COMMONWEALTH of VIRGINIA
Office of the
SECRETARY of TRANSPORTATION

VTrans Regional Workshop

WinFred Area

Jitender Ramchandani, AICP, PMP

August 8, 2019

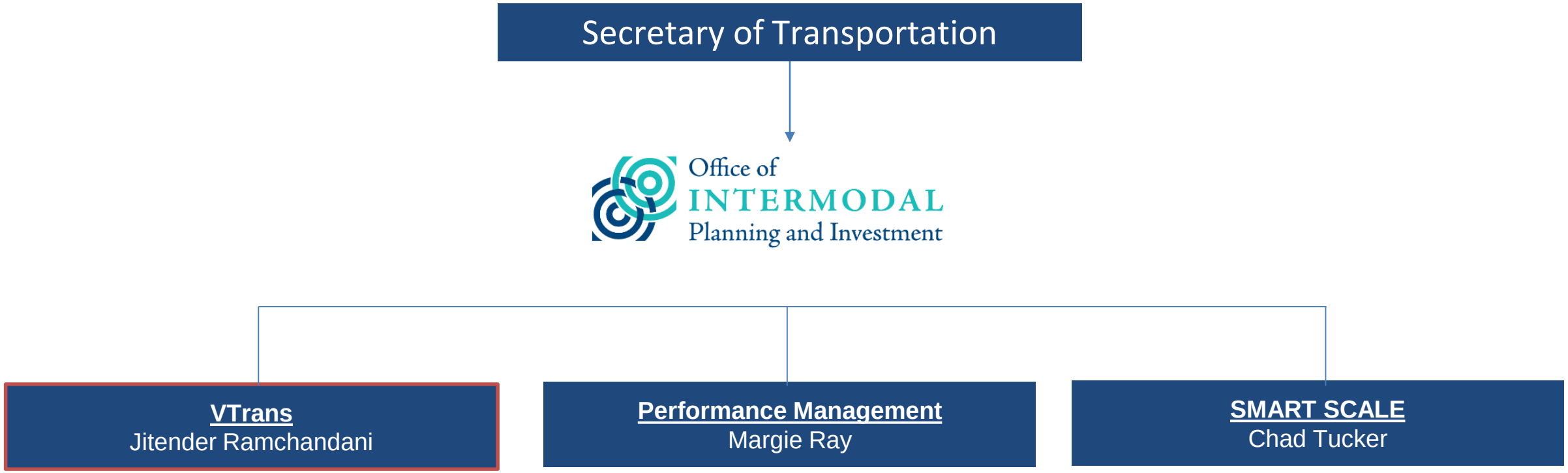
Housekeeping Items

- Refreshments
- Restrooms
- Lunch
- Parking matters
- Wifi Code/Password

Meeting Packet

- July 2019 Newsletter
- Mid-Term Needs FAQs
- VTrans2040 Needs
- Presentations Handout
- Maps of Measures
- Comment Form
- Next Steps

OIPI's ROLE IN VTRANS



OIPI assists the Commonwealth Transportation Board in the Development of VTrans.

TODAY'S SCHEDULE

- Plenary Presentation (10:00am-11:00am)
  - VTrans Overview
  - Statewide Considerations
  - Regional Studies
  - Needs Measures Methodology
- Breakout Groups (11:00am-1:30pm with break for lunch)
  - Congestion and Reliability Measures
  - Passenger Rail On-Time Performance
  - Accessibility to Activity Centers
  - Disadvantaged Population Beyond ¼ Mile Access to Transit
  - Potential for Safety Improvement Locations (PSI)
- Summary/Wrap-up (1:30pm-2:00pm)
  - Review of Next Steps and Timeline

PURPOSE OF TODAY'S WORKSHOP

- Goal: Utilize today's workshop to inform development of VTrans Mid-term Needs
  - We are still reviewing results of the data analysis and have not made any decisions
  - **Needs are not projects - A need can be addressed by different types of projects and strategies**

Purpose of Today's Workshop

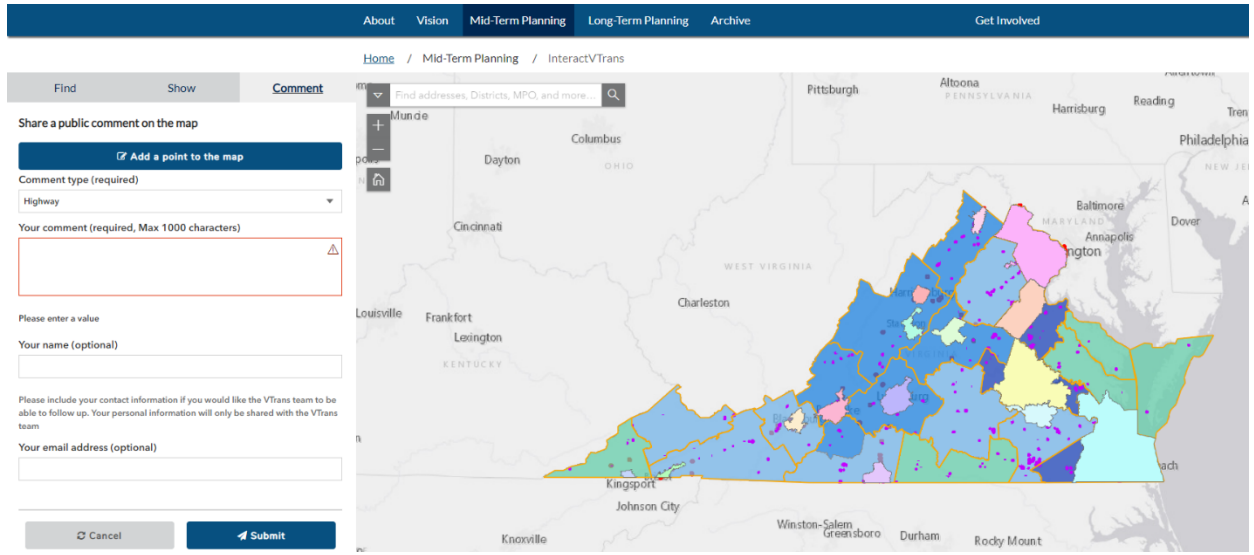
- Workshop format allows us to work together to:
  - Share information about the evolving VTrans process, measures, data and tools
  - Review region-specific data
  - Receive input on mid-term measures and thresholds
  - Utilize local and regional knowledge to capture issues that may not be fully or accurately captured by data alone
  - Discuss region-specific issues

  - Where we can use the most help (due to lack of data)
    - Environmental and equity considerations
    - Non-motorized access
    - Travel Demand Management opportunities associated with a roadway or a corridor

Feedback We Need From You Today

- Provide input on measures and thresholds
- Provide input on issues that may justify a Need
- Ways to provide input:
  - Verbally: During round table discussion
  - Written: Via comment form
  - Online: Interactive mapping application

InteractVTRANS | VIRGINIA'S TRANSPORTATION PLAN
at your fingertips



Purpose of Today's Workshop

- VTrans is used as one of the three screening criteria for SMART SCALE
  - Project is eligible
  - Project is ready
  - **Project meets one or more VTrans Needs**

- VTrans Needs will be utilized for SMART SCALE Round 4 that will start application intake in Spring 2020.
  - Getting your input on preliminary data analysis results is a key step leading to needs development

VTRANS OVERVIEW

VTrans Goals

VTrans2040 Goals

Mid-Term Needs Assessment | Travel Markets Review

- **Corridors of Statewide Significance (CoSS)** [Code of Virginia § 33.2-353]
  - Serve inter-regional travel
- **Regional Networks (RN)** [Code of Virginia § 33.2-353]
  - Serve commuters, intra-regional, and local travel
- **Urban Development Areas (UDA)** [Code of Virginia § 33.2-353 and § 15.2-2223.1]
  - Designated by local governments
  - Intended to promote walkable development and traditional neighborhood design
- **Safety**
- **Additional work underway to identify needs associated with local economic and industrial development areas**

Corridors of Statewide Significance*

- Coastal Corridor
- Crescent Corridor
- East-West Corridor
- Eastern Shore Corridor
- Heartland Corridor
- North Carolina to West Virginia Corridor
- North-South Corridor
- Northern Virginia Corridor
- Seminole Corridor
- Southside Corridor
- Washington to North Carolina Corridor
- Western Mountain Corridor

*Thin lines of same color represent Corridor Component Facilities

- Airports
- Ports
- Rail Network

Travel Markets:

Corridors of Statewide Significance serve inter-regional travel.

Corridors of Statewide Significance*

- Coastal Corridor
- Crescent Corridor
- East-West Corridor
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- Heartland Corridor
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- Washington to North Carolina Corridor
- Western Mountain Corridor

*Thin lines of same color represent Corridor Component Facilities

- Airports
- Ports
- Rail Network
- Regional Networks

Travel Markets:

Corridors of Statewide Significance serve inter-regional travel.

Regional Networks serve commuters, intra-regional and local travel.

Corridors of Statewide Significance*

- Coastal Corridor
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- Southside Corridor
- Washington to North Carolina Corridor
- Western Mountain Corridor

*Thin lines of same color represent Corridor Component Facilities

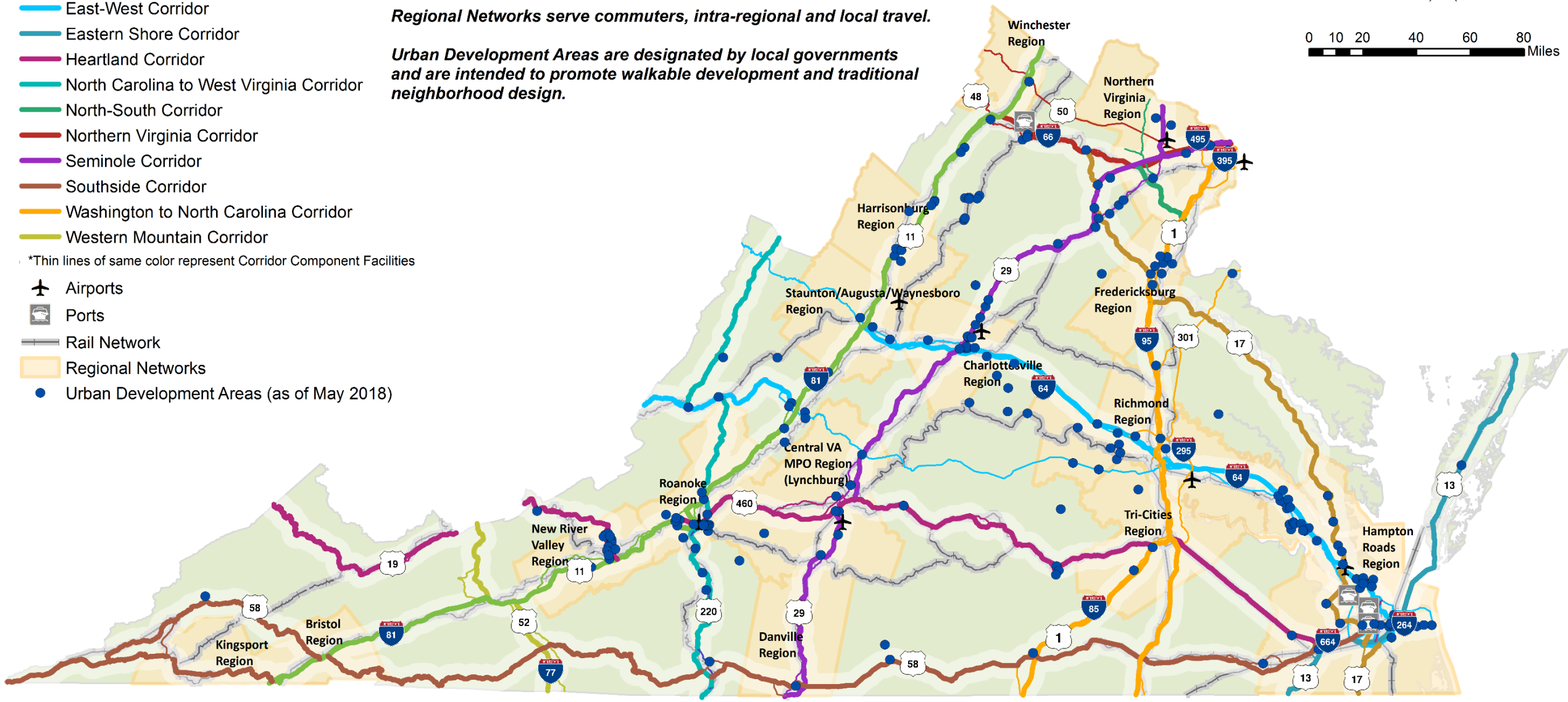
- Airports
- Ports
- Rail Network
- Regional Networks
- Urban Development Areas (as of May 2018)

Travel Markets:

Corridors of Statewide Significance serve inter-regional travel.

