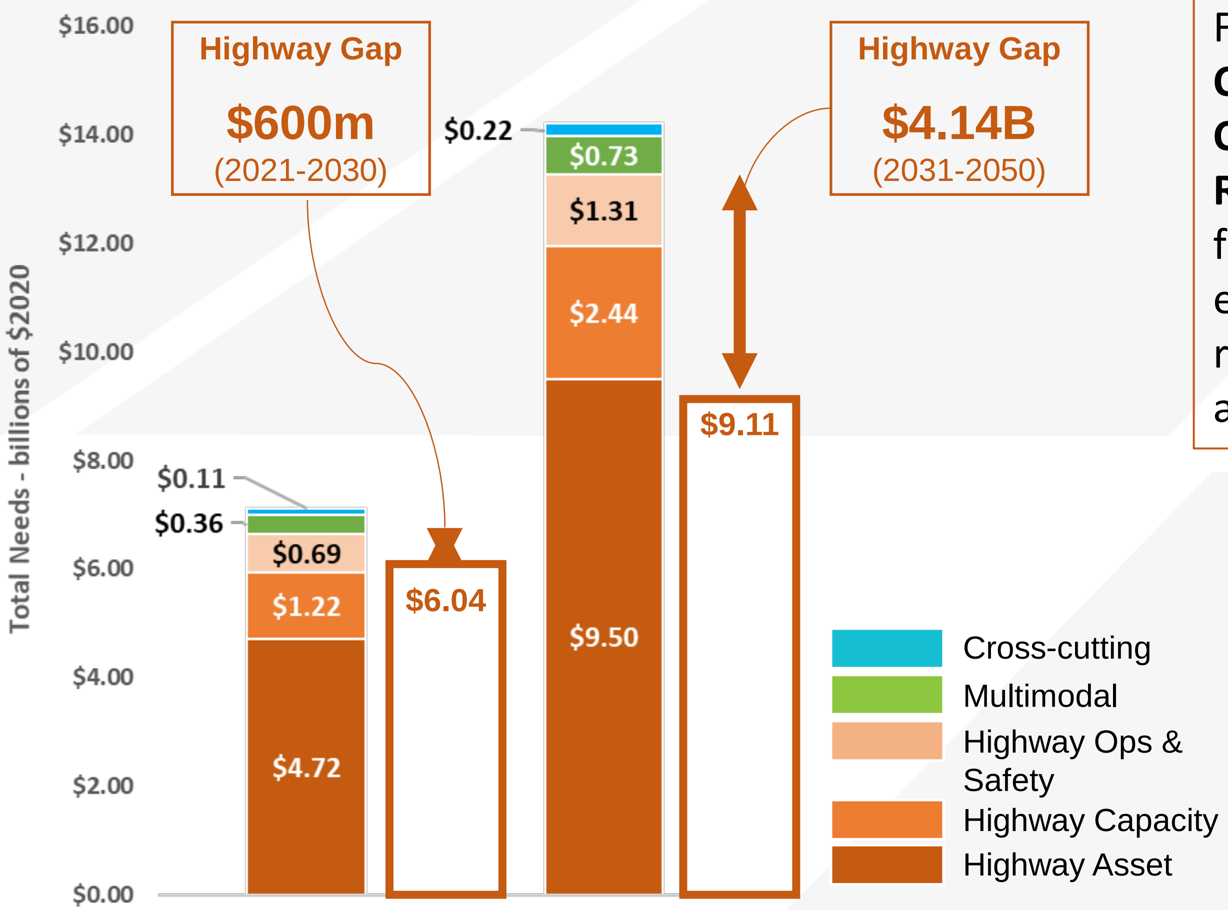
Gap Analysis – DOH Review

Constrained Needs vs. Constrained Revenues



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Focusing on **Constrained Needs** vs. **Constrained Baseline Revenues** provides a framework to compare existing and alternative revenues against **constrained** and **aspirational** needs

