

# 2050 Multimodal Long-Range Transportation Plan



Round 2 Stakeholder Meetings  
February 3 – 4, 2021

# Agenda

- 2050 LRTP Schedule & Status
- Needs Assessment
- Revenue Forecast
- Needs vs. Revenue Gap
- Needs Prioritization, Strategies, Policies, and Portfolios
- Next Steps

# 2050 LRTP

## Work Completed Since October

### ✓ Website –

- ✓ State of the System Fact Sheets
- ✓ Drivers, Trends, and Opportunities Fact Sheets and White Papers **including Funding Fact Sheet**
- ✓ Refined engagement approach

### ✓ Interviews with Subject Matter Experts – input to “ground truth” needs and revenue forecasts

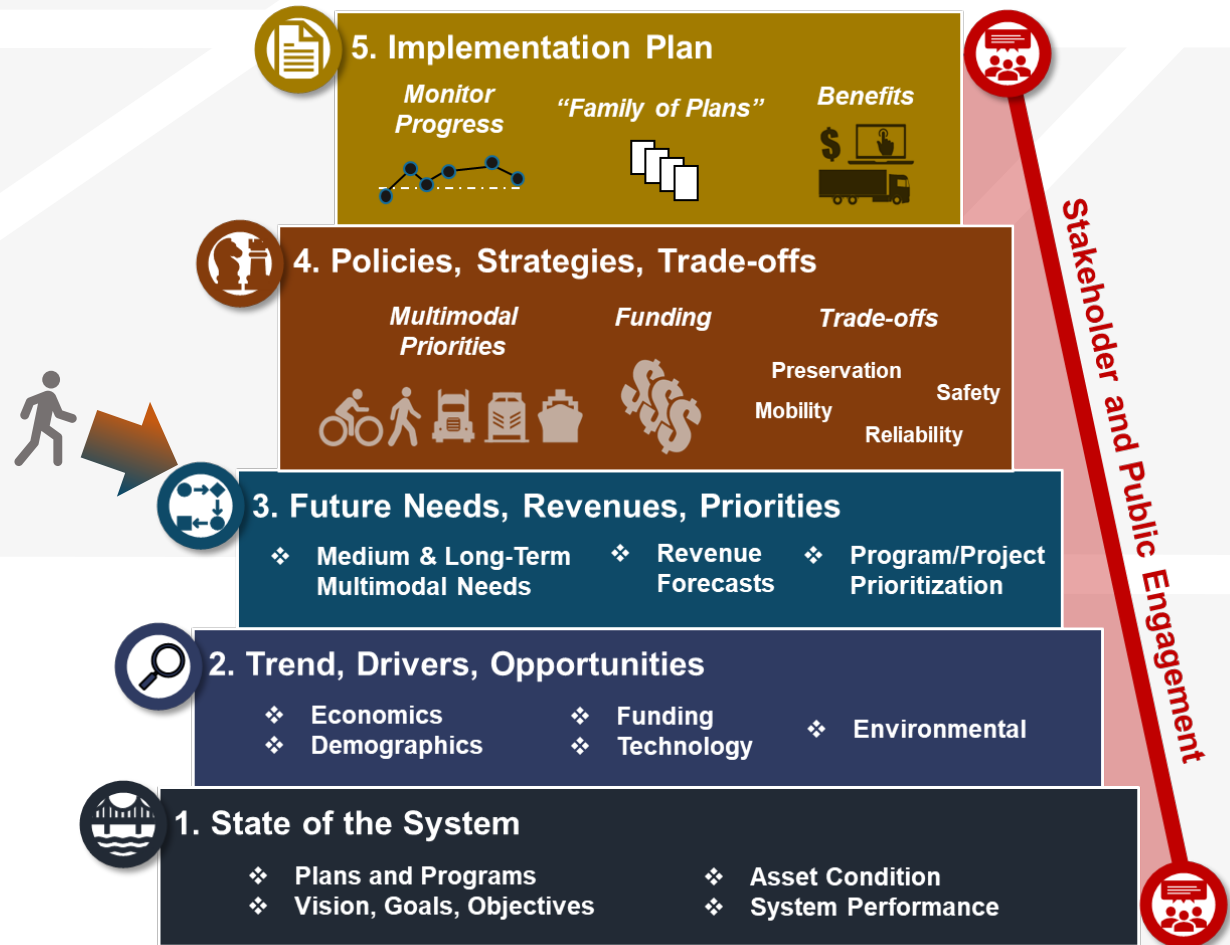
### ✓ Stakeholder survey – perspective from stakeholders and partners



