



# VTrans2040

VTrans Multimodal Transportation Plan (VMTP)

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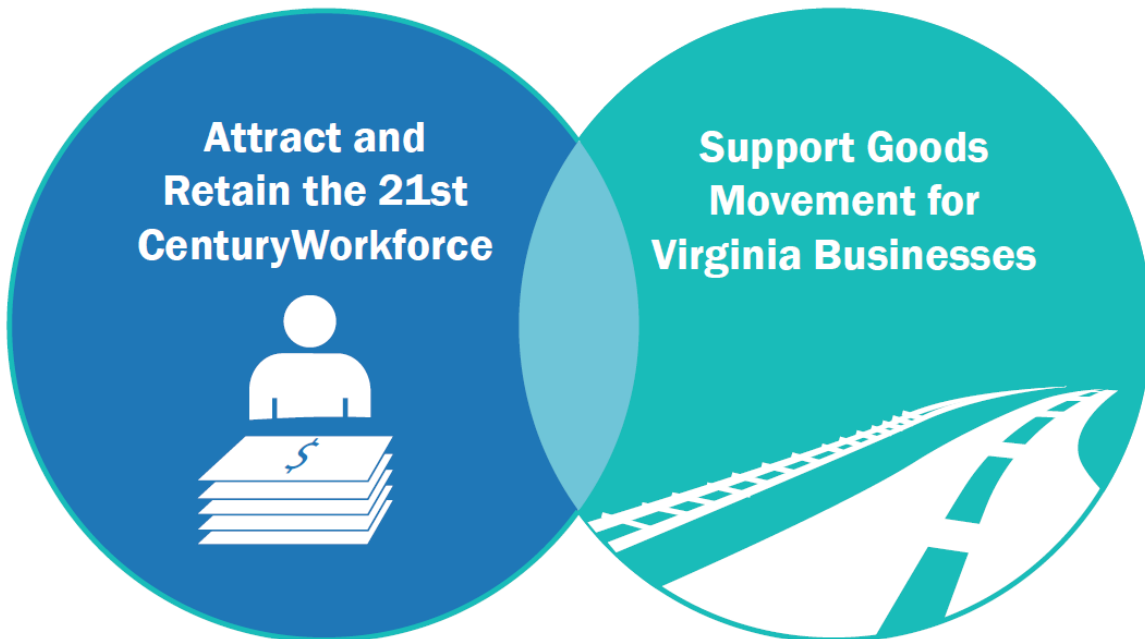
March 15, 2016



# VTrans & VMTP Framework

“Demographic and market studies consistently show that workers in the 21<sup>st</sup> century economy prefer walkable communities that are served by rail and public transit, as well as roads. If we want to cultivate this work force, which we need to do, we need to get ahead of these trends.”

Governor McAuliffe  
June 18, 2014



# Past and Present Elements of VTrans2040

## VTrans Vision Document

- Vision
- Guiding Principles
- Goals
- Objectives
- Trends

[www.vtrans.org/vtrans2040.asp](http://www.vtrans.org/vtrans2040.asp)

Completed  
&  
Adopted by CTB

## VTrans Multimodal Transportation Plan

- 2025 Needs Assessment
- 2025 Recommendations
- 2040 Scenario Analysis
- 2040 FAST Compliant Freight Element