Platform for developing Portfolios & Strategies

2050 LRTP

Gap Analysis – Multimodal Perspective

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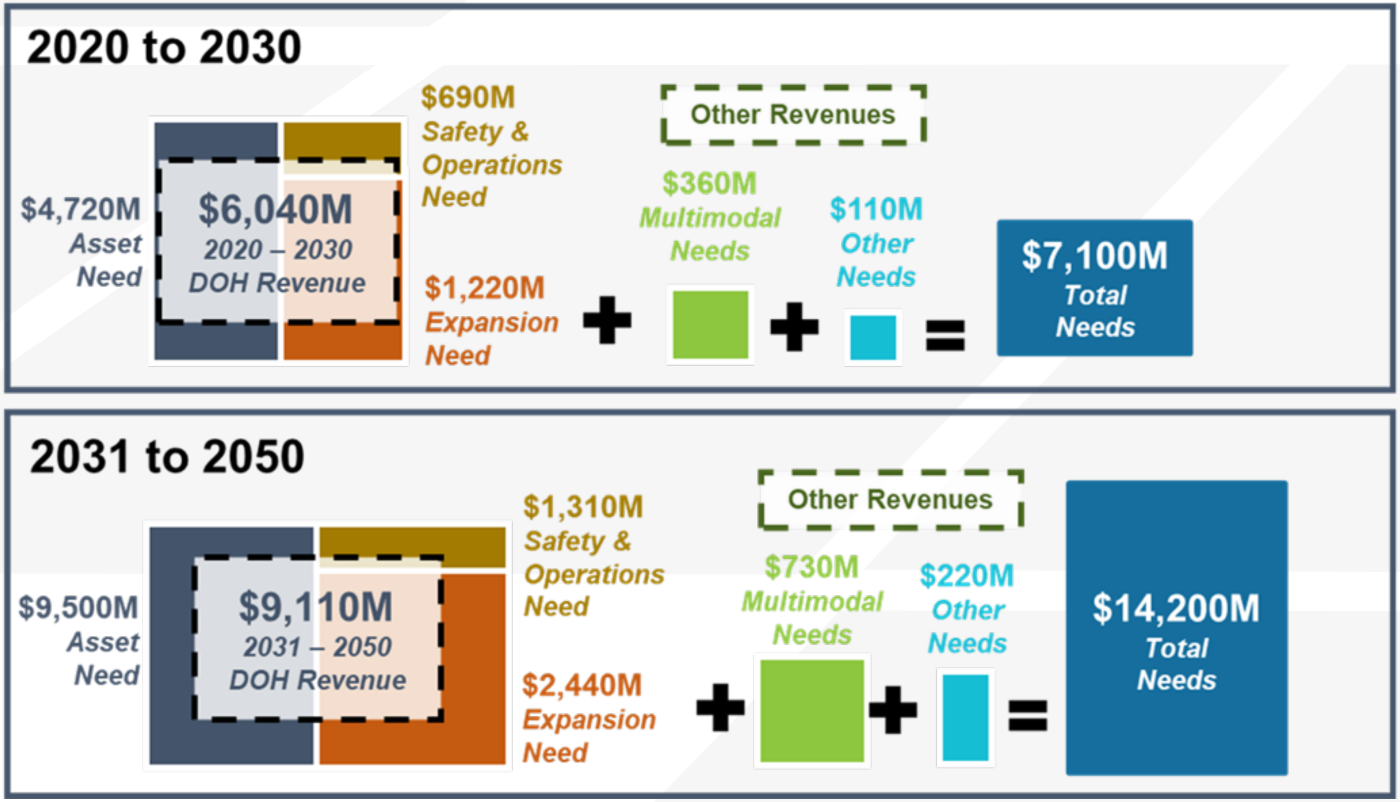
Time Grows Gap
Unaddressed needs increase if nothing is done.

Studying alternative future **Scenarios** alongside changes to revenue **Sources** supports portfolios, strategies, and prioritization



Ongoing Challenges to Funding Transportation As needs outpace revenues, the **2050 LRTP** helps WVDOT *prioritize* approaches to ensure timely repairs are made as future investments are planned across modes, timeframes, and systems.