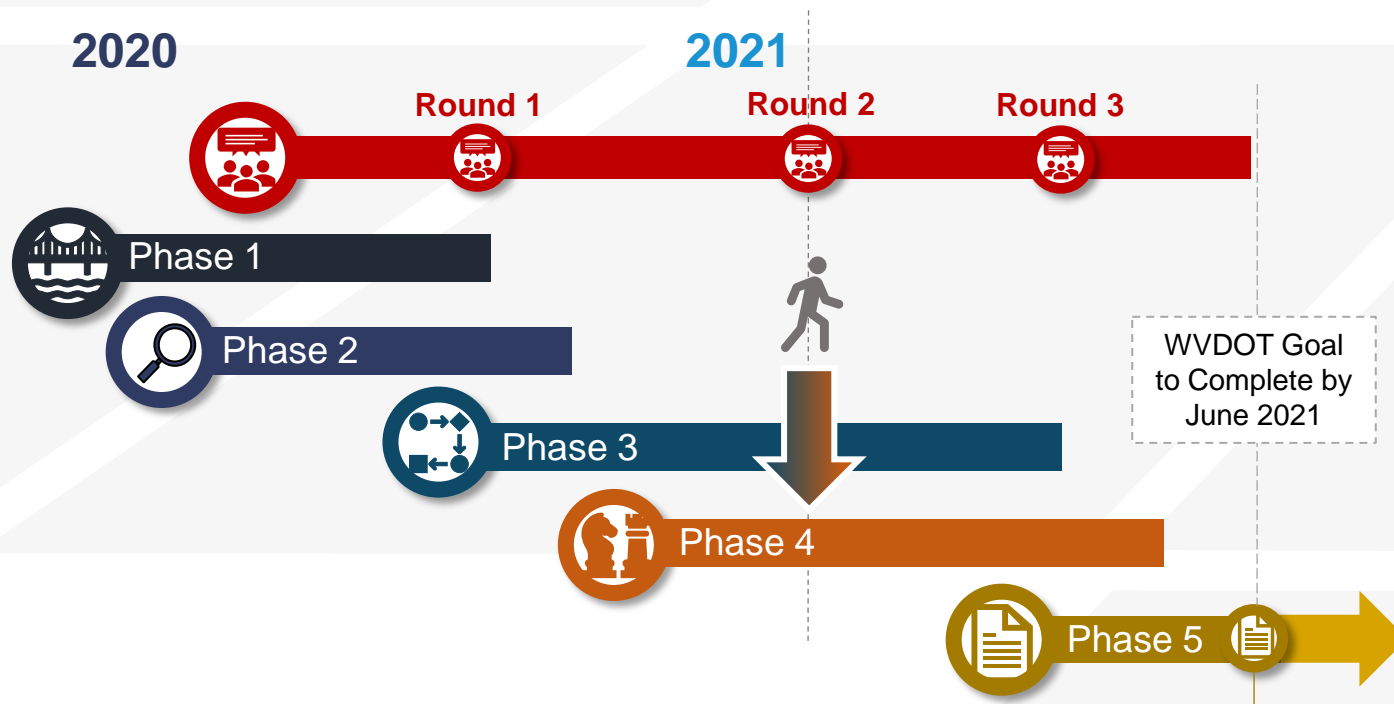
# 2050 LRTP

## Upcoming Milestones

- Complete needs assessment and revenue forecasts
- Finalize gap assessment and evaluate revenue alternatives
- Develop priority policies and strategies
- Develop prioritization and trade-off approach



# 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



# 2050 LRTP

## Engagement

2020

2021



### Actions to Date



Round 1



Round 2



Round 3



- » **Round 1 – Stakeholders** – plan approach, state of the system, trends
- » **Round 2 – Stakeholders**– gathering feedback on needs and strategies
  - Announcements – e-mail blast, stakeholder contact list
  - Surveys / Polling – future needs, recommendations
  - Website – home to all LRTP materials
  - Workshops – today (next cycle in April)



### How You Can Help...

- » Share and link to LRTP website
- » Send E-mail blasts / surveys to your distribution lists and local partners
- » Social Media Announcements



# 2050 LRTP Engagement 2020



## Planned Actions

- » **Round 2 & 3 – Public** – Introduce the LRTP to the public and seek input
- » **Virtual Approaches (for now...)**
  - Announcements – Press Release, E-mail Blast, Social Media posts
  - Website – Home to all LRTP materials, [open public comment period](#)
  - Media Toolkits – Developing materials and messaging (quotes, links, pictures, schedule)
- » **In-Person Approaches (to be determined)**
  - LRTP Outreach Tour – Research local spring event opportunities (with your input)
  - Open House Public Meeting (and Virtual Public Meeting)



Round 1



2021

Round 2



Round 3



## How You Can Help...

- » Share and link to LRTP website
- » Send E-mail blasts / surveys to your distribution lists and local partners
- » Social Media Announcements (through your organization channels)

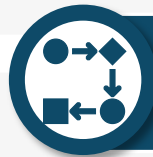


# Needs Assessment



# 2050 LRTP

## Overview – How This All Connects



**Phase 3** – synthesis to compare future revenues against multimodal needs

### NEEDS

define through models, experts, plans, studies

### GAPS

Mid- and long-term by system, mode, investment type, goal, or objective

### REVENUES

forecast from current investment plans and changing revenue futures and risks

### OPTIONS

Test revenue sources

### PRIORITIES

- » Short and long term
- » Capital and asset related
- » Partner candidates
- » Decision criteria
- » Performance impacts

### TRADE-OFFS

performance outcomes driven by multimodal priorities vs. revenue

### PORTFOLIOS

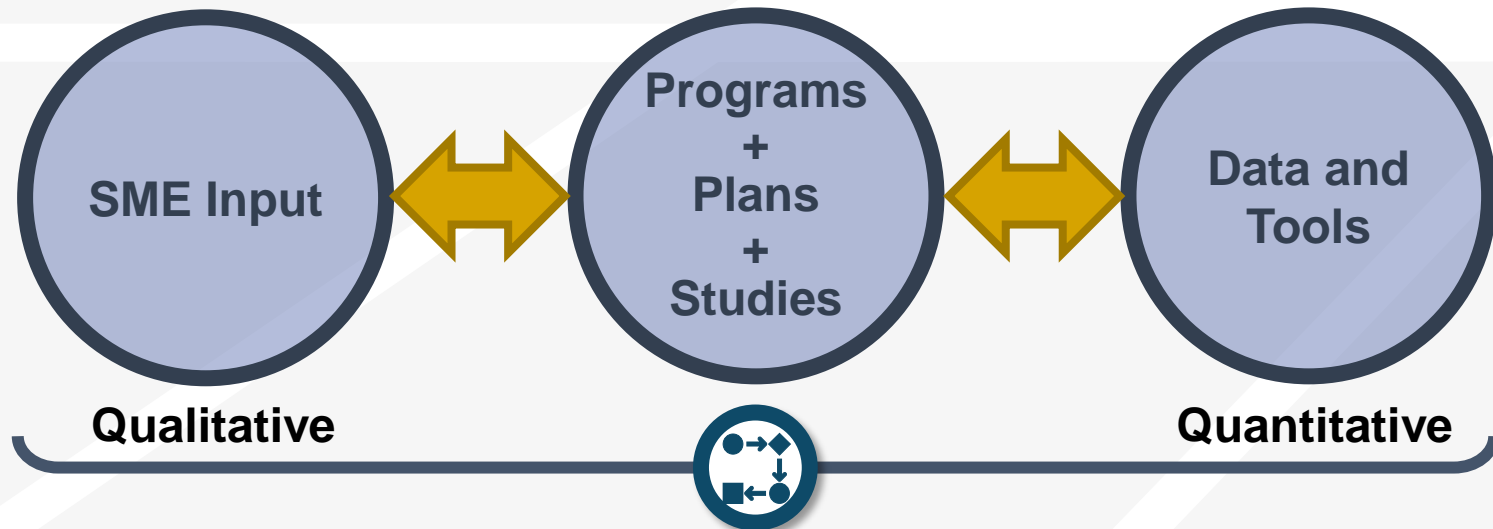
- » Optimized investment levels
- » Prioritized pipeline for future capital programs



**Phase 4** – identify most critical policies, programs and projects to meet goals



# 2050 LRTP Needs Assessment



- **Groundbreaking** – 1st comprehensive multimodal inventory of long-term transportation needs across West Virginia
- **Representative** – Project-specific & network-based improvement costs; Assets needs derived through scenarios; all values in 2020 \$'s
- **Consistent** – Aligns with 10-year plans; assessment beyond 10 years to sustain performance targets & address user needs
- **Reflects Trends** – Builds from information in the White Papers