Completed & Adopted by CTB



# Needs Synthesis & Recommendations Process

March through June

1. Summarize Needs

2. Consolidate Needs

3. Prepare Executive Summary

4. Evaluate Needs Relative to Goals

5. Summary of Priority Needs

6. Identify Recs

7. Evaluate Recs

8. VMTP Recommendations

May through September

Regional Forums

## Needs Synthesis

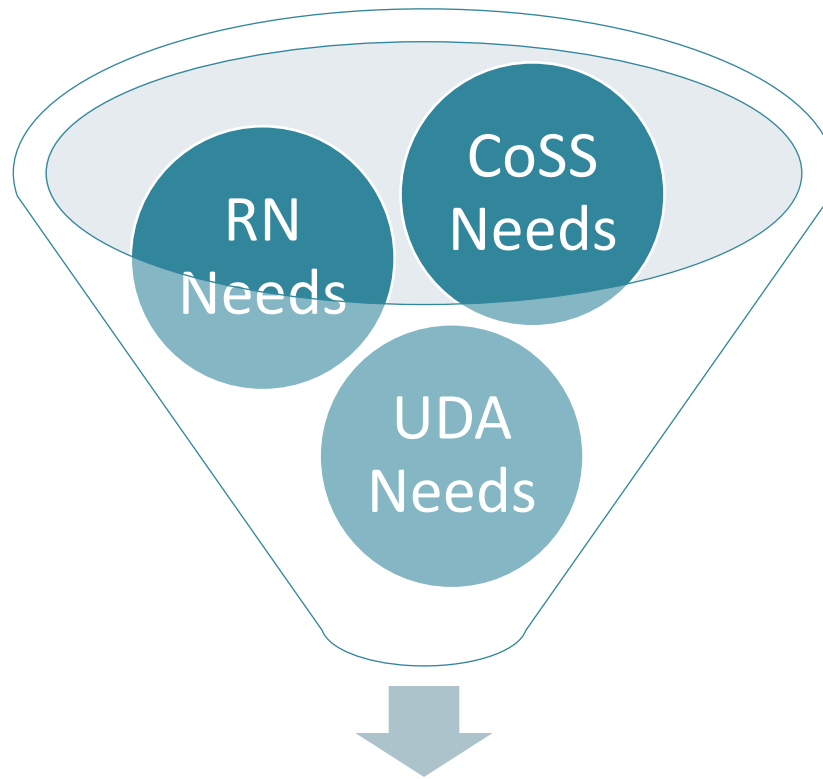
*Instrumental in linking the VTrans goals with the consolidated needs*

## Recommendations

*Recommendations will include new and existing project concepts, plus broad policy and programmatic direction*



# Needs Synthesis Overview



**Consolidated Cross-Geography Needs**



# Summarize & Consolidate Needs

- Create packages of aggregate, multimodal regional specific needs

Market	Summarized Needs
Regional Network	<b>I-81 corridor reliability</b>
	Arterial network reliability
	Roadway operations and management
	Walkability in activity centers
CoSS	Safety related to inadequate climbing lanes and merge areas
	Rail capacity bottlenecks
	<b>US 11 speed and capacity limitations to serve as a I-81 reliever</b>
	<b>Limited transit connections between regional centers</b>
UDAs	<b>Transit amenities and connected bicycle and pedestrian systems</b>
	Intersection design, complete streets, and bicycle and pedestrian systems

Consolidated Needs
<b>I-81 corridor reliability and ability for US 11 to serve as a parallel highway</b>
Arterial network reliability, capacity, and operations
Walkability, improved intersection design, complete streets, and bicycle and pedestrian systems in activity centers
Safety related to inadequate climbing lanes and merge areas
Rail capacity bottlenecks
<b>Limited transit connections between regional centers and transit amenities within centers</b>



# Prioritizing Needs

## Consolidated Needs



Relationship to VTrans Goals (informed by data)


Ongoing, Led by OIPI Team



 VTrans Goals (informed by stakeholders)

Survey and Regional Forums, Largely Complete



 Regional Priority (informed by stakeholders)

Regional Forums and Outreach, Largely Complete



## Prioritized “Tiered” Needs



# Relationship to Vtrans Goals



## Economic Competitiveness & Prosperity

**5 point criteria:** presence of freight bottlenecks (top statewide and by district), poor reliability and high AADT, significant delay



## Accessible & Connected Places

**5 point criteria:** auto and transit accessibility scores, connectivity and redundancy, mode choice or multimodal access



## Safety for All Users

**5 point criteria:** reference a safety need, top 20 district need, top 200 fatal or severe crash locations, non-motorized safety need