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2050 LRTP
Gap Conclusions

Shaped by Goals & Objectives

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

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

Gap Increases

Gap Decreases

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

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

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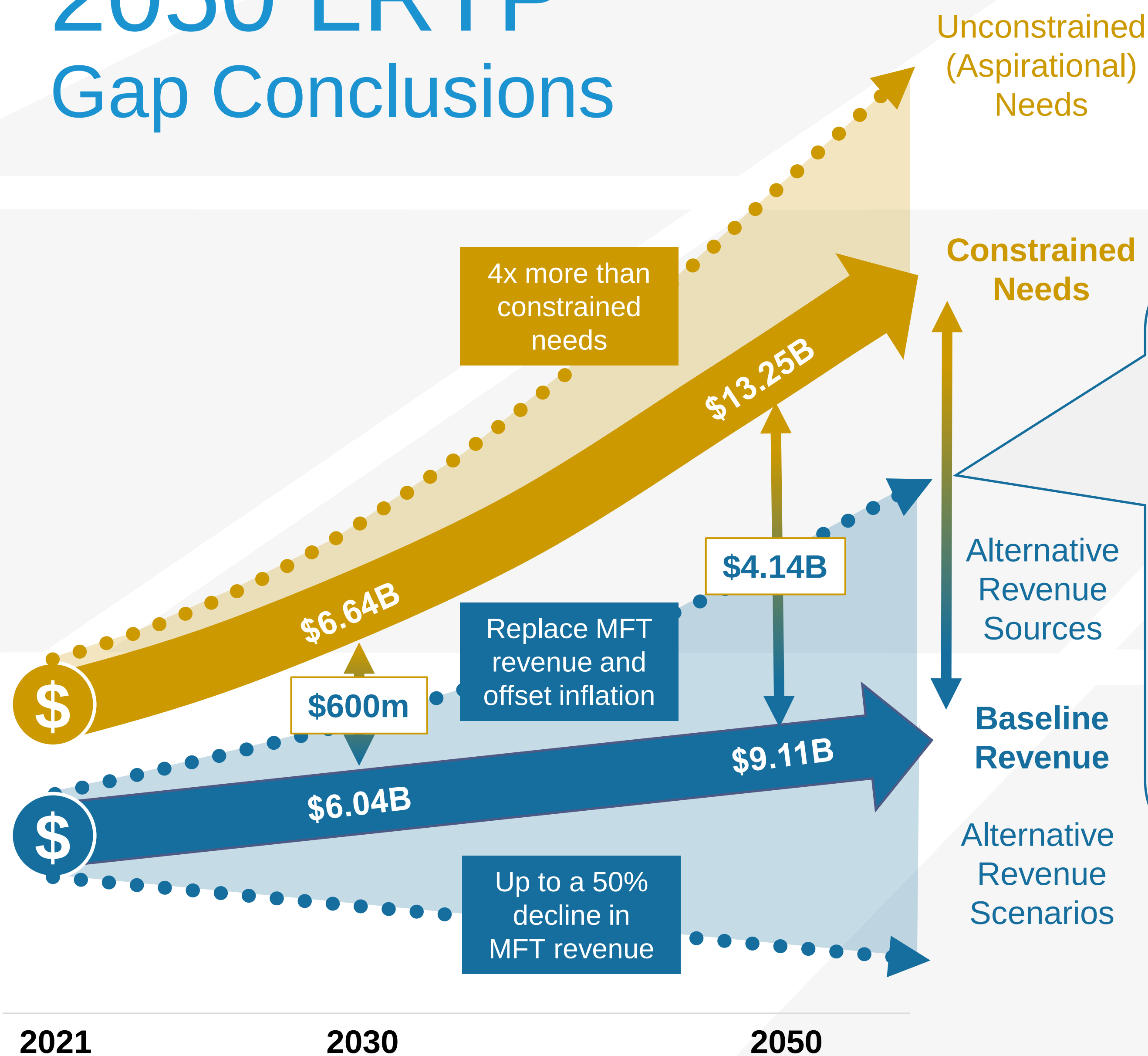
2050 LRTP
Gap Conclusions