# 2050 LRTP

## Needs Assessment – Context

### ➤ **Defining Needs**

- » Difference between a “need” and a “want”
- » Driven by values and goals (variable state, regional, local)

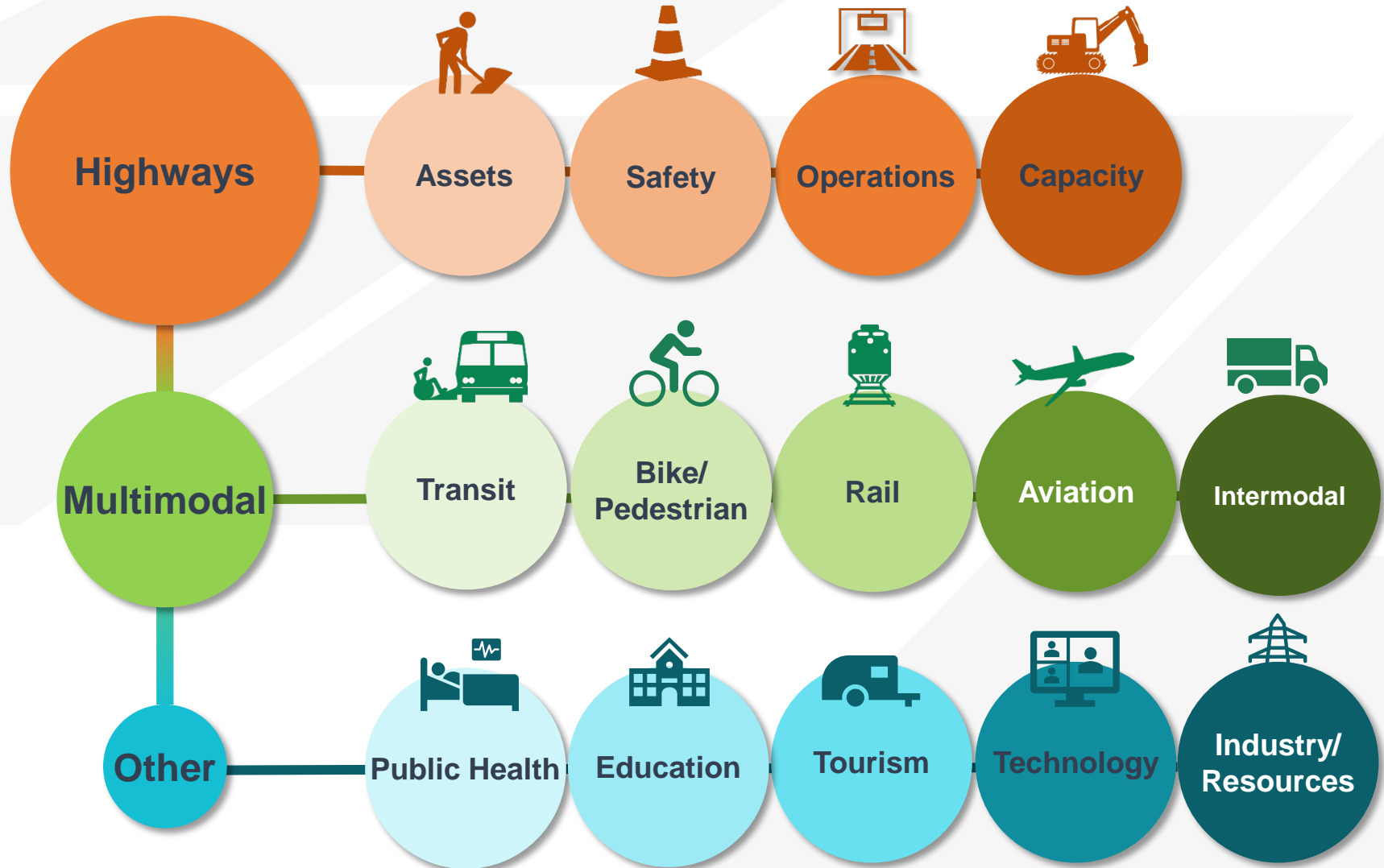
### ➤ **Limitations & Considerations**

- » Qualitative vs. Quantitative
- » Plan Driven vs. Expert Insight
- » Changing, Connection to Priority and Policy

### ➤ **Methodology**

- » Ranges – Constrained vs. Aspirational
- » Existing Snapshot vs. Uncertainty

# Needs Assessment



# 2050 LRTP

## Summary of Needs (DRAFT)

### Constrained v. Aspirational Influences



**Expansion** - what is reasonable to deliver by 2050?

**Target Setting** – what level of asset performance to achieve by 2050?

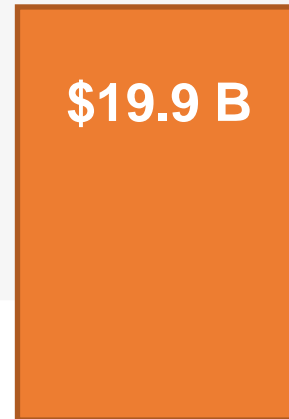


**Gaps** – what resources to address rural and urban mobility and enhance site access and intermodal connections by 2050?



