



COMMONWEALTH of VIRGINIA  
Office of the  
SECRETARY of TRANSPORTATION

## Update: VTrans Risk & Opportunity Register

### RRTPO Technical Advisory Committee

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# TODAY'S PRESENTATION: PURPOSE

- ▶ VTrans Policy for Development and Monitoring of the Long-term Risk & Opportunity Register (LT-ROR)
  - ▶ VTrans Key Long-term Takeaways

# COMPONENTS OF VTRANS

1  
CTB's Vision, Guiding  
Principles, Goals  
and Objectives

2  
VTrans Mid-term  
Needs: Identification  
and Prioritization

3  
VTrans Long-term  
Risk & Opportunity  
Register

4  
Strategic Actions  
(Recommendations)

FOCUS

# LT-ROR POLICY FRAMEWORK

STEP 1

IDENTIFY MEGA- & MACROTRENDS

STEP 2

IDENTIFY METRICS FOR CTB GOALS

STEP 3

ESTIMATE IMPACTS OF MACROTRENDS ON METRICS

STEP 4

DEVELOP VTRANS LONG-TERM RISK  
& OPPORTUNITY REGISTER

STEP 5

TRACK MACROTRENDS FOR ANNUAL REPORTING

## MEGATREND

**IMPACT OF CLIMATE  
CHANGE /  
GREENHOUSE GAS  
EMISSIONS**