Regional Networks serve commuters, intra-regional and local travel.

Urban Development Areas are designated by local governments and are intended to promote walkable development and traditional neighborhood design.



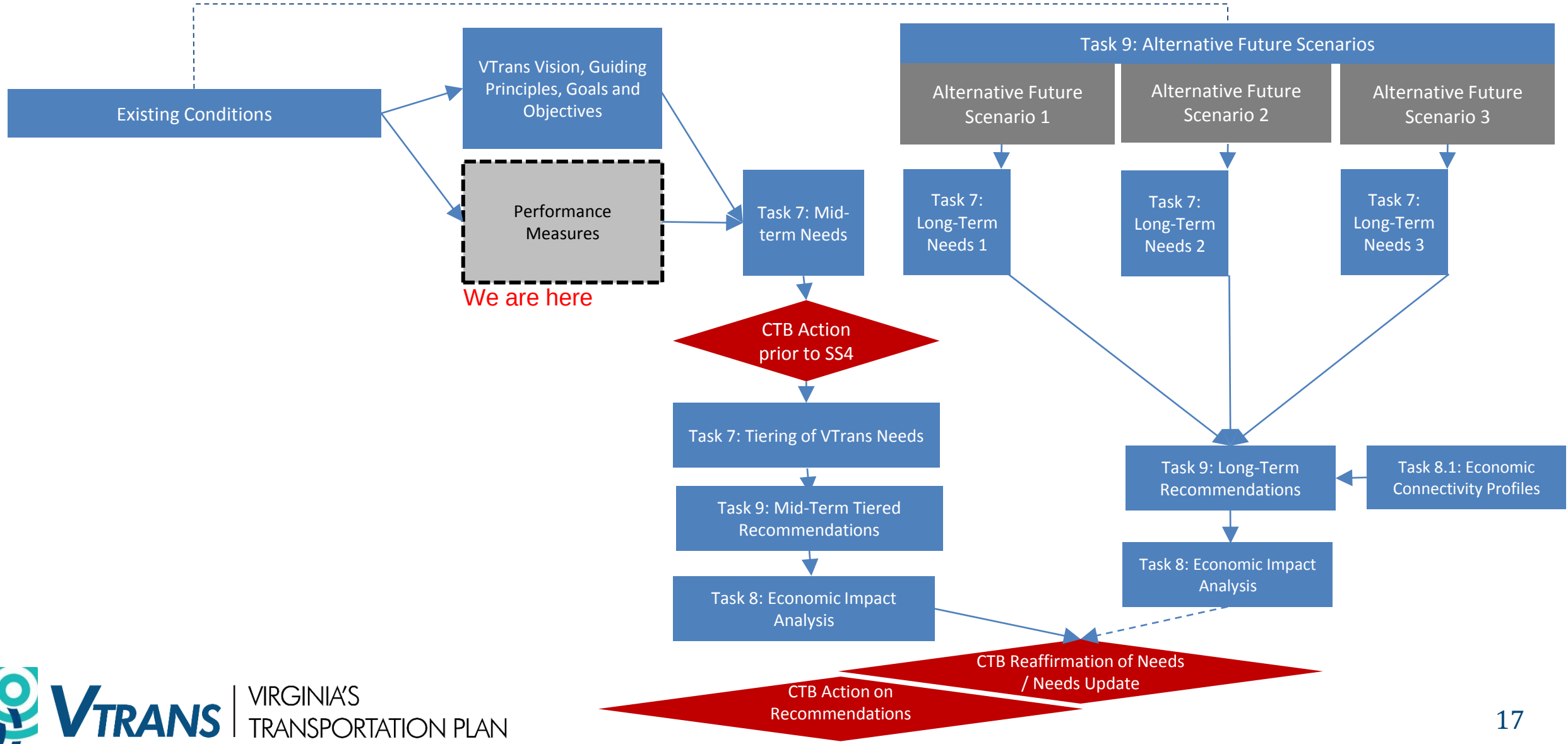
VTRANS | VIRGINIA'S TRANSPORTATION PLAN

Mid-Term Needs vs. Long-Term Needs

Mid-Term Needs	Long-Term Needs
7 - 10 year time horizon	10 + year time horizon
Performance measures with current data to determine	Performance measures through scenario analysis with forecast data to determine
Used as screening criteria for SMART SCALE	Used to inform policy, planning and project recommendations to prepare for 10+ years out
Action requested by December 2019	Expect to request action in 2020 or 2021

Intended to be utilized for SMART SCALE Round 4

VTRANS DEVELOPMENT



Mid-Term Needs – Statewide Considerations

Statewide Considerations of Mid-Term Needs

- Federal and State Requirements
  - Federal requirements per 23 U.S.C. 135 and other
  - State requirement § 33.2-353: OIPI to assist the CTB in the development and update of a Statewide Transportation Plan. Conduct a statewide needs assessment of CoSS, RN, UDA travel markets
  - State requirement § 2.2-229: OIPI to assist the Commonwealth Transportation Board in the development of a comprehensive, multimodal transportation policy, which may be developed as part of the Statewide Transportation Plan pursuant to § 33.2-353
- Virginia-specific Business Requirements
  - Identify safety needs to guide SMART SCALE safety investments
  - VTrans guides state funding programs (e.g. SMART SCALE, Revenue Sharing)
  - VTrans informs project development and advance activities

Statewide Considerations of Mid-Term Needs

- By the Code of Virginia § 33.2-353,

"It is the intent of the General Assembly that this plan assess transportation needs and assign priorities to projects on a statewide basis, avoiding the production of a plan that is an aggregation of local, district, regional, or modal plans."

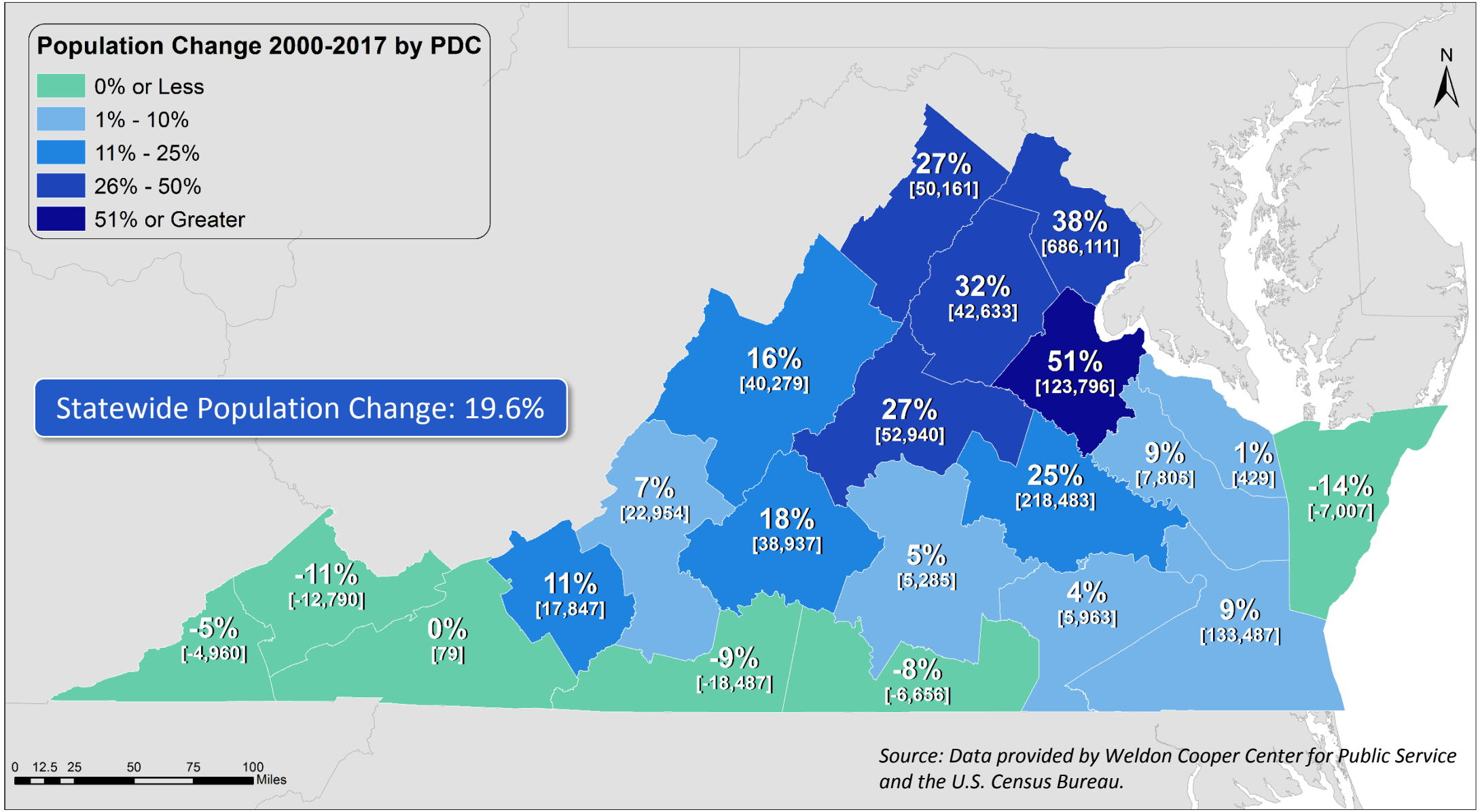
Statewide Considerations of Mid-Term Needs

- VTrans Needs Assessment
  - Acknowledges local and regional transportation plans, MPOs priorities and issues
  - Focuses on data-driven decision-making
- Continued data utilization evolution
  - Lack of reliable and complete data for all modes (highway, transit, non-motorized) in all areas (NoVA versus Bristol) across all facility types (interstates, arterials, collectors) remains a challenge
  - Unit for reporting may not allow detail/accuracy needed

STATEWIDE NEEDS TRADEOFFS

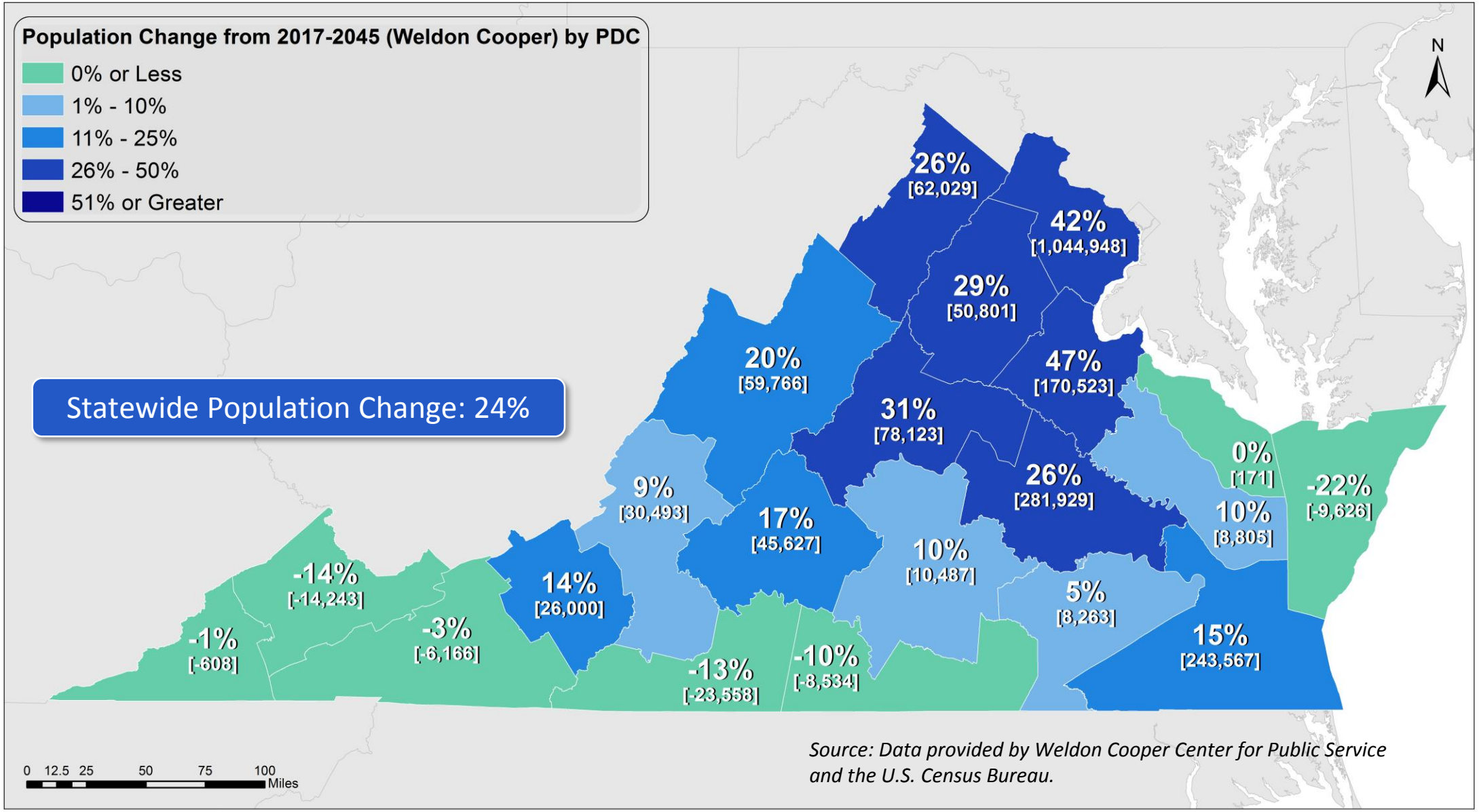
- "Transportation Need" is a broad term
  - The most congested spot for one locality may still be better than the number 50th congested spot for another locality
- VTrans is a statewide plan and has to address conflicting and contrasting priorities
  - More specific needs *versus* more general needs
  - Statewide criteria *versus* region-specific criteria
  - Demonstrable today's needs *versus* aspirational needs

Historical Population Change by PDC – 2000-2017



Source: Data provided by Weldon Cooper Center for Public Service and the U.S. Census Bureau.