**Opportunity** – what project decisions best align to broader, cross cutting statewide issues by 2050?

**Constrained**  
**\$21.3 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

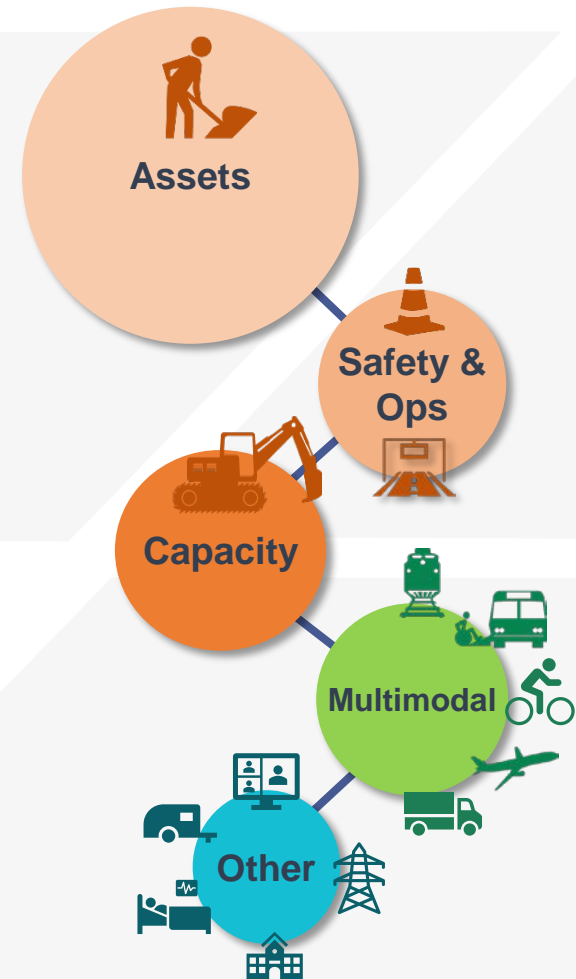
## Need Details – Constrained

<b>CONSTRAINED (LOW-END ESTIMATE)</b>			
	<b>2020-2030</b>	<b>2031-2050</b>	<b>Total</b>
<b>Highways</b>	<b>\$6,630 M</b>	<b>\$13,250 M</b>	<b>\$19,880 M</b>
Bridge	\$2,170 M	\$4,620 M	\$6,790 M
Pavement	\$2,550 M	\$4,880 M	\$7,430 M
Highway Expansion	\$1,220 M	\$2,440 M	\$3,660 M
Highway Traffic Ops	\$270 M	\$550 M	\$820 M
Highway Safety	\$400 M	\$720 M	\$1,120 M
Highway Other	\$20 M	\$40 M	\$60 M
<b>Non-Highways</b>	<b>\$360 M</b>	<b>\$730 M</b>	<b>\$1,090 M</b>
Active Transportation	\$120 M	\$240 M	\$360 M
Aviation	\$40 M	\$80 M	\$120 M
Transit	\$150 M	\$300 M	\$450 M
Rail	\$50 M	\$110 M	\$160 M
<b>Other</b>	<b>\$110 M</b>	<b>\$220 M</b>	<b>\$330 M</b>
<b>Total</b>	<b>\$7,100 M</b>	<b>\$14,200 M</b>	<b>\$21,300 M</b>

# 2050 LRTP

## Needs Assessment – Takeaways

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

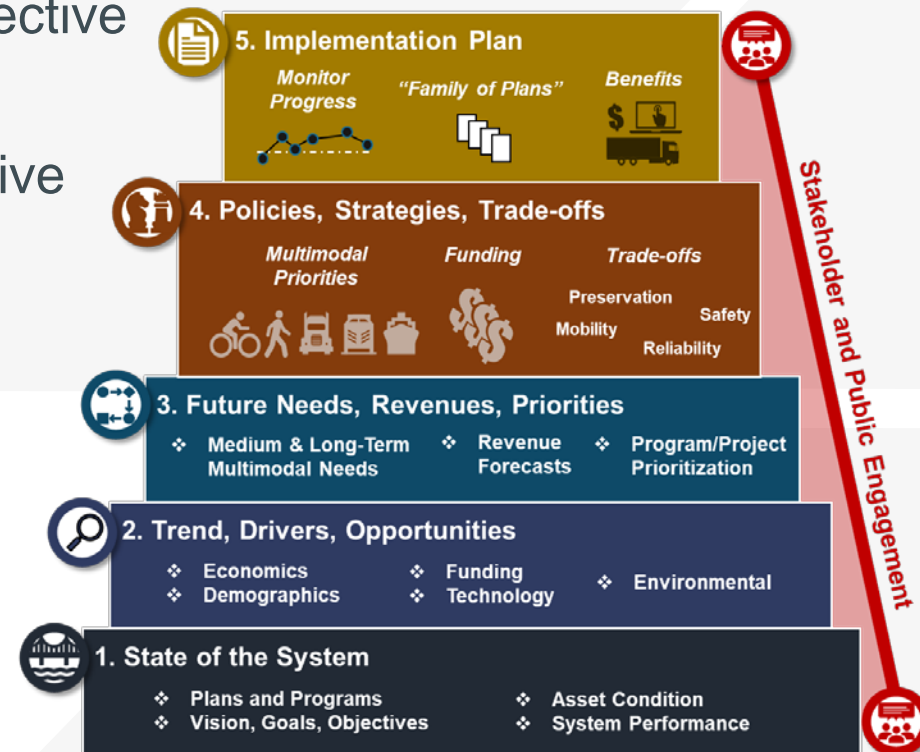


# 2050 LRTP

## Needs Assessment – Next Steps

### ➤ Establish priorities – (Phase 4)

- » Goal and performance perspective  
**Asset condition & safety**
- » Cross-cutting topics perspective  
**Multimodal & economic**
- » Rural or urban perspective  
**Varying regional values**
- » System perspective  
**Balance and criticality**
- » Available resources  
**Optimize limited resources**





# Revenue Forecast

# 2050 LRTP Revenue Forecast

## For WVDOT:

- Identify revenues & expenses and the factors driving them
- Create forecasts under varying future economic scenarios
- Utilize results to:
  - » Forecast total revenues and revenues available for capital investment
  - » Support long range financial planning to meet 2050 LRTP goals & objectives