## Healthy & Sustainable Communities





**5 point criteria:** support a designated UDA, reference TDM or mode choice, walkable/bikeable place need, area of air quality concern

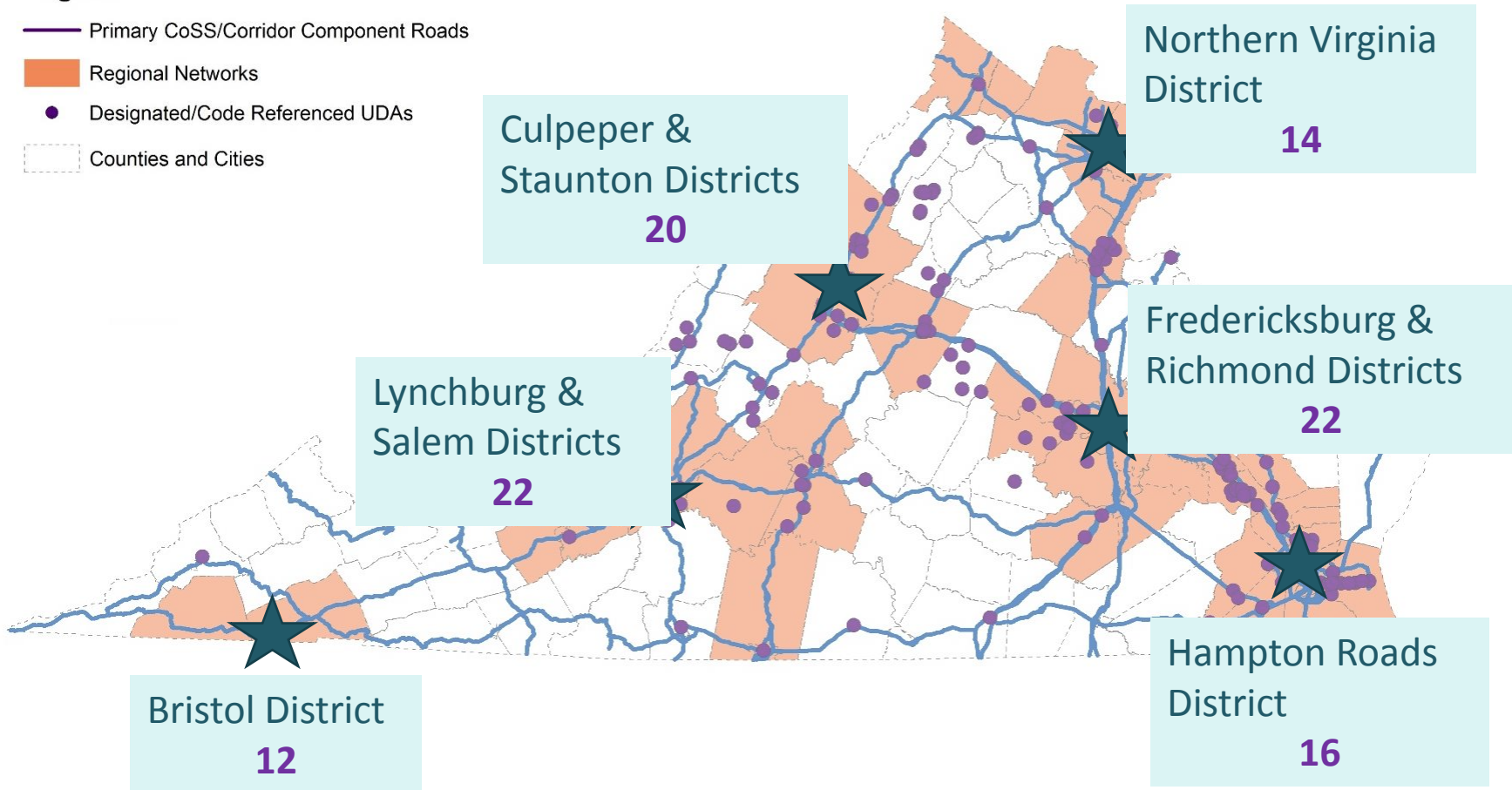




# Regional Forum Review Attendance

## Legend

-  Primary CoSS/Corridor Component Roads
-  Regional Networks
-  Designated/Code Referenced UDAs
-  Counties and Cities

