Update: VTrans Risk & Opportunity Register

RRTPO Technical Advisory Committee

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Virginia Office of Intermodal Planning and Investment

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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)
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
LT-ROR STEP 1: IDENTIFY MEGA- & MACROTRENDS

MEGATREND

IMPACT OF CLIMATE CHANGE / GREENHOUSE GAS EMISSIONS

MACROTREND

Increase in Flooding Risk
- Sea-level Rise
- Storm Surge
- Inland/Riverine Flooding

TECHNOLOGICAL ADVANCEMENTS

Adoption of Highly Autonomous Vehicles
Adoption of Electric Vehicles
Growth in Shared Mobility

CHANGE IN CONSUMPTION PATTERNS

Growth in E-commerce
Greater Automation of Production and Services

SOCIO-DEMOGRAPHIC / EMPLOYMENT CHANGES

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

<table>
<thead>
<tr>
<th>State</th>
<th>VMT Index</th>
<th>2045 Business-As-Usual, No Macro trend Impact</th>
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<td>Accomack-Northampton</td>
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<td>West Piedmont</td>
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**Directional Impact of Macrotrend on the Index**
- **Increase**
  - Low: +4%
  - Medium: +8%
  - High: +17%
LT-ROR STEP 3: IMPACTS OF MACROTRENDS ON CTB GOAL B METRIC

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

Directional Impact of Macrotrend on the Index  
- Increase  
- Decrease

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

<table>
<thead>
<tr>
<th>STATEWIDE IMPACT</th>
<th>-26%</th>
<th>-38%</th>
<th>-67%</th>
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<tbody>
<tr>
<td>LOW</td>
<td>MEDIUM</td>
<td>HIGH</td>
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Directional Impact of Macrotrend on the Index

VTRANS VIRGINIA'S TRANSPORTATION PLAN
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

Directional Impact of Macrotrend on the Index

- Increase
- Decrease
LT-ROR STEP 3: IMPACTS OF MACROTRENDS ON CTB GOAL E METRIC

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

Directional Impact of Macro trend on the Index  
Increase  Decrease
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.
LT-ROR: RESOURCES

POLICY GUIDE
For Policy Makers  I  Adopted by the CTB

Includes all policies

TECHNICAL GUIDES
For practitioners  I  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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