**Revenue forecast focuses on DOH sources only**

**Sources for non-DOH investments are formula and grant driven, with less connection to economic factors**

**Non-DOH revenue forecasts extrapolate recent trends through 2050**

# 2050 LRTP – DOH Revenue Forecast

## Foundation & Existing Conditions –

*Identified Revenue & Funding Sources  
Highway vs. Non-Highway Modes*

## Input from WVDOT Divisions –

*Incorporated Additional Information from  
WV Dept of Revenue*

## Confirm Assumptions –

*Understand Current Methodology &  
Escalation Levels for Forecast*

## Construct Revenue Forecast –

*Historical Conditions + Near-Term Estimates  
Build Baseline Run*

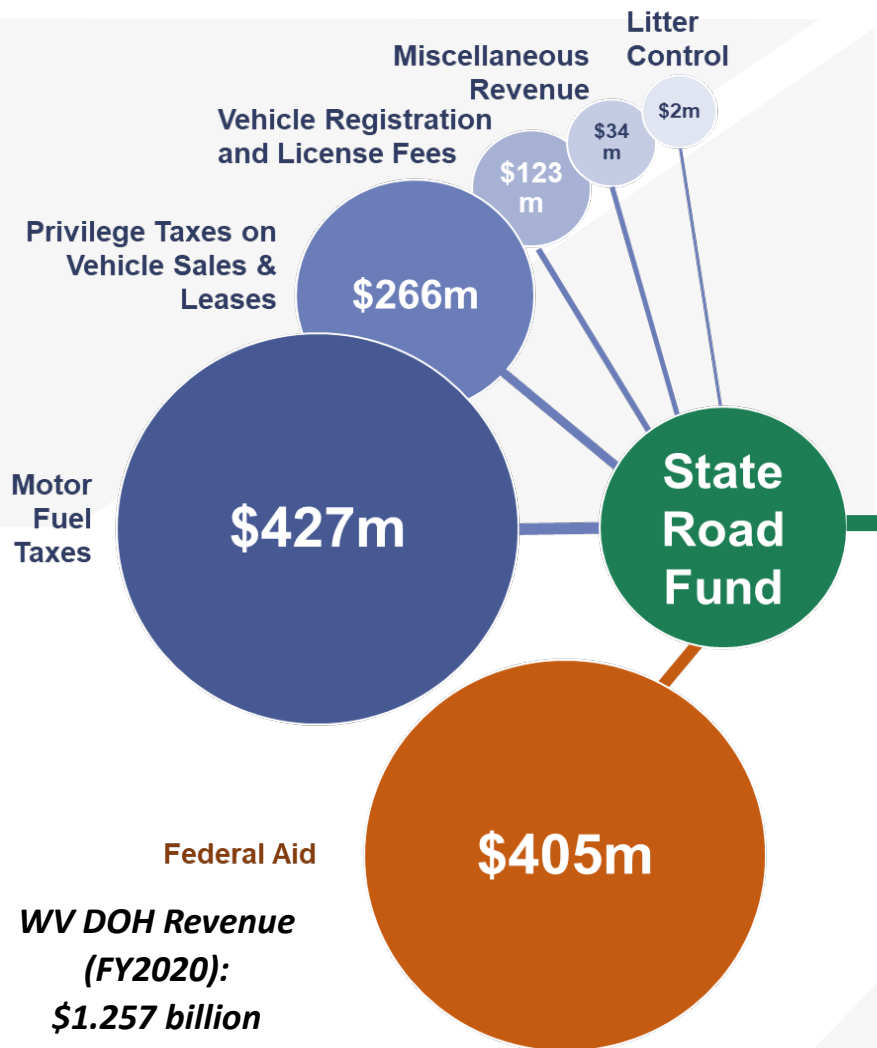
## Validate Results –

*Analyze / Adjust Results, Test Alternatives*



# 2050 LRTP – DOH Revenue Forecast

## Foundation – Non-Tolled Roadway Revenues



**Federal Aid** – Reimbursements for Federal-aid eligible highway investments and FHWA GARVEE bond debt service

**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 and License Fees** – Annual fee: \$51.50 registration, \$200 EV fee, \$100 plug-in-hybrid

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

WV DOH Revenue  
(FY2020):  
**\$1.257 billion**

# 2050 LRTP – DOH Revenue Forecast

## WV DOH Input – Determine Growth Factors

- Relied on WV DOH & WV Dept of Revenue to confirm:
  - » Gallons of fuel consumed & taxed by fuel type
  - » Numbers of licenses and vehicle titles and registrations
  - » Historic tax, fee, & toll rates
  - » Escalation methods &/or frequency
  - » Policy or other changes on the horizon

Motor Fuel Taxes = **Motor Excise Tax** + **Motor Carrier Tax**  
*Motor Fuel Taxes* = **\$0.357/gal** + **\$0.205/gal**

**Motor Excise Tax = \$0.205/gal gasoline, kerosene, & diesel + \$0.152/gal (variable)**

**Motor Carrier Tax = \$0.205/gal for gasoline, kerosene, & diesel**

# 2050 LRTP – DOH Revenue Forecast

## Constrained Revenues – Illustrate Construction Funds

- ➔ **Constrained Revenues** illustrate total funds available for **Capital Investments** adding future value to the highway system

$$\text{Constrained Revenues} = \text{Annual Revenues}$$

–

### Basic Operating Expenses

(Road Maintenance, Admin, & Debt Service)

*Excludes: DMV, Claims, Courtesy Patrol, Admin Hearings, and Road Construction*

Revenues*
(+) Taxes
<i>Gasoline &amp; Motor Carrier Taxes</i>
<i>Automobile Privilege Taxes</i>
(+) Motor Vehicle Registrations & Licenses
(+) Rev. Transfer to Indust. Access Roads
(+) Federal Aid
(+) Miscellaneous Revenues (incl Litter Control)
Total Revenues
Expenses*
(-) Operating Expenses
Road Maintenance**
Support & Admin***
(-) Debt Service****
Total Road Expenses
Available Revenues (Revenues - Road Expenses)