Forecast Population Change by PDC – 2017-2045



Source: Data provided by Weldon Cooper Center for Public Service and the U.S. Census Bureau.

REGIONAL STUDIES

WINFRED REGION

WinFred Regional Network

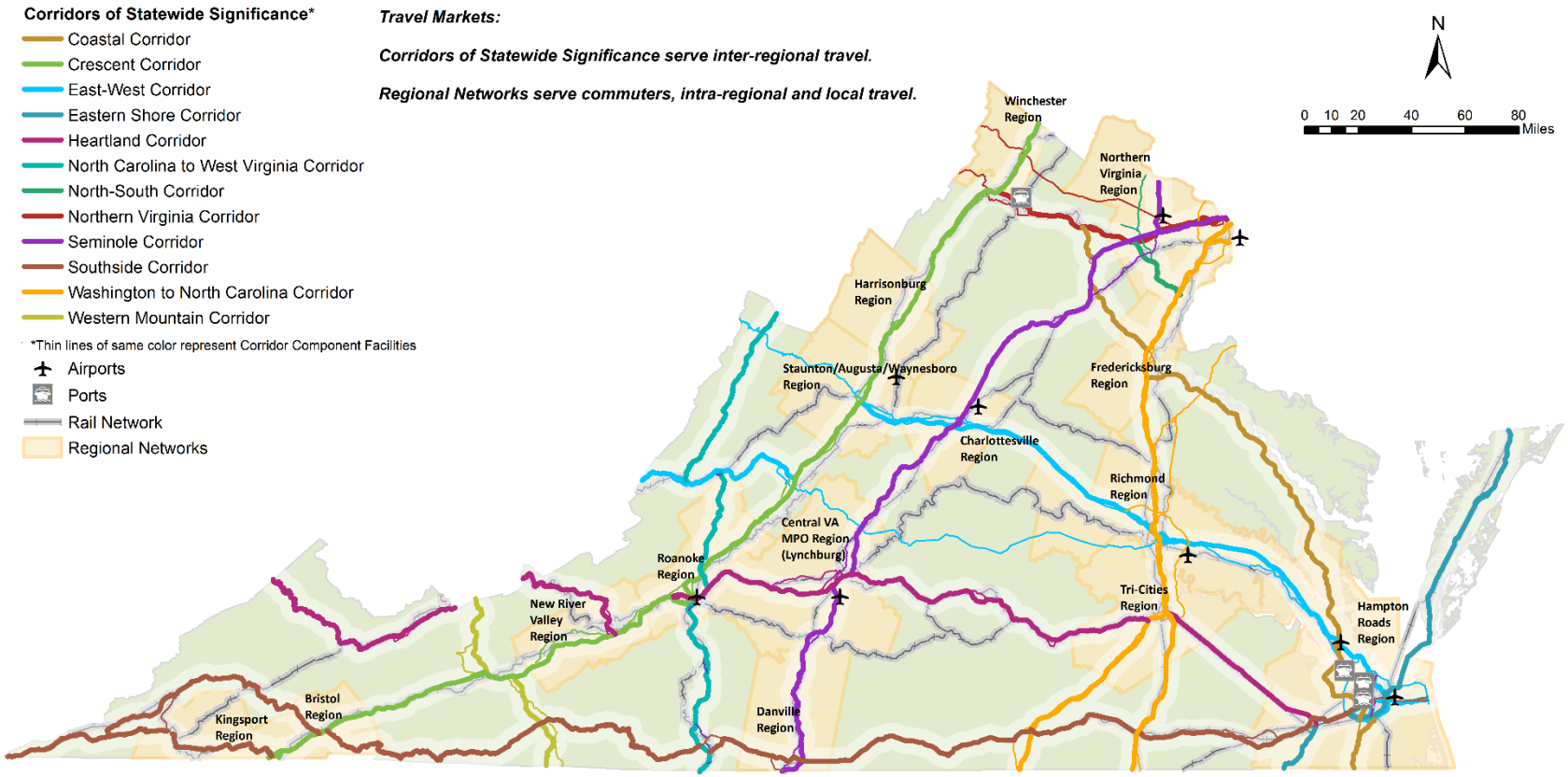
The following Plans and Studies are under review.

Name of Plan	Agency
WinFred MPO 2040 Metropolitan Transportation Plan	WinFred MPO
Bicycle and Pedestrian Master Plan Update	NSVRC/ WinFred MPO
Route 11 (Valley Pike / Valley Avenue) Corridor Study	VDOT/ WinFred MPO
Northern Shenandoah Valley Regional Commission 2035 Rural Long Range Transportation Plan	NSVRC
WinFred MPO 2040 Metropolitan Transportation Plan	WinFred MPO

Mid-Term Needs Measures Methodology

NEEDS METHODOLOGY – COSS, REGIONAL NETWORKS AND DISTRICTS

- Build on Needs from VTrans2040
- Introduce new/improved data sources



Mid-Term Needs Assessment | Measures by VTrans Travel Markets

Goal	Mid-Term Needs Measures	CoSS	Regional Network	UDA	Safety
Economic Competitiveness	Congestion: Percent Person Miles Traveled in Excessively Congested Conditions (PECC)	✓*	✓*		
	Congestion: Travel Time Index (TTI)	✓**	✓**		
	Reliability: Unreliable Delay (UD)	✓*	✓*		
	Reliability: Buffer Time Index (BTI)	✓**	✓**		
	Passenger Rail On-time Performance	✓			

* **All of limited-access CoSS, plus select limited access facilities within Regional Networks**

** **All of non-limited access CoSS, plus all other facilities within Regional Networks**

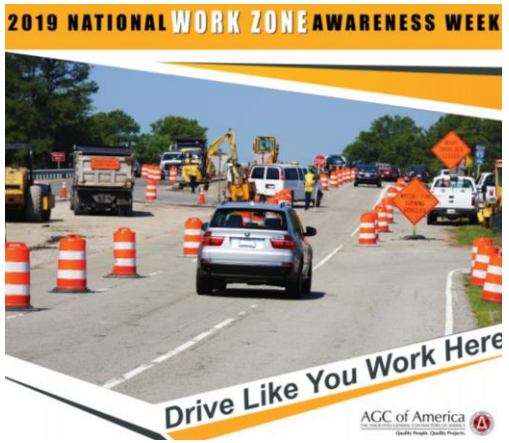
Mid-Term Needs Assessment | Measures by VTrans Travel Markets

Goal	Mid-Term Needs Measures	CoSS	Regional Network	UDA	Safety
 Accessible Places	Accessibility to Activity Centers		✓		
	Disadvantaged Population Beyond ¼ Mile Access to Transit		✓		
 Safety	Potential for Safety Improvement Locations*				✓

* **Safety Needs will also be listed under CoSS and RN to ensure eligibility of their for High Priority Projects Program (HPPP).**

Limitations of Congestion and Reliability Performance Measures

- General Limitations
  - Congestion and reliability measures may not reflect:
    - Slowdowns required by law
    - Slowdown necessitated by geometry or weather conditions
    - Those desired by local communities (i.e. downtowns)
  - Team has tailored measures to overcome limitations as much as possible
  - Data accuracy has improved but there is room for further improvement



Performance Measure for Congestion

Percent Person Miles Traveled in Excessively Congested Conditions (PECC)

- What it tells us:
  - Amount of travel occurring under excessively congested conditions
- What it measures:
  - Percent of total travel that is significantly slower than posted speed limit
- Where it applies:
  - CoSS: limited access facilities
  - Regional Networks: select limited access facilities
- Data source:
  - Speed: Data collection from GPS and other mobile devices (INRIX)
  - Volume: VDOT Traffic Count Program

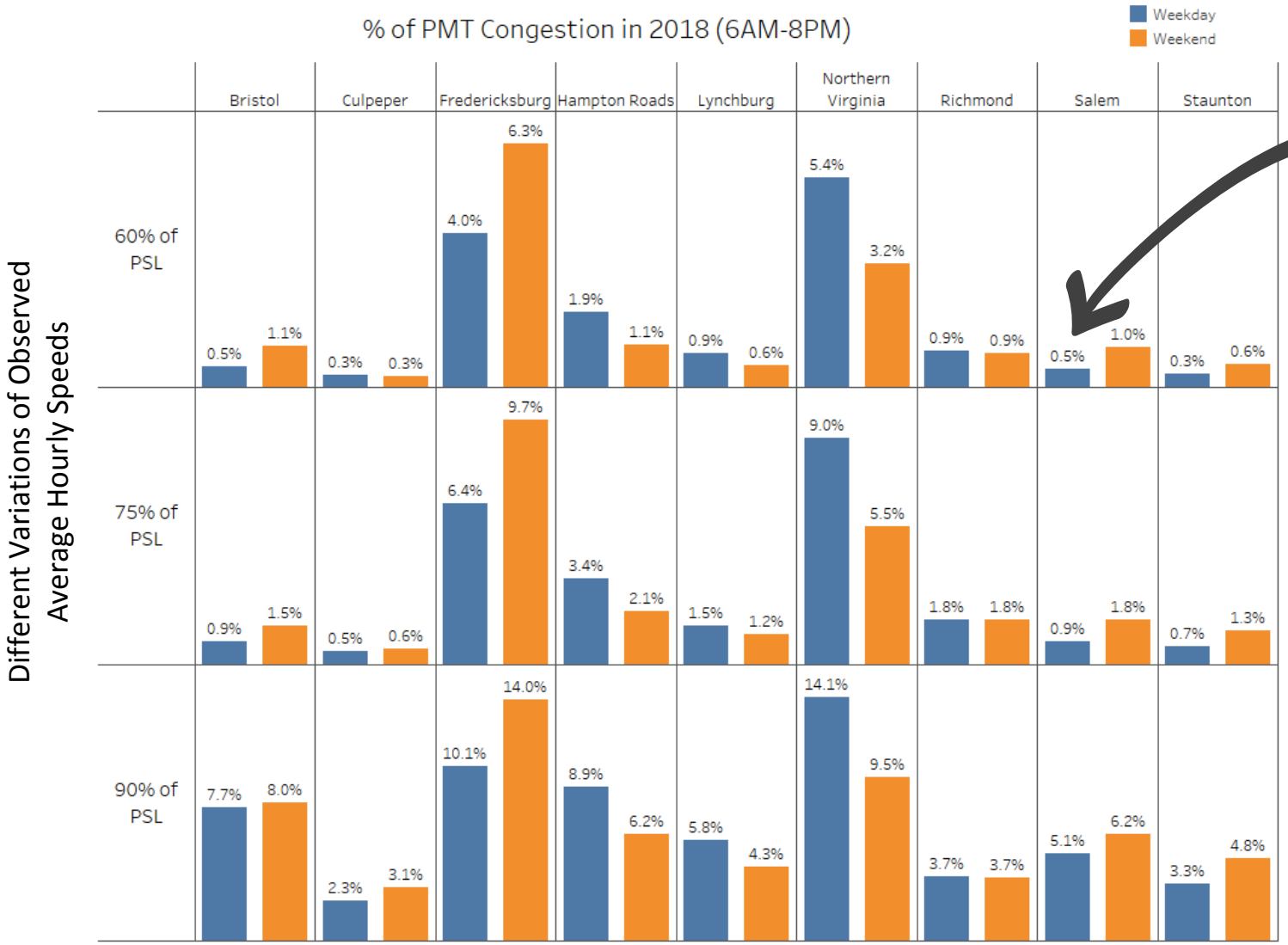
Performance Measure for Congestion

Percent Person Miles Traveled in Excessively Congested Conditions (PECC)

- Period of analysis: Hourly weekday average for 6am to 8pm collected during calendar year 2018
- How it is calculated:
  - Check whether a road segment has an average speed below:
    - Below 90% of posted speed limit (PSL),
    - Below 75 % of posted speed limit (PSL)
    - Below 60% of posted speed limit (PSL)
  - If speed on a segment is below a speed limit
    - sum the person miles of travel on that segment in that hour
    - Divide the person miles of travel in congestion by the total person miles of travel
    - Result is the PECC

Performance Measure for Congestion (Interstate and Select Limited-Access Roadways)

Percent Person Miles Traveled in Excessively Congested Conditions (PECC)



What does this chart show?