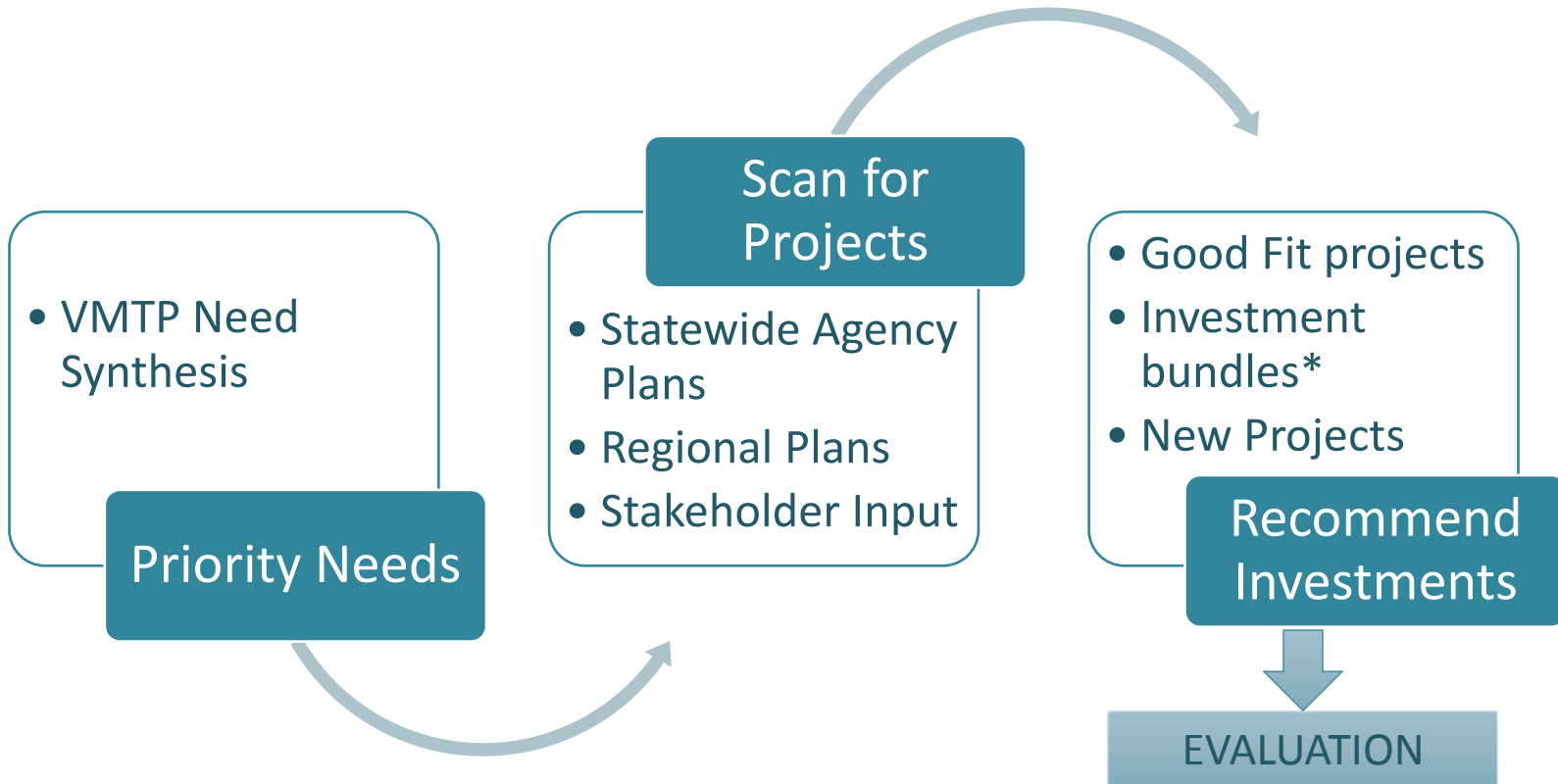


Attendees = Excluding MMWG, local POCs, & consultants



# Identify Recommendations

## Focus on Priority Needs



\*Types of projects that may apply in multiple areas AND packages of complementary investments in a given area.