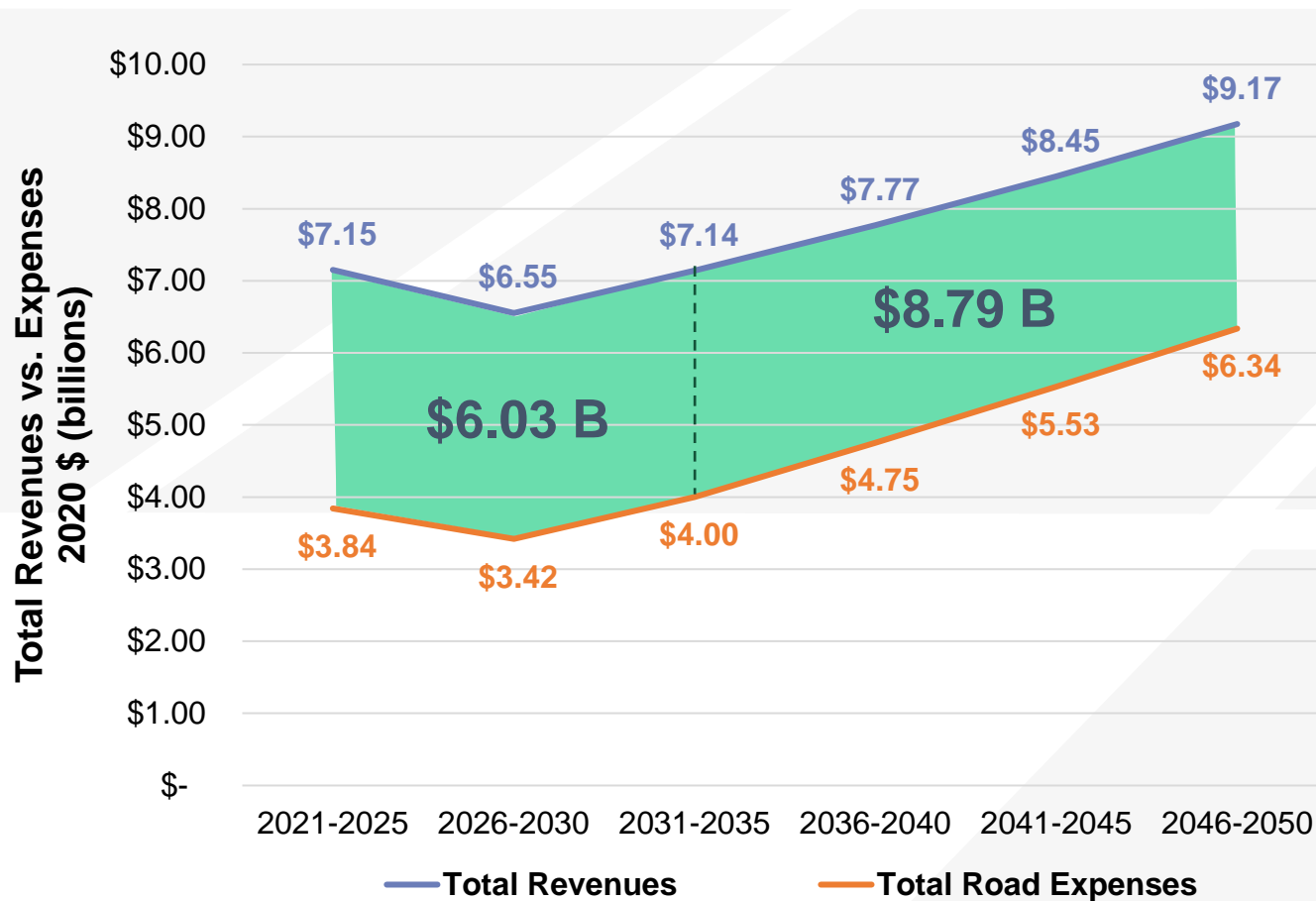
# 2050 LRTP – DOH Revenue Forecast

## Test Assumptions – Forecast Drivers

- Validated & aligned forecast revenue streams with historical revenues & near-term insights
- Population changes are best predictor of future DOH revenue streams
- Forecasts developed for alternative future population scenarios
- Used 2% discount rate to bring future revenue values to 2020\$ for comparison to needs which are in 2020\$

# 2050 LRTP – DOH Revenue Forecast

## Baseline Forecast Results – DRAFT Revenues vs. Expenses



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

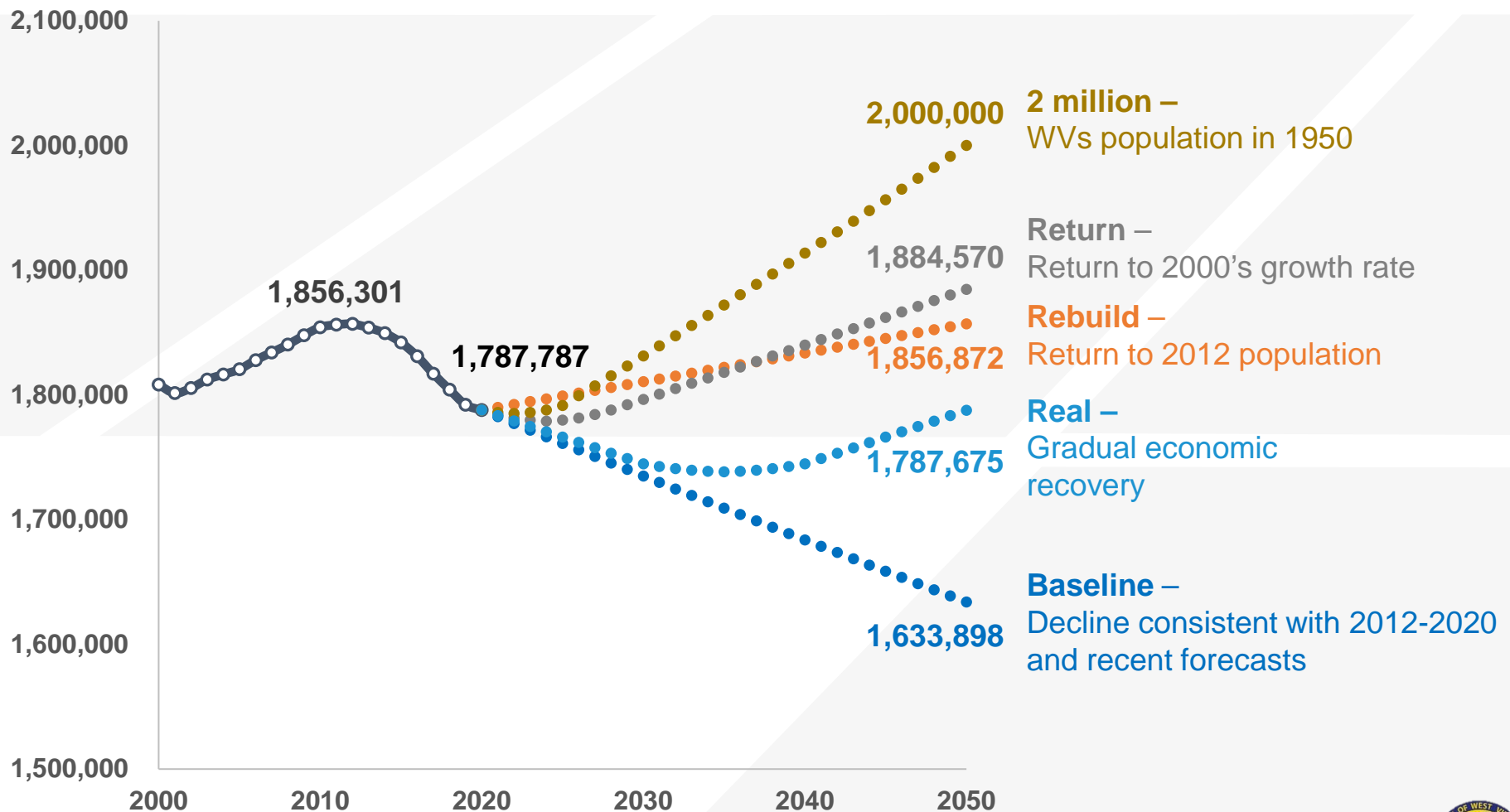
Growth in expenses driven by assumed 4% annual maintenance cost increase and 4% annual admin cost increase, including debt service schedule





