



COMMONWEALTH of VIRGINIA
Office of the
SECRETARY of TRANSPORTATION

Updates: OIPI Statewide Transportation Planning

RRTPO Technical Advisory Committee

Jitender Ramchandani, OIPI Statewide Transportation Planning Manager
Virginia Office of Intermodal Planning and Investment

December 14, 2021



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)



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

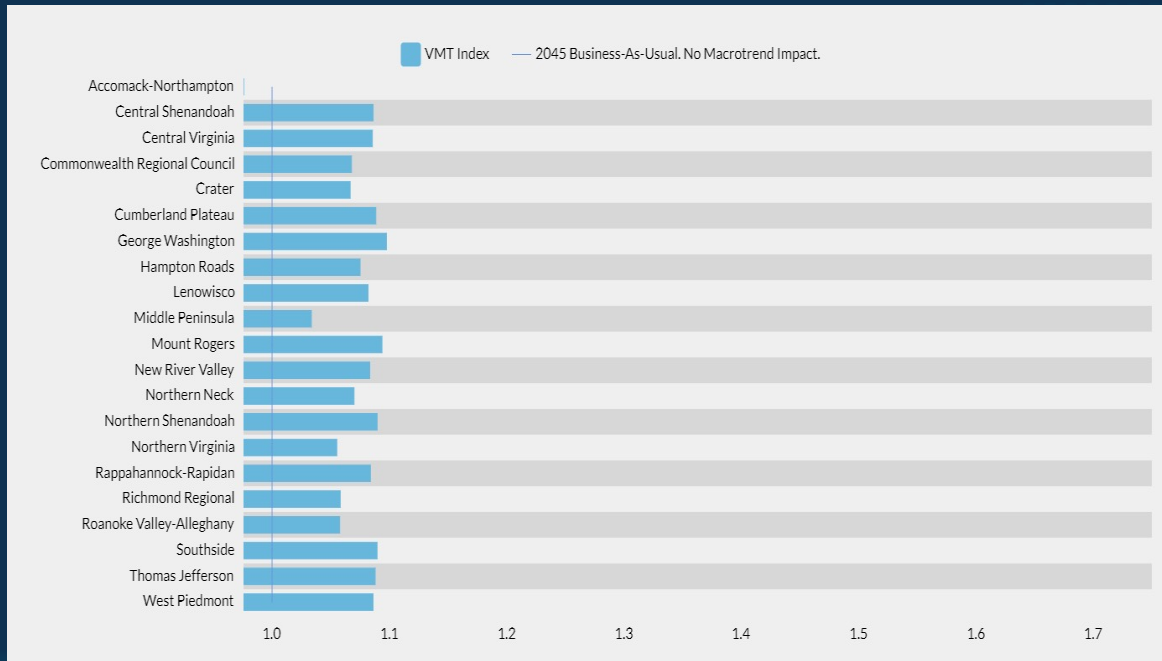
DEVELOP VTRANS LONG-TERM RISK
& OPPORTUNITY REGISTER

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	 <p>Increase in Flooding Risk</p> <ul style="list-style-type: none"> Sea-level Rise Storm Surge Inland/Riverine Flooding 	 <p>Adoption of Highly Autonomous Vehicles</p>  <p>Adoption of Electric Vehicles</p>  <p>Growth in Shared Mobility</p>	 <p>Growth in E-commerce</p>  <p>Greater Automation of Production and Services</p>	 <p>Growth of Professional Service Industry</p>  <p>Increase in Workplace Flexibility</p>  <p>Growth of the 65+ Cohort</p>  <p>Population and Employment Shift</p>