EXAMPLE: In Salem District, 0.5% of total person mile traveled on interstates and select limited-access roadways are at 60% or below average hourly speed

Proportion of person miles traveled that are below the above speed limits

Performance Measure for Congestion (Interstate and Select Limited-Access Roadways)

Percent Person Miles Traveled in Excessively Congested Conditions (PECC)

- How will this measure be used to determine Needs along CoSS and RN?
  - Based on further analysis and consultation with stakeholders, we will determine the most appropriate thresholds for Congestion (PECC)
  - We will evaluate a combination of slow speed and person miles of travel affected

Performance Measure for Reliability (Interstate and Select Limited-Access Roadways)

Unreliable Delay (UD) - Number of Person Hours of Delay During Unreliable Conditions

- What it tells us:
  - Amount of delay associated with high travel time variability (unpredictability). i.e. delay is accounted towards the UD measure for only those hours when the travel time is highly unpredictable
- What it measures:
  - Person hours of delay during periods with large variation in travel times
- Where it applies:
  - CoSS: limited-access facilities
  - Regional Networks: select limited access facilities
- What is "high travel time variability":
  - $80th\ percentile\ /\ 50th\ percentile\ travel\ time$ above or equal to 1.5

Performance Measure for Reliability (Interstate and Select Limited-Access Roadways)

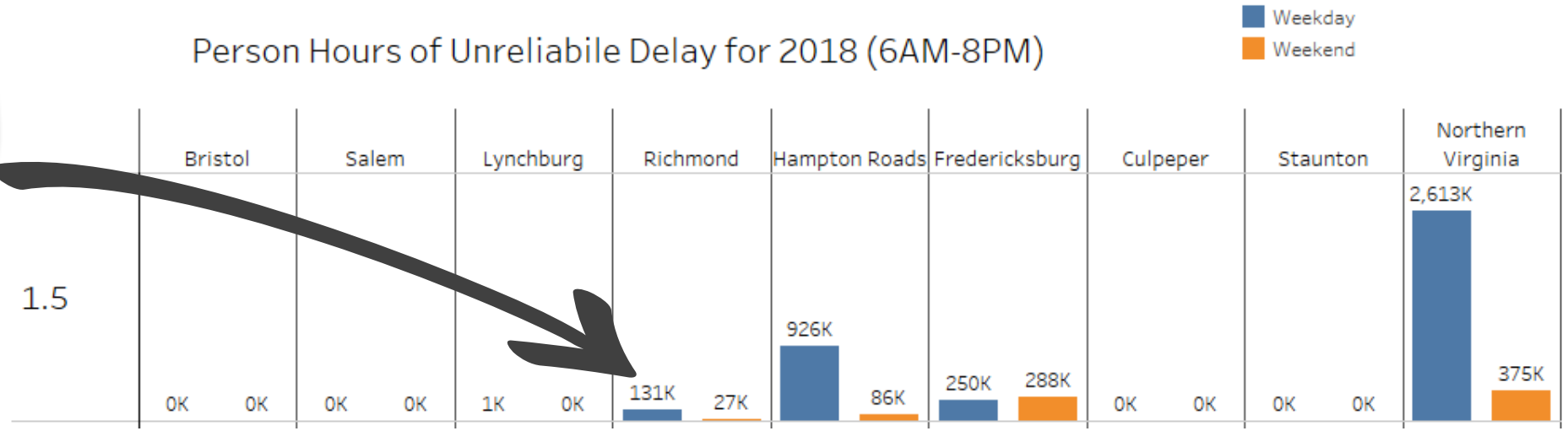
Unreliable Delay (UD) - Number of Person Hours of Delay During Unreliable Conditions

- Data source:
  - Speed: Data collection from GPS and other mobile devices (INRIX)
  - Volume: VDOT Traffic Count Program
- Period of analysis:
  - Hourly, every weekday and weekend, during calendar year 2018
- Calculation:
  - Check whether a road segment has high travel time variability. If so, calculate person hours of delay
  - The person hours of delay is the person hours traveled at the observed speed minus the person hours traveled at the median (50^{th} percentile) travel time for that hour

PERFORMANCE MEASURE FOR RELIABILITY (INTERSTATE AND SELECT LIMITED-ACCESS ROADWAYS)

UNRELIABLE DELAY (UD) - NUMBER OF PERSON HOURS OF DELAY DURING UNRELIABLE CONDITIONS

EXAMPLE: In Richmond District, 131,000 person hours of delay was experienced on interstates and select limited access facilities due to slower than median speed



Number of Person Hours of Delay

Performance Measure for Congestion (Non Limited-Access CoSS and RN)

Travel Time Index

- What it tells us:
  - If the TTI=2.0, it takes twice as long to travel the road during the peak time than at the reference speed (normal traffic conditions)
- What it measures:
  - It measures intensity of congestion
- Where it applies:
  - CoSS, non-limited access facilities
  - Regional Networks: all other roadways except select limited access facilities

Performance Measure for Congestion (Non Limited-Access CoSS and RN)

Travel Time Index

- Data source:
  - Speed: Data collection from GPS and other mobile devices (INRIX)
- Period of analysis:
  - Average weekday, by hour
- Calculation:
  - Observed time divided by reference travel time
  - For each hour of the day, there are 250+ (number of weekdays in a year) observations

Performance Measure for Reliability (Non Limited-Access CoSS and RN)

Buffer Time Index (BTI)

- What it tells us:
  - How much extra time ("buffer") is needed to ensure on-time arrival least 95% of the time (be late one day per month)
- What it measures:
  - Indicator of "buffer" needed to not be late due to variation in travel times
- Where it applies:
  - All of non-limited access CoSS, plus all other roadways within Regional Networks

Performance Measure for Reliability (Non Limited-Access CoSS and RN)

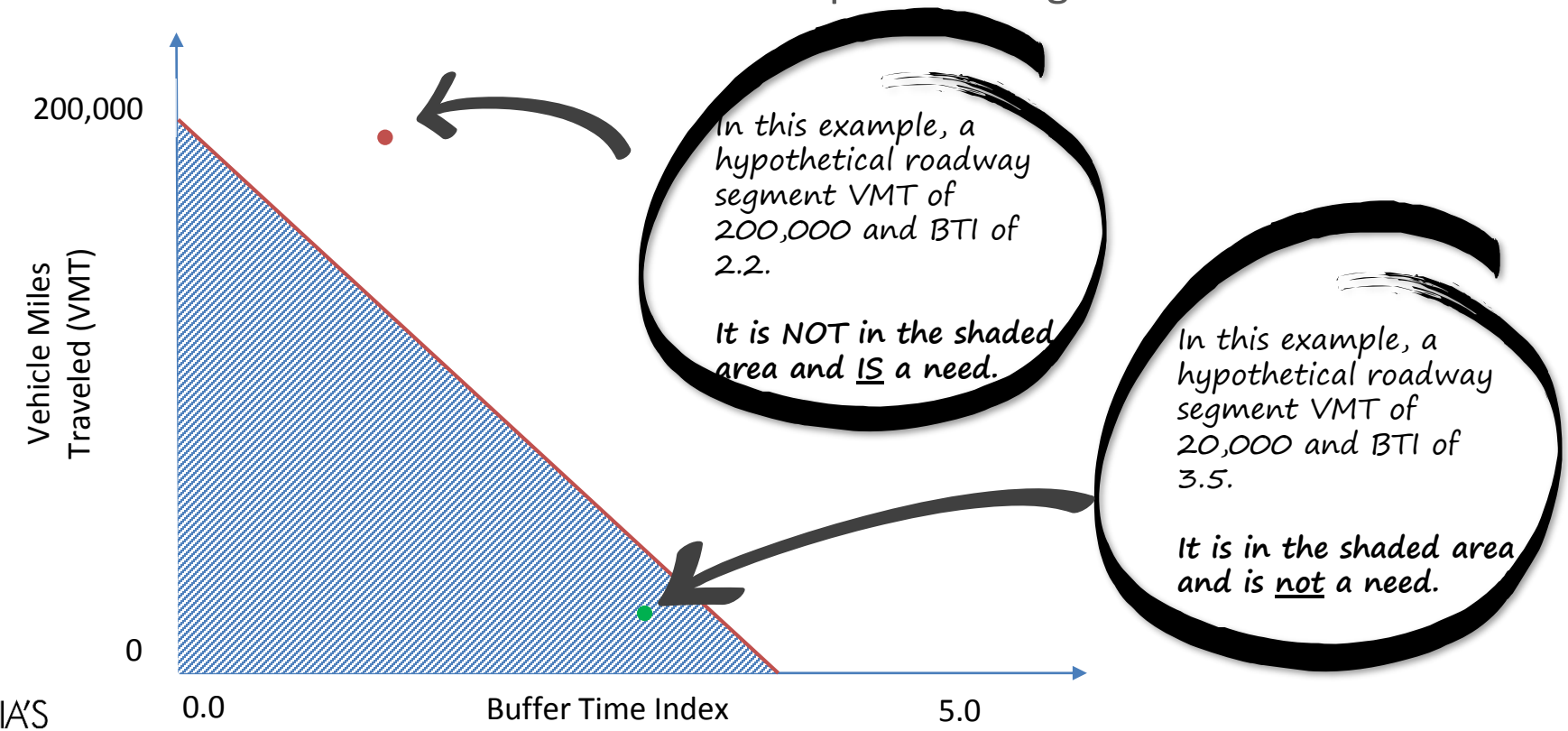
Buffer Time Index (BTI)

- Data source:
  - Speed: Data collection from GPS and other mobile devices (INRIX)
- Period of analysis:
  - Average weekday, by hour
- Calculation:
  - Buffer Time Index = (95% Travel Time – Average Travel time) divided by Average Travel Time

Performance Measure for Reliability (Non Limited-Access CoSS and RN)

Buffer Time Index (BTI)

- "How will the **reliability** measure (**BTI**) be used to determine needs along Nonlimited Access CoSS and RN Roadways?
  - What threshold is appropriate?
  - Should all roads be treated the same?
  - Is there be a level of a BTI that should be considered a problem regardless of AADT or VMT?