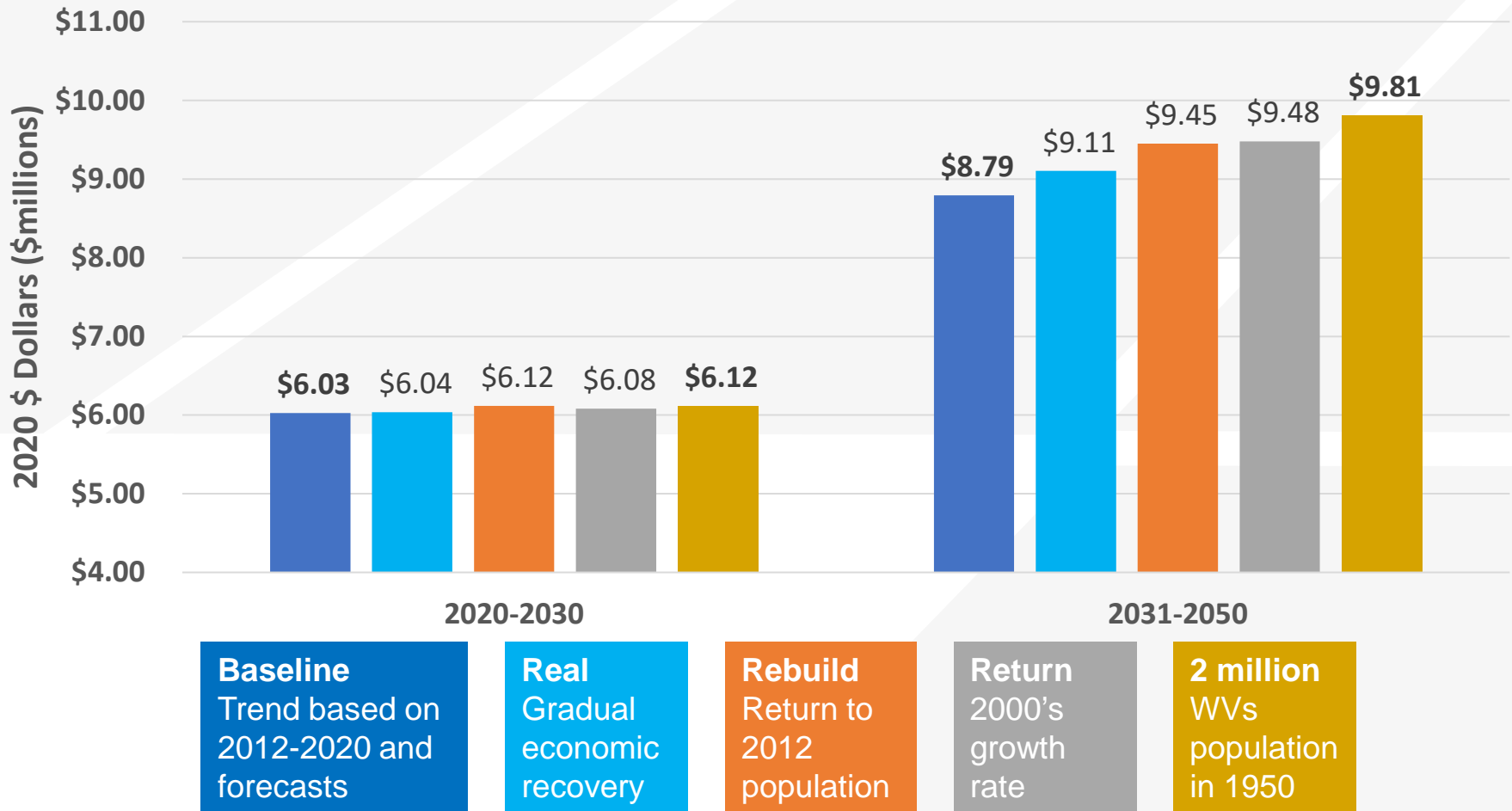
# 2050 LRTP – Forecast Alternatives

## Validate Results – Test Population Alternatives



# 2050 LRTP – Forecast Alternatives

## Validate Results – Draft Revenue Results



# 2050 LRTP

## Revenue Forecast Discussion

**Future revenues are challenged by internal and external factors**

**Current sources are falling further behind needs and costs**

**Operating expenses continue to increase**

**Existing debt service burden through 2040s**

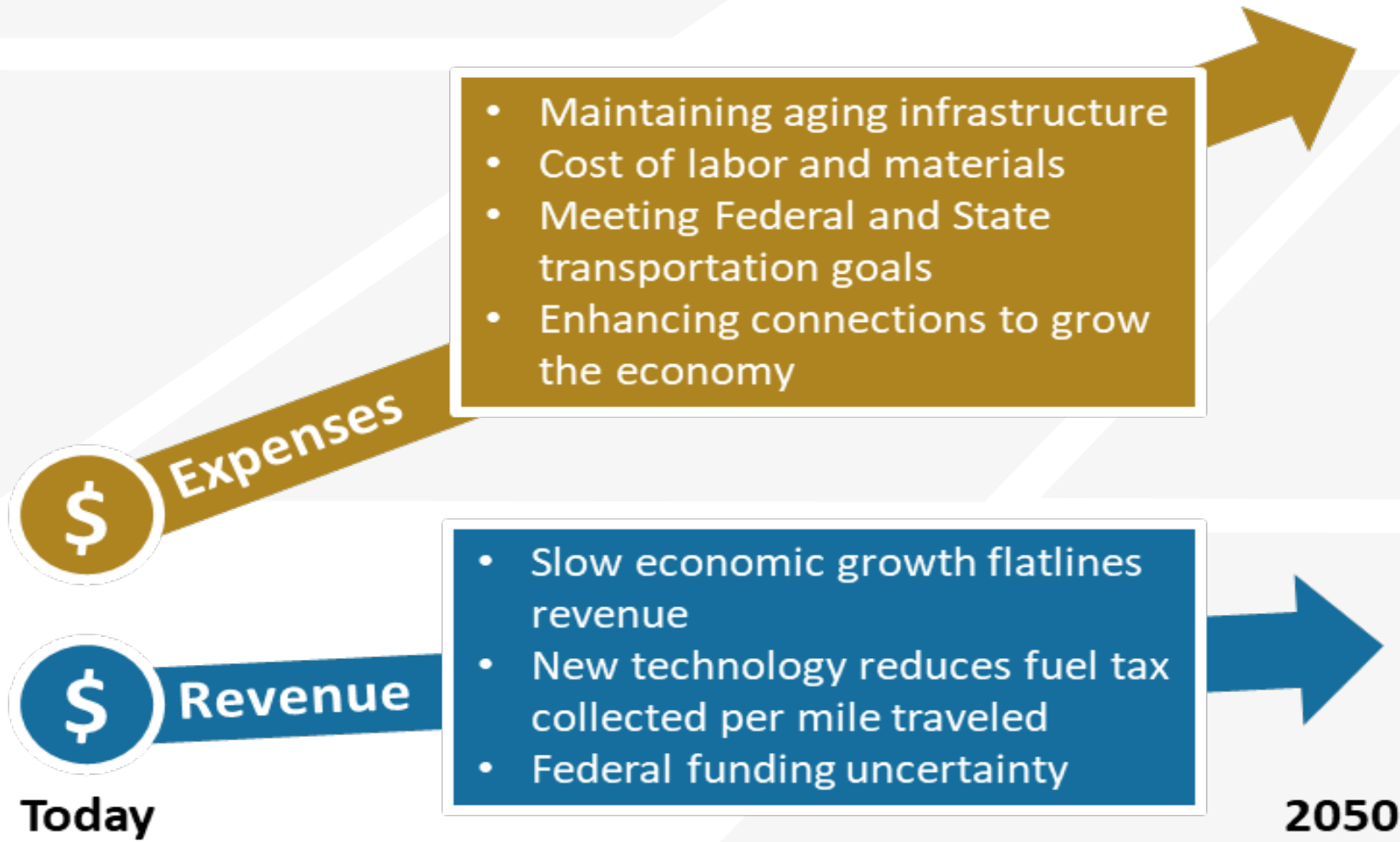
- Feedback on analytical method
  - » Constrained vs. Total Revenues
  - » Revenue and expense growth factors
- Revenue alternatives and policies
  - » Additional tax-based sources
  - » Alternative user-based fee sources
  - » Flexibility and leverage
- Revenue forecasting tool
  - » Value to long-range planning
  - » Value to programming