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



STATEWIDE IMPACT

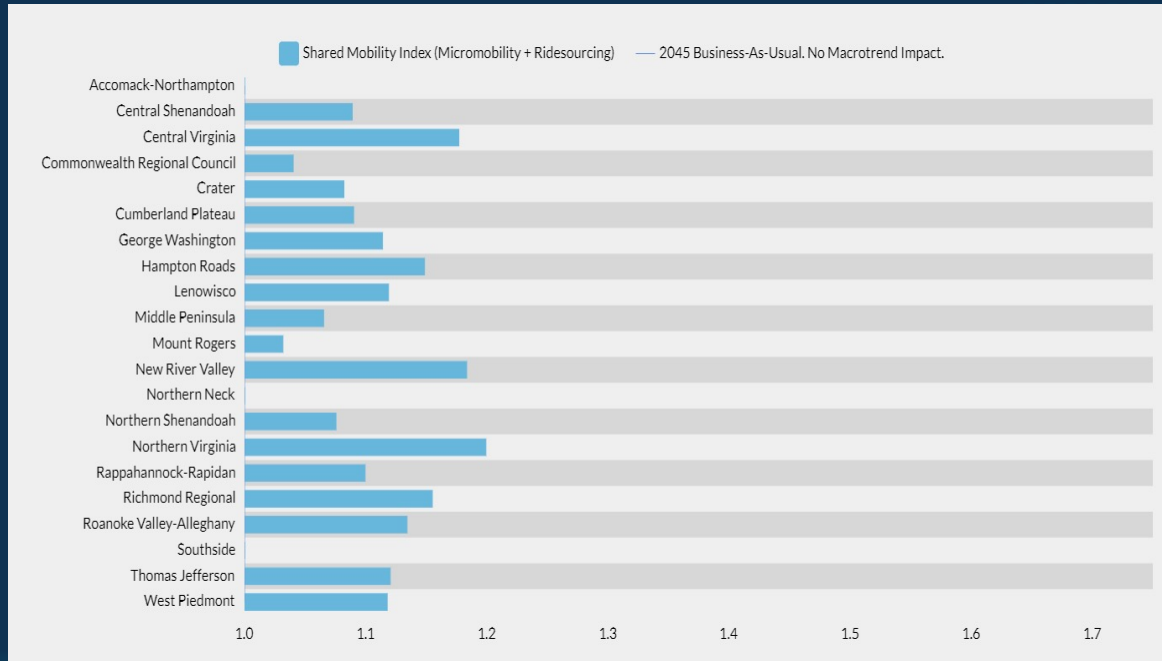
+4%
LOW

+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%

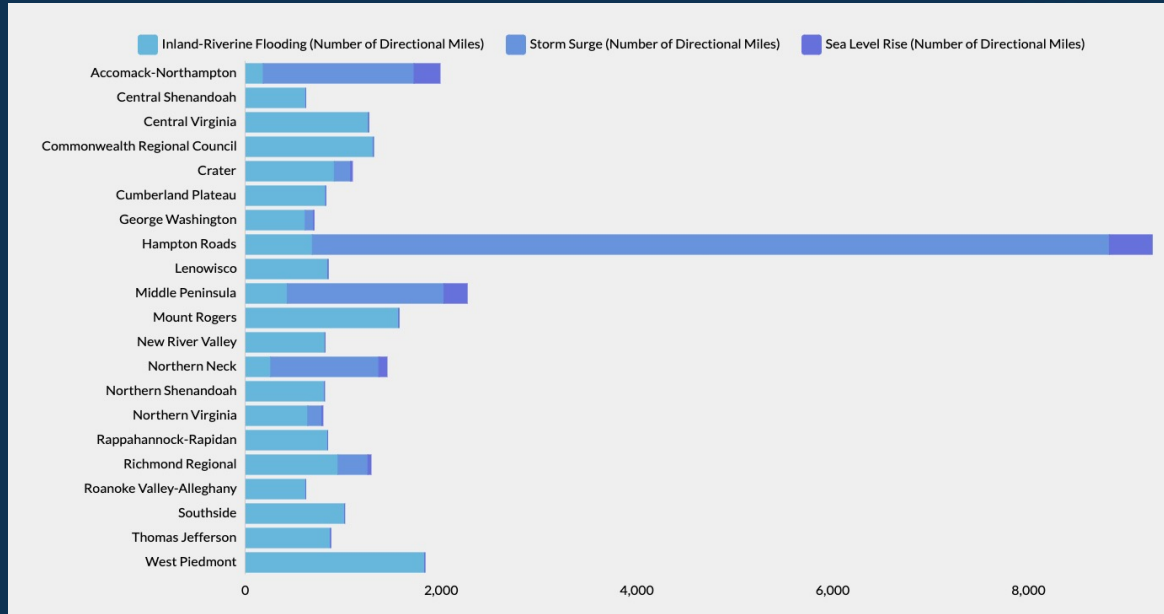
MEDIUM

+27%

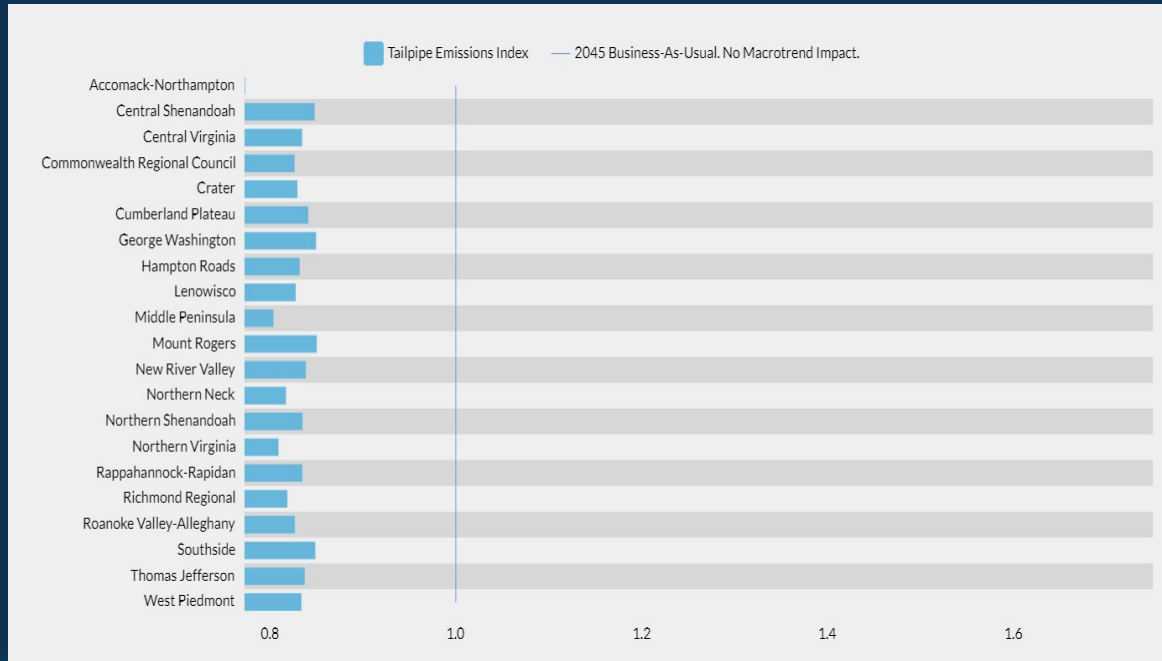
HIGH



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

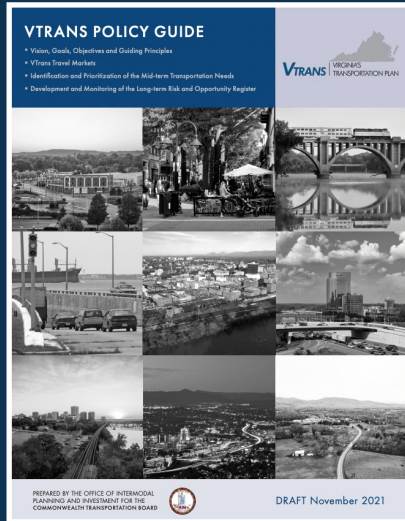


- ▶ Step 4: OIPI has identified 19 risks and opportunities (view them [here](#))
- ▶ Step 5: CTB has directed OIPI to monitor these Mega and Macrotrends and provide annual updates.