Performance Measure for Reliability

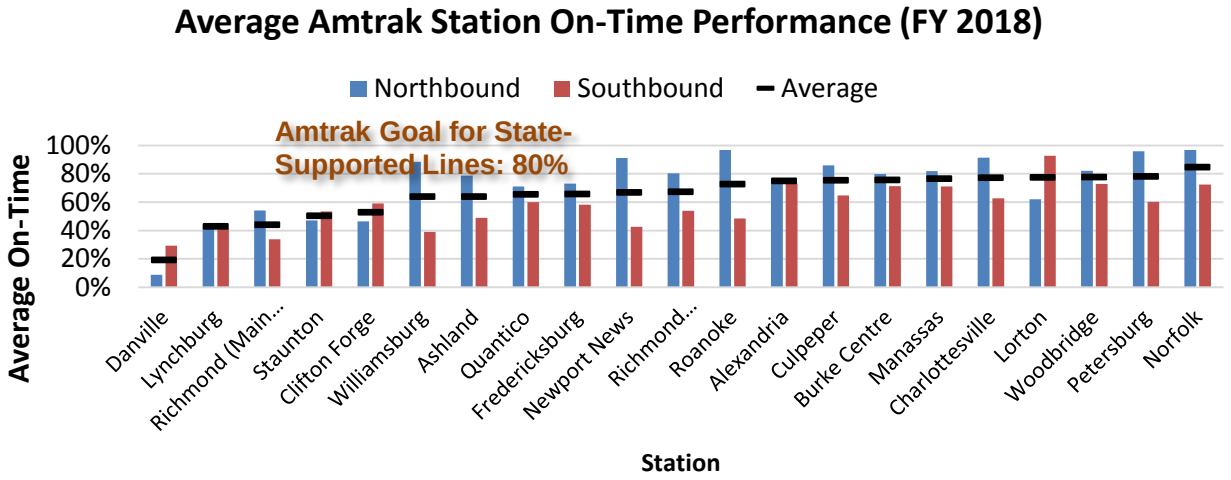
Passenger Rail On-Time Performance

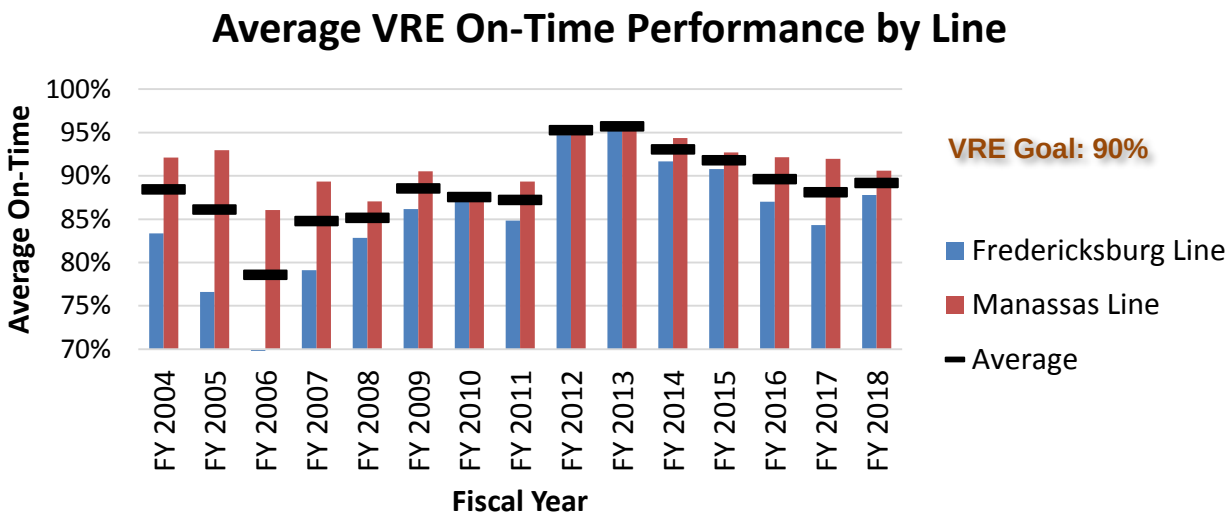
- What it tells us:
  - Reliability of state-supported Amtrak and VRE commuter rail services
- What is “reliability” for a passenger rail service:
  - On-time (per the established schedule) arrival of a passenger train except if a train is originating from that station
- What it measures:
  - On-time performance per rail operator’s goals
- Data source: Average on-time performance
  - Virginia Railway Express (VRE) by line
  - State-supported Amtrak Services by station
- Period and unit of analysis:
  - Virginia Railway Express (VRE) by line (2004-2018)
  - State-support Amtrak Services by station (2018)

Performance Measure for Reliability

Passenger Rail On-Time Performance

- What do these preliminary results tell us?
  - Northbound state-supported Amtrak services are more reliable
  - Southbound services are less reliable, likely due to the delay experienced in DC
  - Danville Amtrak station has the lowest service reliability
  - Often, originating stations have greater reliability than intermediate or terminus stations
  - VRE's average on-time performance has degraded by nearly 7% since 2013
  - VRE's Fredericksburg line is more unreliable than the Manassas line





Performance Measure for Reliability

Passenger Rail On-Time Performance

- How will this measure be used to identify VTrans Needs?
  - Lack of reliability could hamper demand, or indicate other issues (such as rail line congestion)
  - Compare trends over time to determine if improvements may be necessary to keep to a standard performance level into the future
  - Identify stations/hotspots where improvements could be made
  - There are several initiatives in planning and advance activities states such as improvements to Long Bridge which is a bottleneck, DC2RVA, local passenger service studies, etc.
  - Benefit from stakeholder input to identify issues and need for improvements

Performance Measure for Accessibility to Activity Centers

Accessibility Deficit - Highway

- What it tells us:
  - Ability of workers to access Activity Centers (local-serving, knowledge-sector, freight-based)
- What it measures:
  - Needs associated with improved auto accessibility are being measured using congestion and reliability measures
- Where it applies:
  - Highway access is important for all three types of activity centers

Economic and Transportation Correlation Table

	Local Sector	Knowledge Sector	Freight Sector
Highway Access	3	3	3
Passenger Reliability	3	3	1
Bottleneck Relief	2	3	3
Freight Reliability	2	2	3
Freight Accessibility	1	2	3
Network Connectivity	3	2	1
Transportation Demand Management	1	2	2
Modal Choice	3	2	1
Transit Access	3	2	1
Active Transportation (Walk/Bike) Options	2	3	1
Walkable Places	2	3	1

Correlations:

3 = High Correlation to Transportation Need
2 = Moderate Correlation to Transportation Need
1 = Low Correlation to Transportation Need

Source: Summary correlations based on national research and survey of national Industry Site Selection Professionals conducted by OIPI Consultant Team

Performance Measure for Accessibility to Activity Centers

Accessibility Deficit - Transit

- What it tells us:
  - Ability of workers to access Local Serving and Knowledge based Activity Centers
- What it measures:
  - Difference in number of workers, between auto and public transportation, that can access a given activity center within 45 minutes of travel
- Where it applies:
  - To Local-serving and Knowledge-based Activity Centers

Economic and Transportation Correlation Table

	Local Sector	Knowledge Sector	Freight Sector
Highway Access	3	3	3
Passenger Reliability	3	3	1
Bottleneck Relief	2	3	3
Freight Reliability	2	2	3
Freight Accessibility	1	2	3
Network Connectivity	3	2	1
Transportation Demand Management	1	2	2
Modal Choice	3	2	1
Transit Access	3	2	1
Active Transportation (Walk/Bike) Options	2	3	1
Walkable Places	2	3	1

Correlations:

3 = High Correlation to Transportation Need
2 = Moderate Correlation to Transportation Need
1 = Low Correlation to Transportation Need

Source: Summary correlations based on national research and survey of national Industry Site Selection Professionals conducted by OIPI Consultant Team

Performance Measure for Accessibility to Activity Centers

Accessibility Deficit - Transit

- Data source:
  - Workers: 2015 Longitudinal Employer-Household Dynamics
  - Highway Network: HERE
  - Existing Fixed-Route Transit Service: DRPT
- Period of analysis:
  - Weekday peak period
- Calculation:
  - Using TransCAD, calculate the number of workers that can access an activity center block group within a 45-minute *drive*
  - Using TransCAD, calculate the number of workers that can access an activity center block group within a 45-minute *bus or train ride*
  - Calculate the difference between automobile and transit accessibility
  - Categorize activity centers as having high, medium, and low transit access deficit at Regional Network

Performance Measure for Accessibility to Activity Centers

Accessibility Deficit - Transit

- How will this measure be used to identify VTrans Needs?
  - We are evaluating different thresholds for characterizing transit access deficit and would like to receive feedback from stakeholders

Performance Measure for Accessibility to Activity Centers

Accessibility Deficit – Non-motorized

- What it tells us:
  - Non-motorized access to Local Serving and Knowledge based Activity Centers
- What it measures:
  - Existing average walk and bike shed to a Knowledge-based or Local-serving Activity Center
- Where it applies:
  - Knowledge-based and Local-serving Activity Centers

Economic and Transportation Correlation Table

	Local Sector	Knowledge Sector	Freight Sector
Highway Access	3	3	3
Passenger Reliability	3	3	1
Bottleneck Relief	2	3	3
Freight Reliability	2	2	3
Freight Accessibility	1	2	3
Network Connectivity	3	2	1
Transportation Demand Management	1	2	2
Modal Choice	3	2	1
Transit Access	3	2	1
Active Transportation (Walk/Bike) Options	2	3	1
Walkable Places	2	3	1

Correlations:

3 = High Correlation to Transportation Need
2 = Moderate Correlation to Transportation Need
1 = Low Correlation to Transportation Need

Source: Summary correlations based on national research and survey of national Industry Site Selection Professionals conducted by OIPI Consultant Team

Performance Measure for Accessibility to Activity Centers

Accessibility Deficit – Non-motorized

- Data source:
  - Walk and bike speed: Manual on Uniform Traffic Control Devices
  - Average bike and walk travel time: 2017 American Community Survey
- Period of analysis: Weekday
- Calculation:
  - Pedestrian: 1 mile
    - Average speed of 2.4 mph
    - Travel time of 24 minutes: Census-reported 90th percentile single-mode walking commute time for Virginia
  - Bike: 7 mile
    - Average speed of 9.9 mph: Average in-town bike speeds from multiple sources
    - 40 minutes: Imputed by combining Census-report mean commute times by mode with 90th percentile walk commute time

Performance Measure for Accessibility to Activity Centers

Accessibility Deficit – Non-motorized

- How will this measure be used to identify VTrans Needs?
  - We are evaluating different thresholds for characterizing non-motorized access deficit and would like to receive feedback from stakeholders

Performance Measure for Travel Options for Disadvantaged Populations

Disadvantaged Population Beyond ¼ Mile Access to Transit

- What it tells us:
  - Areas where transit access is of high importance but is unavailable
- What it measures:
  - Block groups with significant number of disadvantaged population without transit access
- What is Disadvantaged Population:
  - Population below 150% of poverty level
  - Population with age 75 year and older
  - Population with disability
- Who developed this definition of Disadvantaged Population:
  - Based on Federal Transit Administration-sponsored research identifies: Zhao, F. et al. (2013). *Transportation Needs of Disadvantaged Populations: Where, When, and How?* Florida International University, Center for Special Needs of Special Populations.

Performance Measure for Travel Options for Disadvantaged Populations

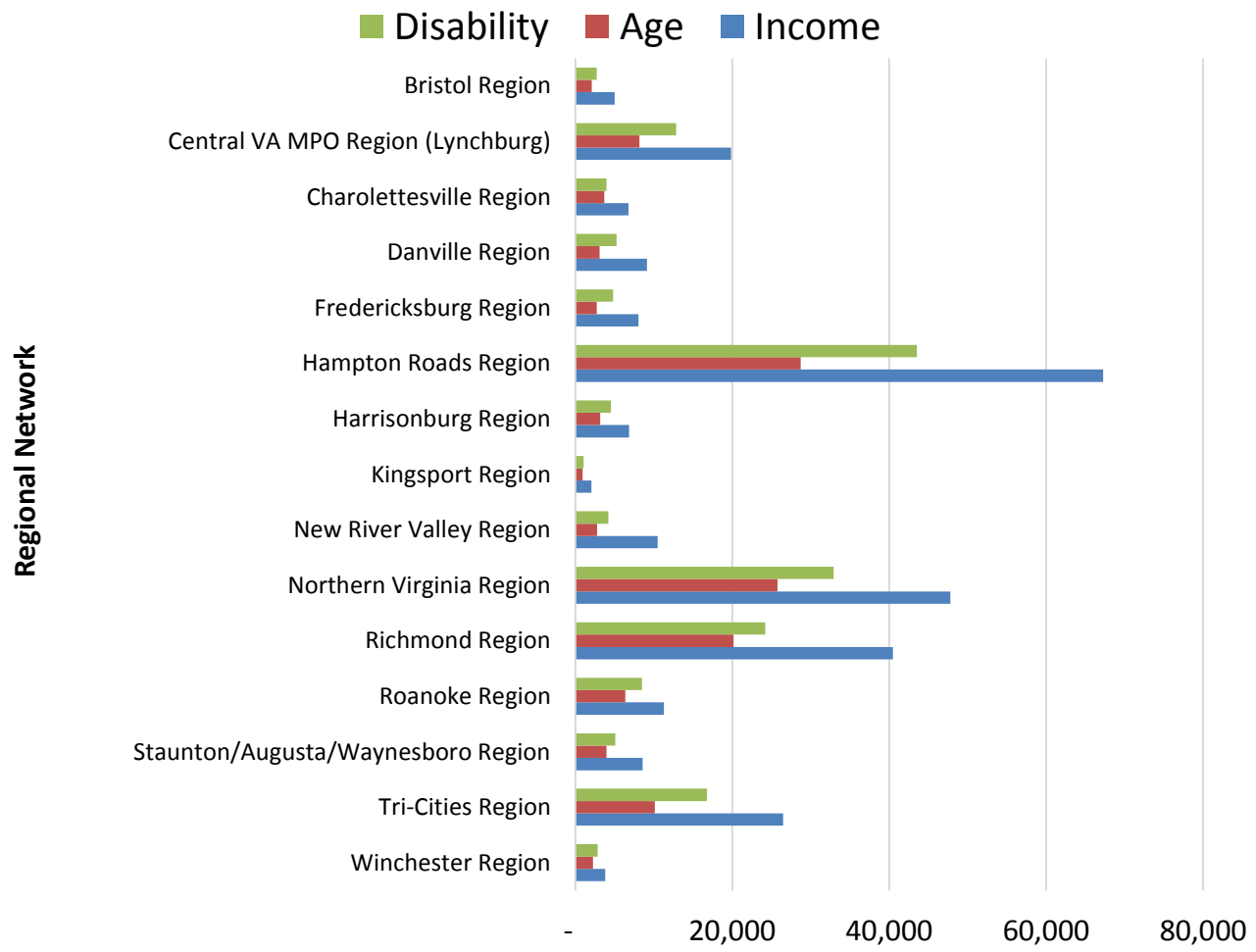
Disadvantaged Population Beyond ¼ Mile Access to Transit