# Needs vs. Revenue Gap

# 2050 LRTP

## Needs vs. Revenues



# 2050 LRTP

## Needs vs. Revenues

### Needs

#### Policy/priority questions

- » Short vs long term performance relative to goals
- » Immediate priorities – bridge condition, secondary roads
- » Rural connectivity and mobility
- » Prepare for technology and other industry changes
- » Economic development

### Revenue

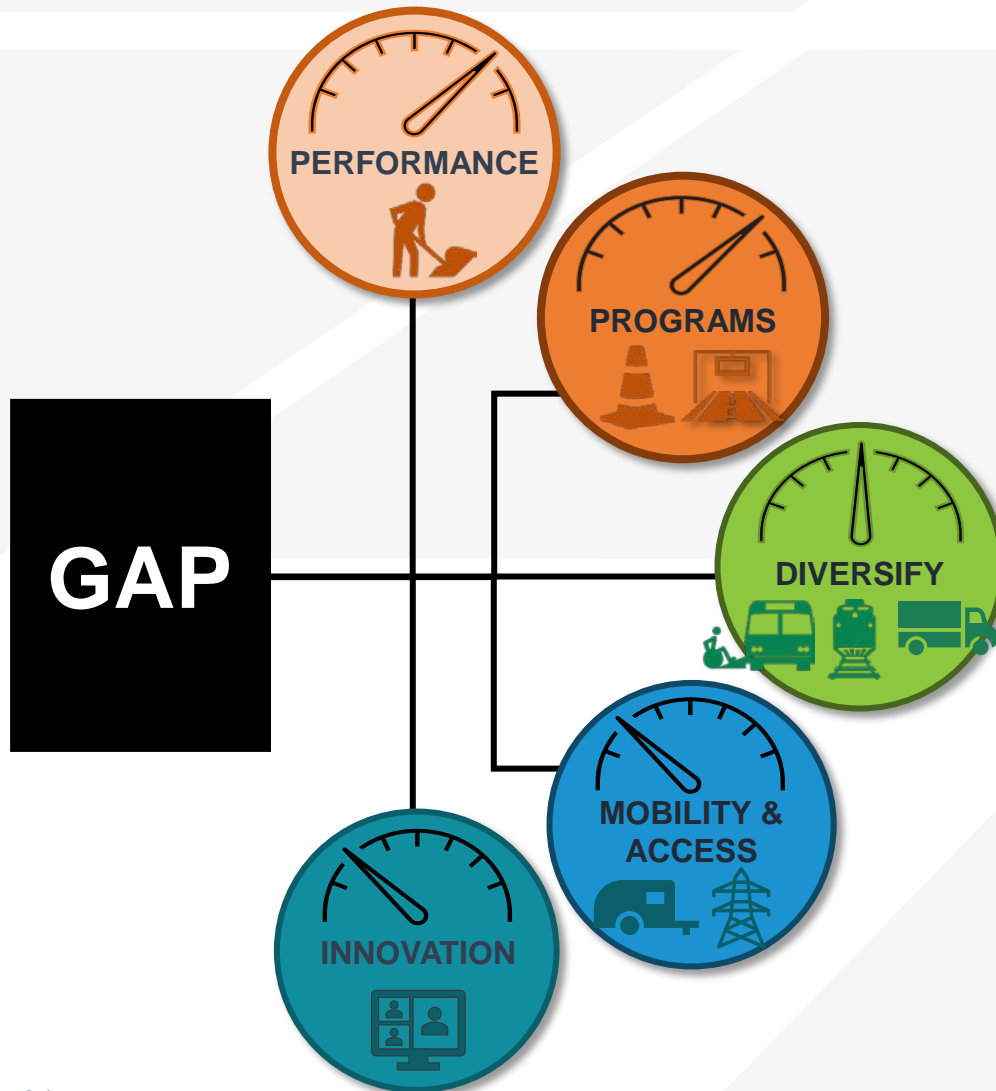
#### WV and Federal direction

- » Federal uncertainty
- » Declining return from traditional sources relative to cost increases
- » Limited bonding capacity
- » More fuel-efficient fleet
- » More flexibility among sources and grant focused



# 2050 LRTP

## Gap Discussion



What **criteria** should **define highest priority investments?**

What is the **optimal** mix of investment (portfolios) among **highest priorities** to address the gap?

Different approach for **Short vs. Long Term?**

# 2050 LRTP

## Next Steps

- ➔ LRTP project team to finalize needs assessment and revenue forecast results and reports
- ➔ Refine and deliver a proactive & interactive engagement effort
- ➔ Organize findings into comparative portfolios, start conducting trade-off analysis
- ➔ Prepare for Meeting #3 where we will discuss your perspectives on the optimal long term multimodal investment strategy



By end of February through Fact Sheets & Technical Reports



Proactive approach through June



Starting in February through April



Targeting mid-April





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