- **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**

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Portfolio Development

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Defining Portfolios

PRESERVATION

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

PERFORMANCE

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

INNOVATION

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

DIVERSIFY

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

ACCESS

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

Portfolio Strategies

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PRESERVATION	PERFORMANCE	INNOVATION	DIVERSIFY	ACCESS
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...able an... ...ced ass... ...gement... local ar... commerce			...emain ...ition, ...er faci... ...d impr... new flexible systems	underserved communities
Ensure support facilities, vehicles, roadside assets are in good condition, and enhance quality and capacity of travel plazas and welcome centers	Expand statewide Intelligent Transportation Systems along high priority WV routes	Develop a statewide mobility plan and program that coordinates transit and other mobility services	Enhance p... service a... impr...	
Protect at risk assets and maintain stormwater facilities	Enhance operational, design, and access management features of high priority WV routes	Implement new innovative project delivery and management strate...		

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Portfolio Performance

	System Investment Outcomes	**Change in Performance** *Relative to current state, degree of difference* *By time period, by state and local scale*
PRESERVATION	Balance of bridge to pavement condition	**% Poor, %Fair, %Good**
PERFORMANCE	Optimize capacity in corridors and establish safer statewide and regional travel conditions	**Serious Injury & Fatality Rates** **PAX & FRT Travel Time Reliability**
INN	Technology enhances statewide travel and introduces new regional and local travel options	**PAX and FRT Travel Time Reliability**
DIVERSIFY	Intermodal, multimodal connectivity to industries, terminals and destinations enhance state economic opportunity	**% Non-Highway Mode Share (PAX & FRT)** **% Non-Motorized Mode Share**
ACCESS	Target investment in key corridors and to underserved areas which stimulate regional, local economies	**% Non-Highway Mode Share** **PAX & FRT Travel Time Reliability**

Portfolio Process

Leadership direction, Stakeholder input, SME & Team review, Public input

PRIORITY

Tier 1
Next 5 years

Combination of strategies that address most critical short-term needs, support performance targets, meet LRTP goals, are cost effective, and are feasible to implement through 2030

Tier 2 & 3
Next 10 years

Combination of existing and new strategies that address short and long-term needs, support performance targets, meet LRTP goals, are resilient to alternative scenarios, and leverage new opportunities

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Portfolio Review – Framework

ALIGNMENT

- System Condition
- Safety and Security
- Economic Vitality
- Multimodal Mobility, Access, Reliability
- Livable and Healthy Communities

PERFORMANCE

- Safety – Crash Modification Factors
- Assets – BMS/PMS Modeling
- Reliability – Passenger and Freight Travel
- Other – FTA Asset Management and Public Transit Asset Safety Plans; FRA Rules

READINESS

- Status (Existing, Modified, New)
- Address short- and long-term Gap
- Resource Constraints
- Policy/Regulatory Issues to Implement
- Public Acceptance

RESILIENCY

- Demographic
- Environme
- Federa
- Fu

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Portfolio Review

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Highway Preservation Portfolio
Guiding Principles

Focus on the most critical asset management needs

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against deterioration, traffic demand and limited funding resources

- Strategies which employ more inn
materials and methods to incre

- Strategies which increase
extend service life and

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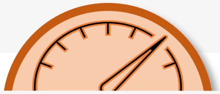
Highway Preservation Portfolio

Considerations



Focus on the critical system performance issues

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stakeholders to obtain supportive buy-in for the best asset
management practice methodology?

- How should WVDOH deal with its no...
eligible highway system?

- What is the proper amount to...
Non-NHS pavement condi...
process in the PMS for ...