- Data source:
  - 2017 5-year American Community Survey (ACS)
- Period of analysis:
  - Weekday fixed-route service
- Calculation:
  - Identify Census Block Groups where disadvantaged population (sum of all three disadvantaged group populations) is higher than 20% of total population
  - Flag block group as disadvantaged block group
  - Identify region-specific transit viability – population density served by transit system
  - Apply region-specific 10th% percentile population density served by transit

Performance Measure for Travel Options for Disadvantaged Populations

Disadvantaged Population Beyond ¼ Mile Access to Transit

- What do these preliminary results tell us?
  - Share of population in disadvantaged Block Groups that current not served by a fixed-route transit service is greatest in the Kingsport Region (which does not have fixed-route transit)
  - It is lowest in the Northern Virginia and Charlottesville Regions
  - Hampton Roads Region, followed by Northern Virginia and Richmond, has the largest disadvantaged population that is currently not served by a fixed-route transit service
  - On average, a fixed-route transit service is viable for nearly half of disadvantaged Block Groups



Disability: with disability I **Age:** 75 or older I **Income:** Less than 150% of poverty level

Performance Measure for Travel Options for Disadvantaged Populations

Disadvantaged Population Beyond ¼ Mile Access to Transit

- How will this measure be used to identify VTrans Needs?
  - Block groups that are found to be transit viable seem to have a demonstrable need for transit service
  - We are evaluating different modifications to thresholds for identification of disadvantaged Block Groups and will rely on stakeholder input

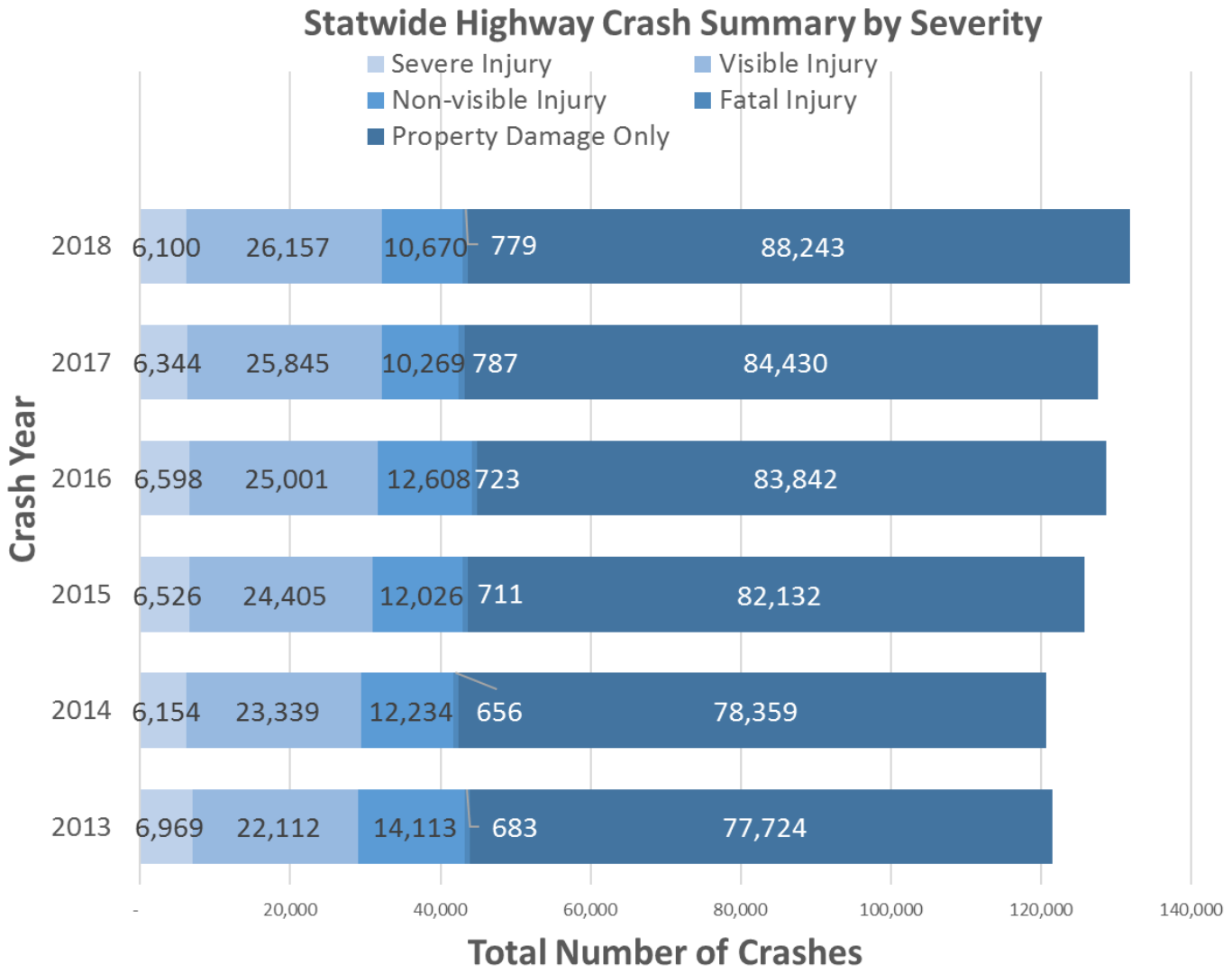
*

MID-TERM NEEDS METHODOLOGY – SAFETY NEEDS

Performance Measure for Safety

Potential for Safety Improvement (PSI) Locations

- Safety Needs are identified for the entire roadway network in Virginia
- Locations with Potential Safety Improvements (PSI) are used to guide VTrans Needs Identification



Performance Measure for Safety

Potential for Safety Improvement (PSI) Locations

- The PSI list is used in many different forms.
- We are considering the following tiering of the PSI list for ease of communication:
  - Tier 1: Targeted safety needs (less than 100 per district)
  - Tier 2: Top 100 PSI based on Fatal + Injury crashes only (100 per district)
  - Tier 3: Top 100 PSI based on all crashes
  - Tier 4: VTrans Safety Needs - Somewhere between complete list and 100 per district
  - Tier 5: Complete PSI List

Performance Measure for Safety

Potential for Safety Improvement (PSI) Locations

- When will the PSI list become available?
  - Early fall
- When will a subset of the PSI list be identified as VTrans Safety Needs?
  - A draft is expected to be available by October, 2019

Mid-Term Needs Methodology – Urban Development Areas, and Industrial and Economic Development Areas

Needs Methodology – Urban Development Areas

- Per Virginia Code §15.2-2223.1, UDAs …
  - Are designated by a locality with a comprehensive plan/ zoning authority
  - May be sufficient to support 10-20 years of projected growth
    - May extend planning horizon to 40 years around current/ planned rail transit
  - May be appropriate for higher residential densities and commercial floor area ratios (FAR)
  - ***Shall*** incorporate principles of traditional neighborhood design (TND)

✓ Pedestrian friendly road design

✓ Connected local street / pedestrian networks

✓ Preserved natural areas

✓ Mixed use neighborhoods, mixed + affordable housing

✓ Reduced front/ side yard building setbacks

✓ Reduced street widths and intersection turning radii

Needs Methodology – Urban Development Areas

- My jurisdiction currently does not have a UDA. Can we designate one in time for inclusion of needs in VTrans?
  - Planned UDAs (expected designation by April 1st, 2020)
    - Provide the needs for these areas in this survey (contact us)
    - Upload relevant data and shapefiles
    - Describe your plans for designation
    - These needs will become eligible for the next round of SMART SCALE only if designation process is complete by April 1st, 2020

Needs Methodology – Industrial and Economic Development Areas

- We are evaluating needs associated with designated industrial and economic development areas that have achieved some level of planning and readiness as determined by Virginia Economic Development Partnership (VEDP)
    - Leverage Virginia Economic Development Partnership (VEDP) Business Ready Sites program to account for the transportation needs of future industrial and economic development in VTrans

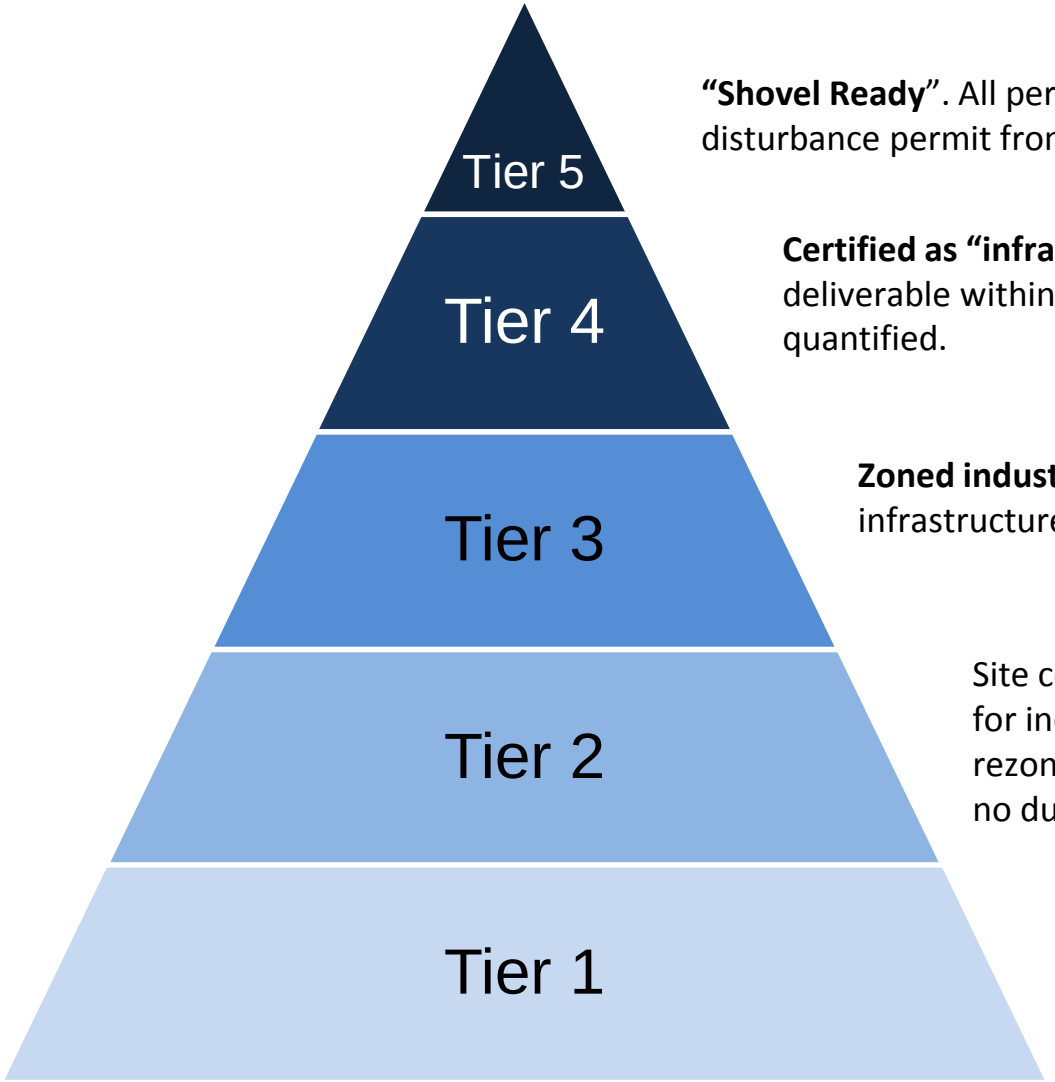
Needs Methodology – Industrial and Economic Development Areas

- VEDP's Business Ready Site Program
  - The Virginia Business Ready Sites Program (VBRSP) was established pursuant to § 2.2- 2238 C. of the Code of Virginia of 1950, as amended (the Code), **to identify and assess the readiness of potential industrial or commercial sites** in the Commonwealth of Virginia (the Commonwealth) **for marketing** for industrial or commercial economic development purposes, thereby enhancing the Commonwealth's infrastructure and promoting the Commonwealth's competitive business environment.