# VMTP Recommendations

## Project Concepts

- Project concept details to include:
  - Summary of priority need being addressed
  - Location, detailed description
  - Source (including reference to recent studies)
  - Planning-level cost estimate
  - Qualitative assessment of HB2 factor benefits
- Details developed in coordination with VDOT and/or DRPT and local partners

**Outcome: Inform future HB2 applications and other funding program applications, or identify funding need for further planning or PE**



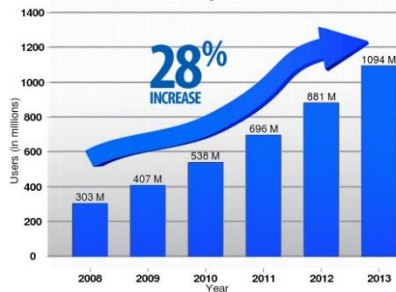
# VTrans2040 Scenarios

- How can we consider the impact of major trends on future transportation demand and costs?
  - Identify key drivers of future travel
  - Create scenarios
  - Study the relationships between the drivers and key outcomes

What Trends are Most Impactful to Transportation?



**UNDERSTAND**



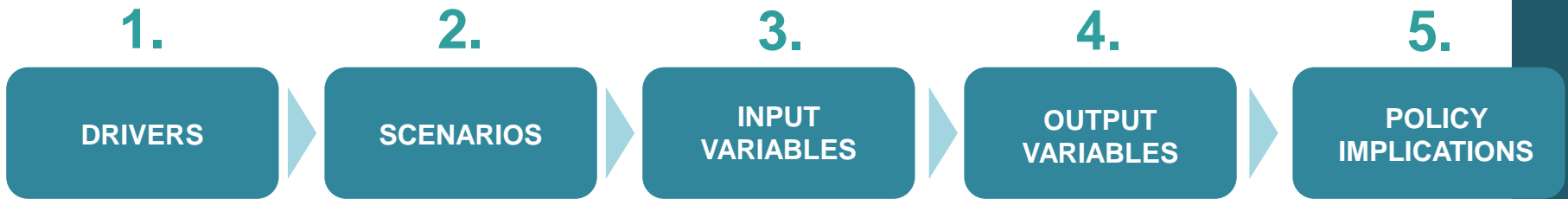
How might Trends interact to affect future transportation demand and costs?



**EXPLORE**



# Simplified Scenario Process



How are the results used?

**Resilience Test:**  
Which policies produce optimal results under ALL possible scenarios?

**Responsiveness Test:**  
Over time, which scenario is getting closest to reality? Which policies best respond to this scenario?

What will the results help inform?

“Stress test” of 2040 Baseline Projections

Inform Agency Business Plans

Inform VMTP Policy Recommendations

Inform MPO Long Range Planning

# Scenario Outcomes

- Trends will be linked to outcomes based on research
- Outcomes will include high-level measures of system needs and costs
  - Vehicle Miles Traveled
  - Passenger Mode Share
  - Freight Mode Share
  - User Costs
- Collectively the scenarios will establish a range of future outcomes
- Comparing outcomes will provide insight into investment needs and policy needs for common threads across scenarios



# Sources of Input for the 2040 Scenario Analysis

- 2015 Fall meetings provided input on the trend drivers
- Multimodal Advisory Committee and agency reps providing input on draft scenarios
- Extensive research and economic models will provide many of the key input-output relationships
- Focus groups and an expert panel will provide input on technology factors that have much uncertainty
- MAC, online web tool and 2016 fall meetings will relate scenario outputs to implications and policy recommendations