LT-ROR: RESOURCES

POLICY GUIDE

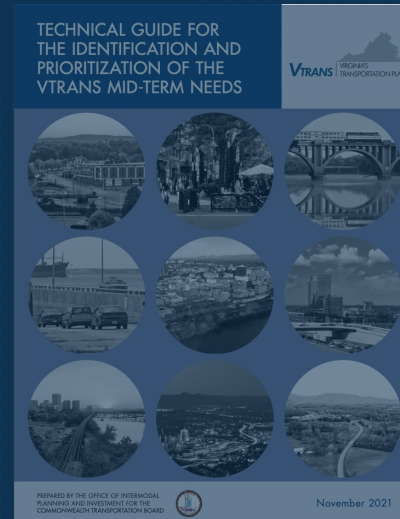
For Policy Makers | Adopted by the CTB



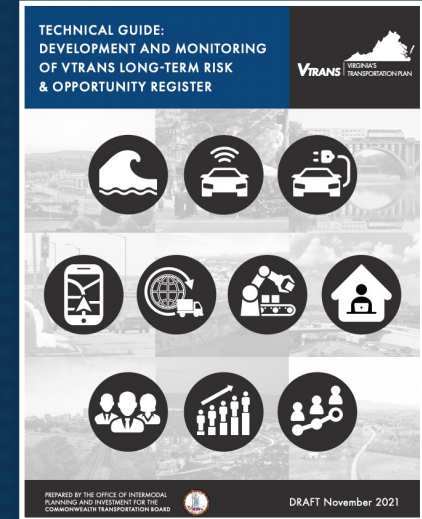
Includes all policies

TECHNICAL GUIDES

For practitioners | Not adopted by the CTB



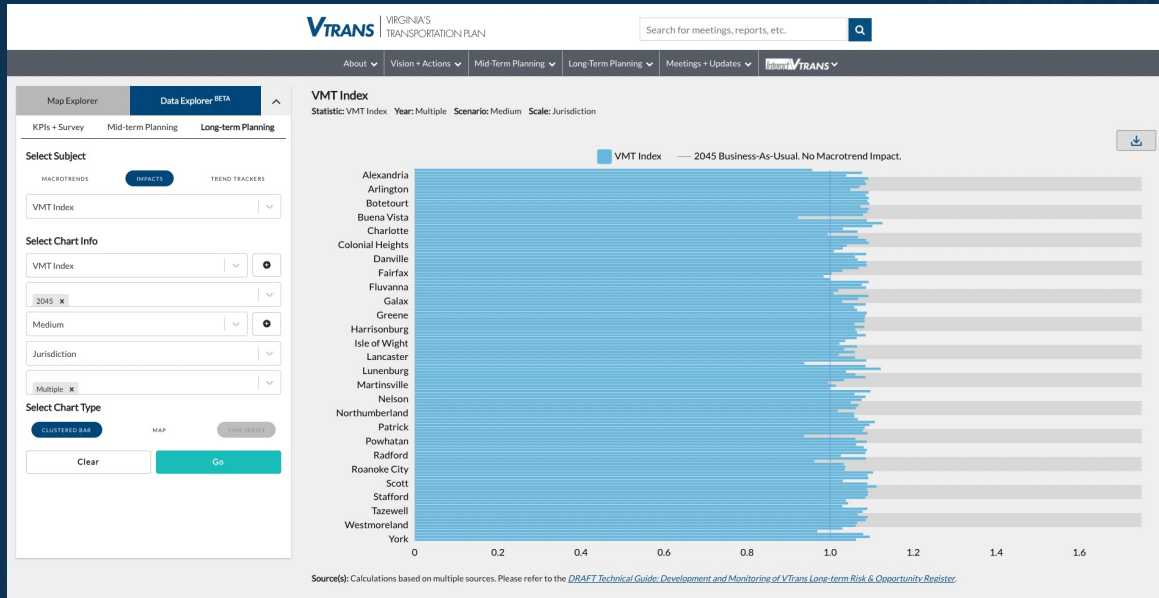
Needs Identification and Prioritization



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

➤ 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

- ▶ Jitender Ramchandani: jitender.Ramchandani@oipi.virginia | 804.489.4295