Needs Methodology – Industrial and Economic Development Areas

- Program components
  - Site characterization to assess and designate a site's current level of development
  - Site Development to further develop a pool of potential sites across the Commonwealth
- Requirements
  - Minimum of 100 contiguous acres (statutory) - VEDP is now accepting sites of 25+ acres
  - Allows for industrial, research and office parks
  - Applicants to program must be political subdivisions of the Commonwealth of Virginia, including counties, cities, towns, industrial/economic development authorities

Needs Methodology – Industrial and Economic Development Areas



"Shovel Ready". All permits are in place and the site is ready for a site disturbance permit from the locality in which the site is located.

Certified as "infrastructure ready". All infrastructure is in place or will be deliverable within 12 months. All permit issues have been identified and quantified.

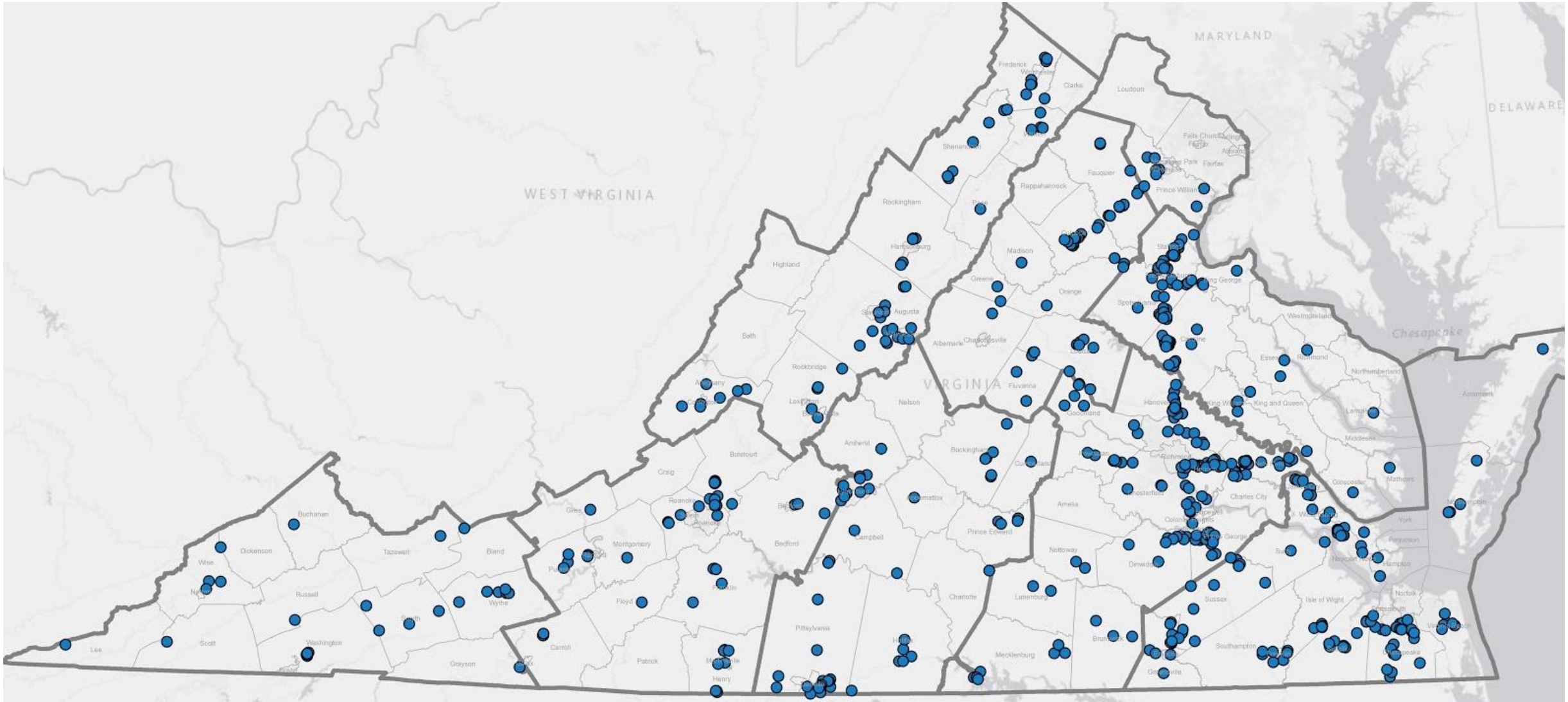
Zoned industrial/commercial, due diligence complete, but site has minimal or no infrastructure.

Site controlled and marketed for development. **Comprehensive Plan reflects** site intended for industrial or commercial development and use, **but site is not zoned as such** and a rezoning hearing needs to be scheduled. Site has minimal or no infrastructure. Minimal or no due diligence has been performed.

Site under (a) public ownership, (b) public/private ownership, or (c) private ownership which such private owner(s) agreeable to marketing the site for economic development purposes and to allowing access to the property for site assessment and marketing purposes. Comprehensive plan reflects site as appropriate for industrial or commercial development and use, but site is not zoned as such. Site has minimal or no infrastructure. Minimal or no due diligence has been performed.

Source: https://www.vedp.org/vbrsp

NEEDS METHODOLOGY – INDUSTRIAL AND ECONOMIC DEVELOPMENT AREAS



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Needs Methodology – Industrial and Economic Development Areas

Construction Districts	Total Sites (number)	Total Developable Acreage (acres)	Average Developable Acreage per Site (acres)	Largest Site by Developable Acreage (acres)	Average Distance to nearest Interstate (miles)	Average Distance to nearest Port (minutes)
Bristol	27	7,571	280	3,100	16	291
Culpeper	46	6,518	142	1,600	20	57
Fredericksburg	72	15,252	212	2,200	7	56
Hampton Roads	110	26,463	241	4,000	11	38
Lynchburg	51	9,254	181	2,500	42	120
Northern Virginia	9	1,530	170	524	4	49
Richmond	125	24,148	193	1,600	5	30
Salem	42	6,106	145	720	15	181
Staunton	53	6,960	131	770	3	73
Total	535	103,802	194			

Location and Characteristics of Sites in VEDP's Business Ready Site Program

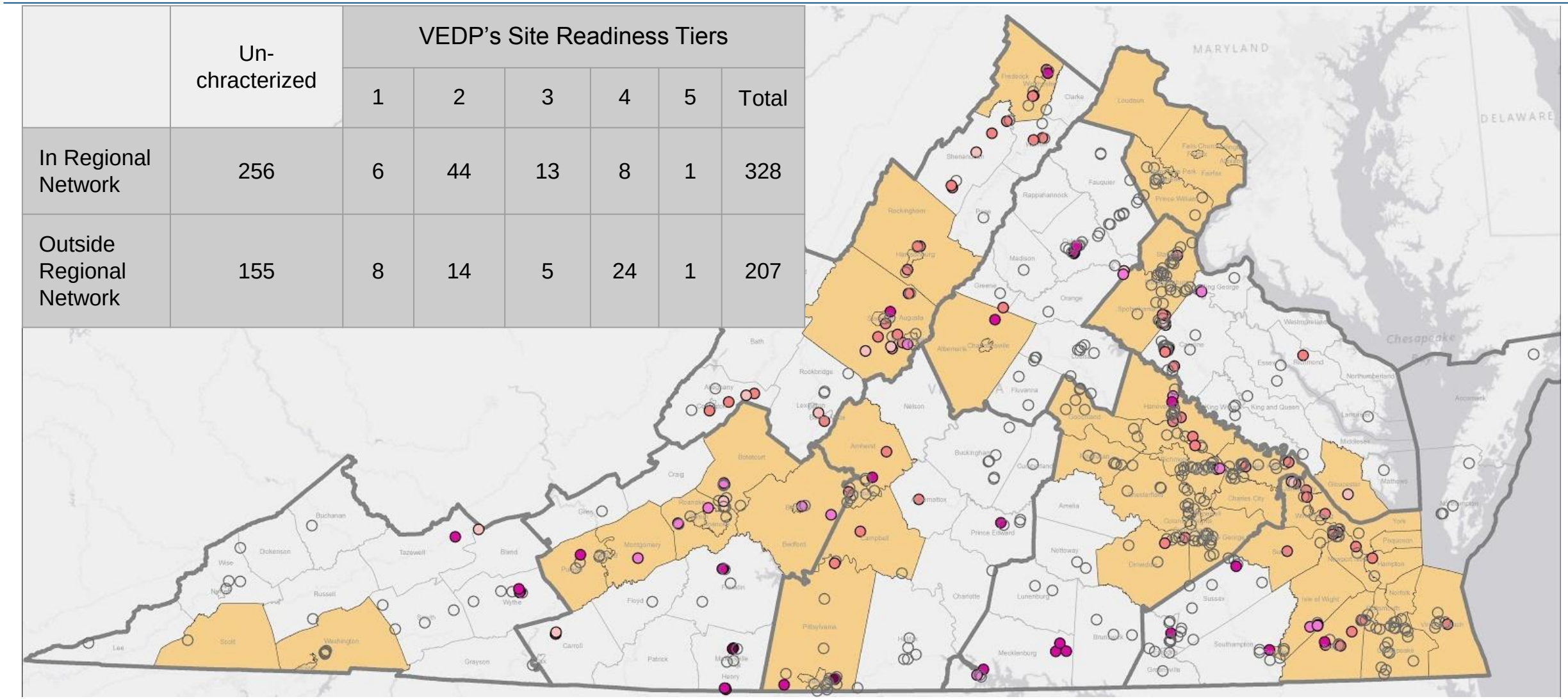
Needs Methodology – Industrial and Economic Development Areas

	Bristol	Culpepper	Fredricksburg	Hampton Roads	Lynchburg	NoVA	Richmond	Salem	Staunton	Total
Uncharacterized	22	36	60	86	42	9	108	25	23	411
Tier 1	1	1	4	1				2	5	14
Tier 2		1	7	15	5		8		22	58
Tier 3	1	1	1	3			4	7	1	18
Tier 4	3	7		5	3		5	7	2	32
Tier 5					1			1		2
Total	**27**	**46**	**72**	**110**	**51**	**9**	**125**	**42**	**53**	**535**

Location and Readiness of Sites in VEDP's Business Ready Site Program

NEEDS METHODOLOGY – INDUSTRIAL AND ECONOMIC DEVELOPMENT AREAS

	Un-chracterized	VEDP's Site Readiness Tiers					
		1	2	3	4	5	Total
In Regional Network	256	6	44	13	8	1	328
Outside Regional Network	155	8	14	5	24	1	207



Needs Methodology – Industrial and Economic Development Areas

- How will we use VEDP's Business Ready Site Program to determine VTrans Needs?
  - We are evaluating needs associated with sites that VEDP has determined to be "shovel ready" or Tier 5 and "infrastructure ready" or Tier 4
  - The readiness indicates that these sites are likely to benefit from the required transportation improvements

BREAKOUT TABLES

Feedback We Need From You Today

- Provide input on measures and thresholds
- Provide input on issues that may justify a Need
- Ways to provide input:
  - Verbally: During round table discussion
  - Written: Via comment form
  - Online: Interactive mapping application