Highway Performance Portfolio

Guiding Principles

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

- **Maximize the statewide awareness of traffic safety programs** through education and outreach and the role of law enforcement and high-quality safety data
- **Leverage the focus on improving driver behavior** through deploying countermeasures to address critical issues and enhancing highway design practice
- **Optimize the use of existing and new technologies** to actively manage traffic in high-travel corridors and monitor conditions across the State
- **Strategically address existing and future system bottlenecks** through proven and innovative design and infrastructure

Highway Programs Portfolio
Considerations

Focus on highway safety, operations, and reliability needs

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resource sharing arrangements?

- Do the strategies provide the right mix implementation tied to existing agen programs? Do the strategies set resource and priority setting di

Innovation Portfolio

Guiding Principles

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INNOVATION

Focus on existing and emerging technology opportunities to optimize asset preservation, safety, highway operations, and multimodal mobility and access

- Strategies which enhance agency response, data streams and communication with changing infrastructure conditions
- Strategies which can provide more real time information to transit providers and users through web and mobile applications
- Strategies which cultivate a “technology awareness” within all phases of project planning, design, operations and construction

Innovation Portfolio
Considerations

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Focus on existing and emerging technology opportunities

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pilots, and new partners to explore new strategies and program delivery. Are there programs/poli

foster pilot tests and new partnerships?

- How does WVDOT market innova

  potential for private investment

Diversify Portfolio

Guiding Principles

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

- Strategies which expand multimodal system connectivity to provide more equitable access for underserved communities and support enhanced freight movement statewide
- Strategies which focus on prioritizing investments in safety measures and related infrastructure for all travelers to improve operational efficiency (i.e., Bike/Ped, ADA compliance, Hwy/Rail crossings)
- Strategies which improve existing assets through management and maintenance, fleet replacements and expansions, and modern infrastructure improvements to meet future travel demand
- Strategies which invest in emerging technologies to support economic development opportunities and increase mobility options for all travelers

Diversify Portfolio

Considerations

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Focus on increasing investment in multimodal options for ... ght t...

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- Do the strategies leverage state funds to pursue Federal loans and grant applications thereby maximizin...

- Do the strategies provide a framewo... current and future infrastructure n... economic development and gr...

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Access Portfolio
Guiding Principles

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

- Strategies **enhancing** reliability to underserved rural areas statewide to complement and compete with cities
- Strategies **closing** gaps of job opportunities, education, and health care across rural and urban areas
- Strategies **empowering** a healthy and thriving population who choose to invest in and bring talent to West Virginia

Access Portfolio
Considerations

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

- As many strategies will require coordination and collaboration with other state agencies, how can WVDOT's relationship across agencies be amplified to streamline implementation?
- Given existing services provide a wealth of value, can any be modified slightly to meet strategies without creating new programs?
- As some strategies might require new taxes and/or other public funding sources, how might the current political climate respond? Should strategies be reframed to ease adaption and assist acceptance?

Portfolios to Implementation
Considerations

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1. How should we **prioritize strategies**?
   - Create a priority portfolio
   - Group strategies into 3 tiers (top tier becomes the "priority portfolio" as the top 8-10 strategies)
2. 2050 LRTP Implementation Plan approach:
   - **Within each Tier 1 strategy** will be targeted actions (executable specific policies, plans, programs, projects)
   - **Within Tier 2 and Tier 3 strategy** will be recommendations for next steps (planning and policy development only)

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Next Steps

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2050 LRTP
Next Steps

- Overall strategy priority questions and specific strategy considerations
- Leadership and Policy & Technical Team survey
- Setup SME meetings to review portfolio strategies and prioritize
- Implement public outreach

Complete Needs Assessment,
Finance Plan,
Gap Assessment

By early May…
Portfolio Fact Sheets, System Performance Report

By end of May…Final Portfolios, Strategies, and Draft Implementation Actions

May - June…SME interviews, Stakeholders input to Portfolios

May - June…Public Outreach

By mid June…
Draft Implementation Plan

By end of June…release 2050 LRTP Plan for public comment