**TECHNOLOGICAL  
ADVANCEMENTS**

**CHANGE IN  
CONSUMPTION  
PATTERNS**

**SOCIO-DEMOGRAPHIC /  
EMPLOYMENT  
CHANGES**

## MACROTREND



Increase in  
Flooding Risk

- Sea-level Rise
- Storm Surge
- Inland/Riverine Flooding



Adoption of  
Highly  
Autonomous  
Vehicles



Adoption of  
Electric Vehicles



Growth in  
Shared Mobility



Growth in E-  
commerce



Greater  
Automation of  
Production and  
Services



Growth of  
Professional  
Service Industry



Increase in  
Workplace  
Flexibility

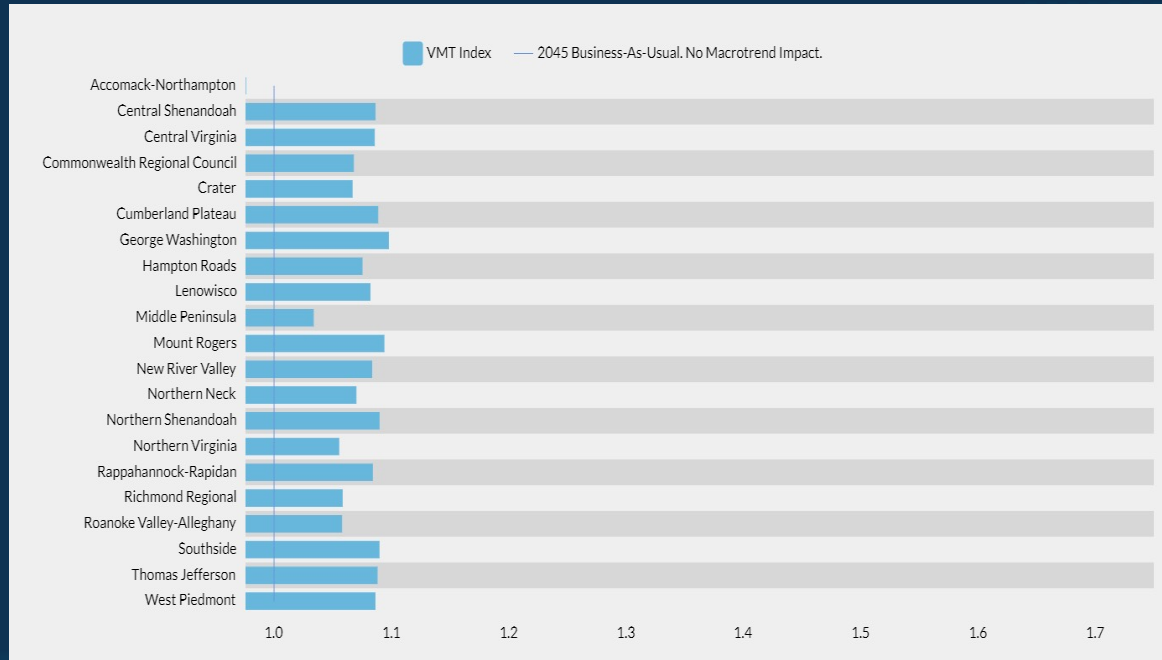


Growth of the  
65+ Cohort



Population and  
Employment  
Shift

## VEHICLE MILES TRAVELED (VMT) INDEX: ESTIMATED CHANGE IN VMT DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIO



### STATEWIDE IMPACT

**+4%**

LOW

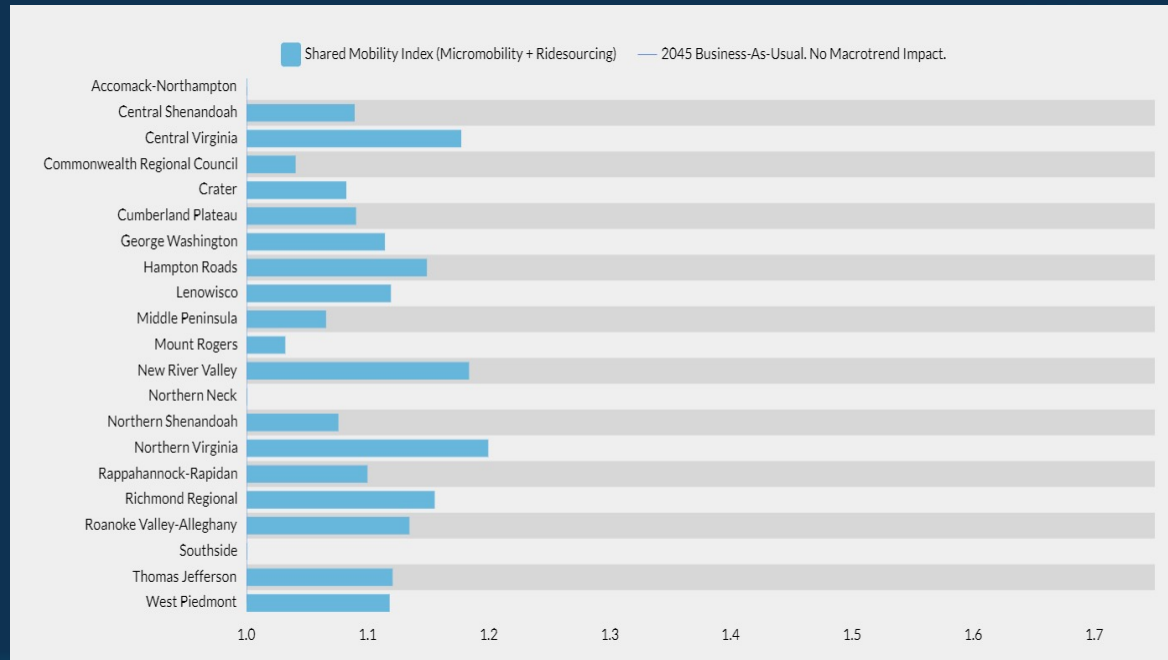
**+8%**

MEDIUM

**+17%**

HIGH

## SHARED MOBILITY INDEX: ESTIMATED SWITCHABLE URBAN AUTO SOV VMT TO MICROMOBILITY + RIDESOURCING DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIO



### STATEWIDE IMPACT

**+9%**

LOW

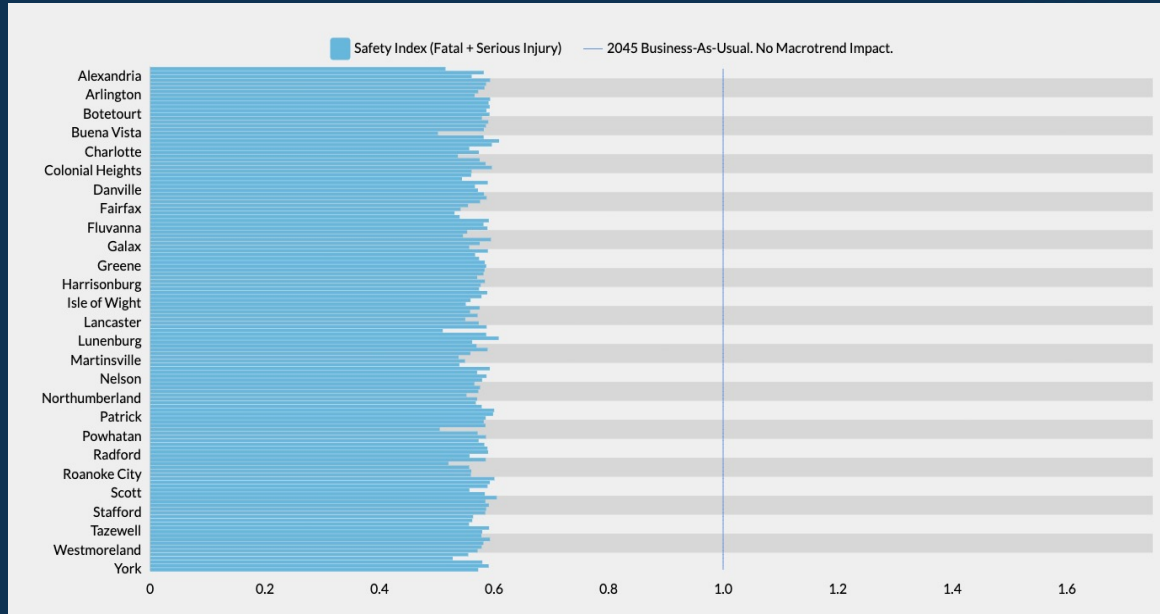
**+18%**

MEDIUM

**+27%**

HIGH

## SAFETY INDEX: ESTIMATED CHANGE IN NUMBER OF CRASHES INVOLVING FATALITIES + SERIOUS INJURIES DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIO



### STATEWIDE IMPACT

**-26%**

LOW

**-38%**

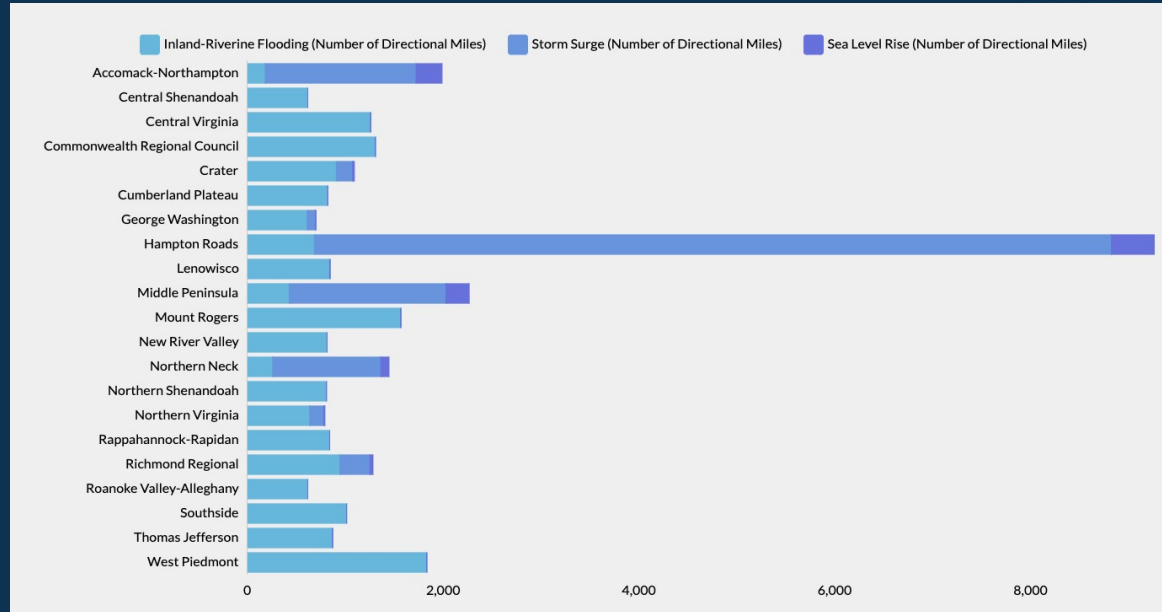
MEDIUM

**-67%**

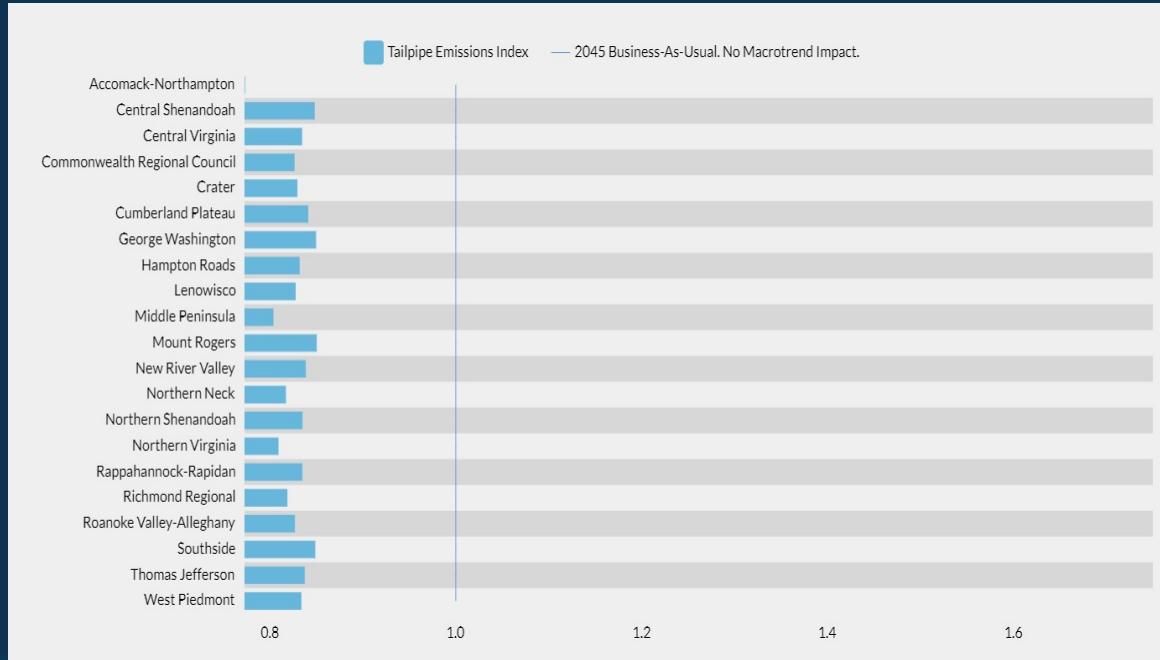
HIGH



## ROADWAYS AT RISK OF FLOODING: ESTIMATED DIRECTIONAL MILES OF ROADWAY AT RISK OF FLOODING DUE TO SEA LEVEL RISE, STORM SURGE, AND/OR INLAND/RIVERINE FLOODING IN 2045



## TAILPIPE EMISSIONS INDEX: ESTIMATED CHANGE IN TAILPIPE EMISSIONS DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIOS



### STATEWIDE IMPACT

**-3%**

LOW

**-17%**

MEDIUM

**-69%**

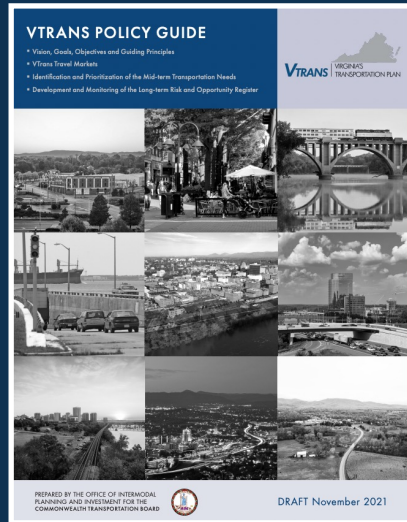
HIGH

## LT-ROR Steps 4 and 5: RISK & OPPORTUNITY REGISTER

- ▶ Step 4: OIPI has identified 19 risks and opportunities (view them [here](#))
- ▶ Step 5: CTB has directed OIPI to monitor these Mega and Macrotrends and provide annual updates.

## POLICY GUIDE

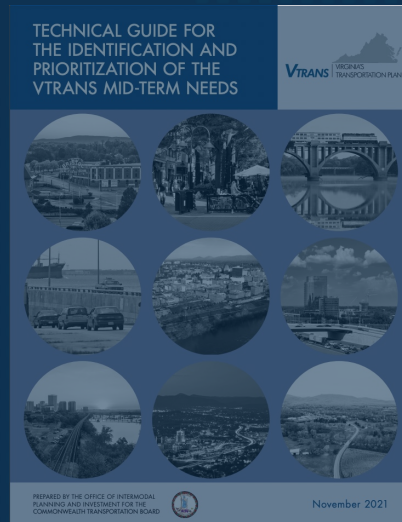
For Policy Makers | Adopted by the CTB



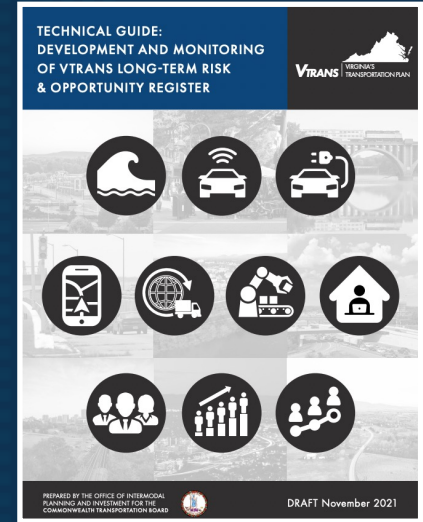
Includes all policies

## TECHNICAL GUIDES

For practitioners | **Not** adopted by the CTB



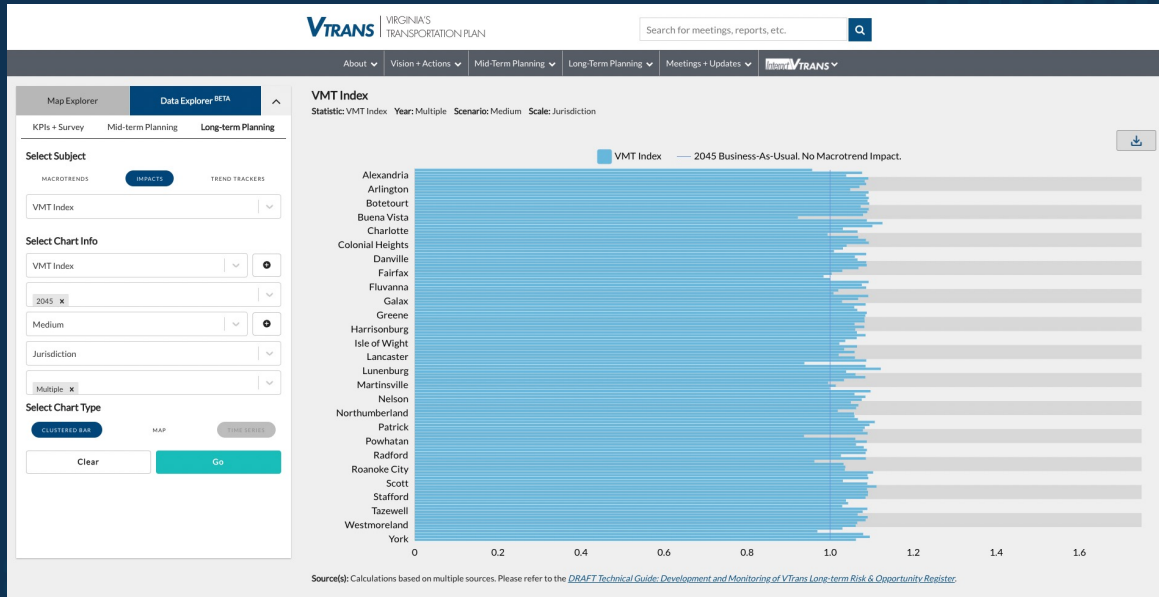
Needs Identification and Prioritization



Long-term Risk & Opportunity Register

## ► Gather jurisdiction- and region-specific impacts of VTrans Macrotrends

VTrans.org > InteractVTrans > Data Explorer



## LT-ROR: WHAT CAN MPO AND PDCs DO WITH THIS INFORMATION?

1. Share with your policy board members
  - ▶ Convey why this matters
2. Make your jurisdictions aware of it
  - ▶ Convey why this matters. This is the time to get ahead of the curve on some of the more local items.
3. Evaluate the extent to which your LRTPs will be impacted
4. Monitor the 19 identified risks and opportunities
5. Study and develop pilots to address the identified risks and opportunities
  - ▶ GAP-TA Program Component 2 offers resources

## NEXT STEPS

### ➤ OIPI will:

- Monitor long-term risks & opportunities and modify based on new data and information
- Collaborate with VDOT, DRPT, and other stakeholders to implement and monitor the VTrans Strategic Actions
- Inform local and regional jurisdictions of available resources to ensure all stakeholders are aware

# THANK YOU!

## ► OIPI's Statewide Transportation Planning (STP) Section

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