WRAP UP

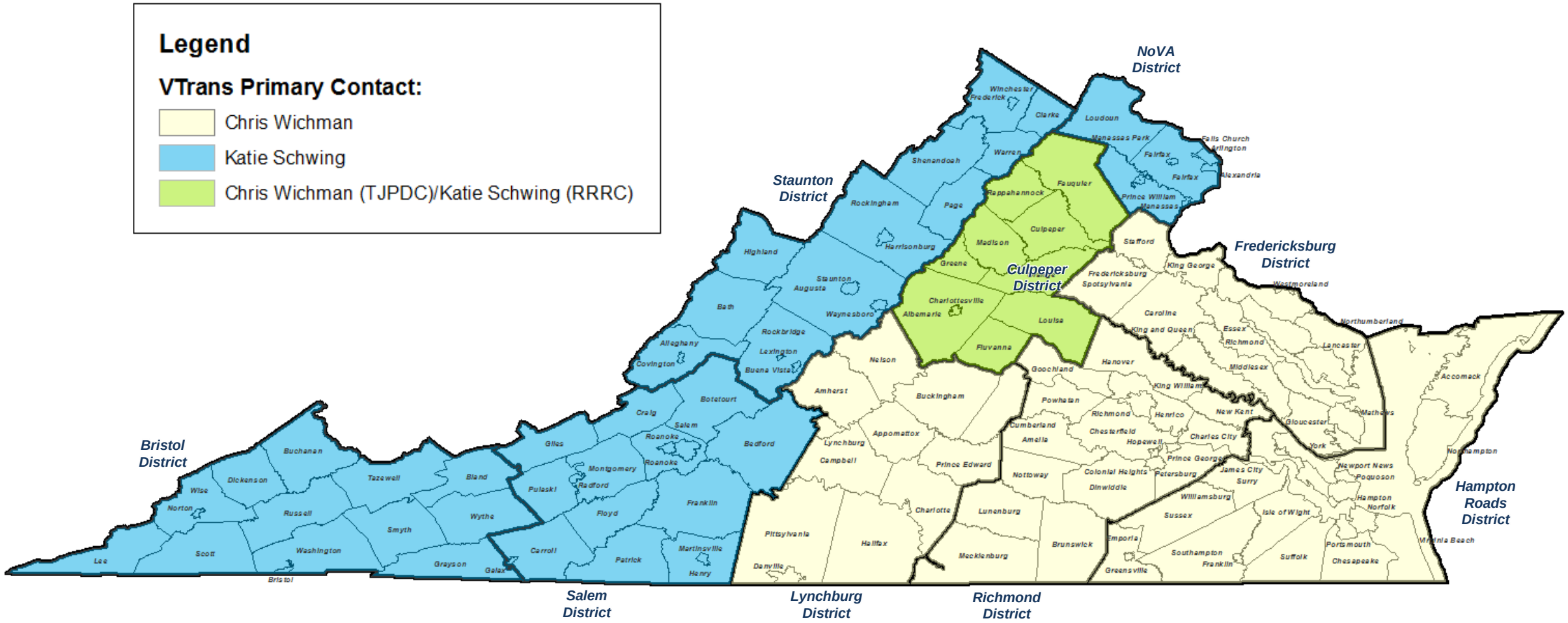
Next Steps

- Information presented today was for discussion purposes only.
  - We will continue seeking feedback from all stakeholders via in-person meetings and online
- For any pending items, we will follow up in the coming weeks.
- We will take your and feedback from all other regions to establish informed thresholds for CTB's review and consideration
- VTrans performance measures and Needs, when available in draft format, will remain available for comment until CTB takes an action

Final Needs Identification Timeline

Date	VTrans Task
October 16	October CTB meeting: Present draft needs
December 11	December CTB Meeting: Request for CTB action
Before the end of 2019	OIPI intends to publish final approved list of Mid-Term Needs
April 1, 2020	Deadline for localities to adopt new UDAs in Comprehensive Plans
Spring-Summer 2020	SMART SCALE Round 4 proposals screened with updated Mid-Term Needs

VTrans Designated Points of Contact



QUESTIONS/DISCUSSION

OIPI Staff Contact Information:

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Katie Schwing	804.786.2362	Kathryn.Schwing@oipi.Virginia.gov
Chris Wichman	804.786.2366	Chris.Wichman@oipi.Virginia.gov


Sign up for updates on the website (www.VTrans.org)


Like our Facebook Page (www.facebook.com/VTransVirginia)


Follow our Instagram Page (www.instagram.com/VTransVirginia)

Additional Slides - Handouts

JULY 2019 NEWSLETTER

- E-Blast to public and stakeholder contacts
- Printed for distribution
- Available on website

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Office of INTERMODAL Planning and Investment

SUMMER 2019 NEWSLETTER

What's Been Happening?

SPRING 2019 OPEN HOUSES

The Office of Intermodal Planning and Investment (OIPI) hit the road in April and May, traveling around the Commonwealth to meet with public stakeholders and local representatives. The team held Open House meetings in all nine Commonwealth Transportation Board (CTB) districts, in conjunction with the CTB's Spring Meetings. The materials provided an introduction to the VTrans process, outlined key demographic and transportation trends, and previewed the Needs Assessment process. To accommodate those who were unable to attend an Open House, OIPI also shared an Online Open House page on the VTrans website.

JUNE CTB MEETING

OIPI also conducted two informative presentations at the June CTB meeting. First, the team provided an overview of statewide demographics, including population, employment, and income trends across the Commonwealth, as well as key implications for transportation demand.

For the second presentation, OIPI updated the CTB on the latest VTrans activities. The presentation highlighted the following key topics:

Vulnerability Assessment This part provided updates on work to measure vulnerability and resilience to flooding and sea level rise according to up-to-date definitions.

VTrans Vision & Goals The team reaffirmed the VTrans Vision and Goals.

Mid-Term Needs Assessment OIPI offered a status update for ongoing work to refine the VTrans Mid-Term Needs.

Outreach & Engagement The team recapped recent outreach efforts, including a summary of the Spring 2019 Public Open Houses.

What's Next?

It's a busy season, as the VTrans team works toward finalizing Mid-Term Needs by the end of 2019. Check out what's coming next for VTrans:

July/August The VTrans team will be traveling across the Commonwealth to hold workshops with regional transportation planning stakeholders and get their input on the draft Mid-Term Needs. Stay up-to date at vtrans.org/get-involved/events

September–November OIPI will continue meeting with local & regional transportation planning stakeholders to discuss and refine the draft Mid-Term Needs.

October/November The VTrans team will host Open Houses and present the draft Mid-Term Needs to the CTB, along with a summary of any feedback.

SPOTLIGHT

143 attendees to in-person Open Houses

3,000 pageviews to Online Open House meeting page

Great opportunity for VTrans to share info and hear feedback

DID YOU KNOW?

Between 2000 and 2017, Virginia's population has increased by **19.6%**

Source: Weldon Copper Center for Public Service and the US Census Bureau

COMING SOON

We're working behind the scenes on a new interactive map feature. Stay tuned to VTrans.org

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Office of INTERMODAL Planning and Investment

DRPT VDOT

Virginia's transportation system is a complex network of highways, streets, sidewalks, trails, rail corridors, transit systems, information systems, airports and runways, shipping ports and docks, intermodal connectors, and even a space port. This variety is the essence of a "multimodal" transportation system.

MID-TERM NEEDS FAQS

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MID-TERM NEEDS FREQUENTLY ASKED QUESTIONS

July 2019

What is the status of the Mid-term Needs identified in VTrans2040 and will they be used in this Needs identification process?

The Mid-term Needs identified in VTrans2040 (as part of the VMTP process) will be considered in the VTrans Needs identification process. However, as part of the VTrans Update, there will be an outreach process to all regions in the state, as well as new metrics and performance measures applied. The results of this outreach process and new performance metrics will modify the prior VTrans2040 Needs into a new set of Mid-term Needs that are based on this new input and information. The VTrans Needs framework will assess the State's transportation needs at three scales, listed below, and will include a statewide assessment of safety needs:

Corridor of Statewide Significance (CoSS) – Interregional travel market
Regional Networks (RN) – Intraregional travel market
Urban Development Areas (UDA) – Local activity center market

What are Corridors of Statewide Significance?

There are twelve designated Corridors of Statewide Significance (CoSS) in the State. CoSS are those facilities and services which comprise the multimodal network connecting major centers of activity (RNs and UDAs) and accommodate inter-city travel between these centers as well as interstate traffic. The Commonwealth Transportation Board (CTB) is responsible for the designation and study of these multimodal corridors per the code of Virginia section § 33.2-353. The official definition of a CoSS is: "An integrated, multimodal network of transportation facilities that connect major centers of activity within and through the Commonwealth and promote the movement of people and goods essential to the economic prosperity of the state."

To be considered a CoSS, a corridor must meet all four criteria pertaining to:

Multimodal Must involve multiple modes of travel or must be an extended freight corridor.
Connectivity Must connect regions, states, and/or major activity centers.
High Volume Must involve a high volume of travel.
Function Must provide a unique statewide function and/or address statewide goals.

What are Regional Networks?

Fifteen Regional Networks were defined during the VTrans2040 VMTP 2025 Needs Assessment. Regional Networks refer to the major economic regions of the Commonwealth and are based on the designated Metropolitan Planning Organization (MPO) areas in Virginia. MPOs are regions greater than 50,000 in urban area population and are considered the primary centers of Virginia's regional economies. The Regional Networks encompass the MPO boundary and any county that is included as part of the MPO boundary. The Regional Network includes all transportation infrastructure and facilities inside the regional jurisdiction boundaries. Outside those boundaries, those facilities associated with a Regional Network Need that extends beyond the regional analysis area are considered part of the Regional Network. Regional networks serve commuters, intra-regional, and local travel.

What are Urban Development Areas?

In 2007, the General Assembly in § 15.2-2223.1 established Urban Development Areas (UDAs) as a mechanism to assist with the coordination of transportation and land use planning, to encourage infill development, and to help reduce public costs related to the provision of services by focusing development in areas with existing infrastructure. In 2010, the legislation was amended to establish density and design criteria for UDAs and to improve the coordination between transportation and land use. In 2012, it was amended again to make the designation of UDAs voluntary across all localities and to include a more flexible definition. A UDA is defined as:

1. Areas designated by a locality that may be sufficient to meet projected residential and commercial growth in the locality for an ensuing period of at least 10 but not more than 20 years;
2. Where an urban development area in a county includes planned or existing rail transit, the planning horizon may be for an ensuing period of at least 10 but not more than 40 years;
3. Areas that may be appropriate for development at a density on the developable acreage of at least four single-family residences, six townhouses, or 12 apartments, condominium units or cooperative units per acres and an authorized floor area ratio of at least 0.4 per acre for commercial development, or any proportional combination thereof, or any other combination or arrangement that is adopted by a locality in meeting the intent of the UDA code section; and,
4. Areas that incorporate principles of traditional neighborhood design (TND).

Designated UDAs should also have boundaries which are identified in the locality's comprehensive plan and are shown on future land use maps contained in such plans. The code also states that any incentives, financial or other, for development of these UDAs should be described in such plans as well.

Are there Mid-Term Needs measures associated with each of the Goals?

The VTrans Needs identification process relies on a combination of stakeholder input and Needs measures. Needs measures are being developed and will be used for identifying trends and making policy decisions:

Goal A Economic Competitiveness and Prosperity
Goal B Accessible and Connected Places
Goal C Safety for all Users
Goal D Measures developed for Proactive System Management
Goal E Healthy Communities and Sustainable Transportation Communities

What is the definition of Activity Centers?

Activity Centers are defined as " areas of regional importance that have a high density of economic and social activity." Additional Activity Centers can be identified in the Needs identification process

Will rural areas' and slow growth areas' Mid-Term Needs be captured?

As in VTrans2040, rural areas that are outside of Regional Networks (RN) will have Needs identified through the Corridors of Statewide Significance (CoSS) and Urban Development Areas (UDA) geographies. In addition, Safety Needs are statewide and not limited to any particular geography.

How will STARS and Arterial Preservation Studies be utilized for Mid-Term Needs identification?

The VTrans Needs identification process will include a scan of relevant plans at the regional level, which will include studies such as those conducted under STARS and the Arterial Preservation Program. However, not every need identified within a prior planning process can automatically be included in the statewide needs process but will be reviewed in the context of the overall Mid-term Needs identification methodology.

How do Mid-term Needs relate to project scoping and development?

The Mid-term Needs framework is used to screen projects for SMART SCALE eligibility. Mid-term needs guide the development tiered recommendations. Tier-1 Recommendations, per the CTB Policy (*www.ctb.virginia.gov/resources/2018/jan/reso/resolution_14_vtrans.pdf*), will become eligible for state funding for advance activities.

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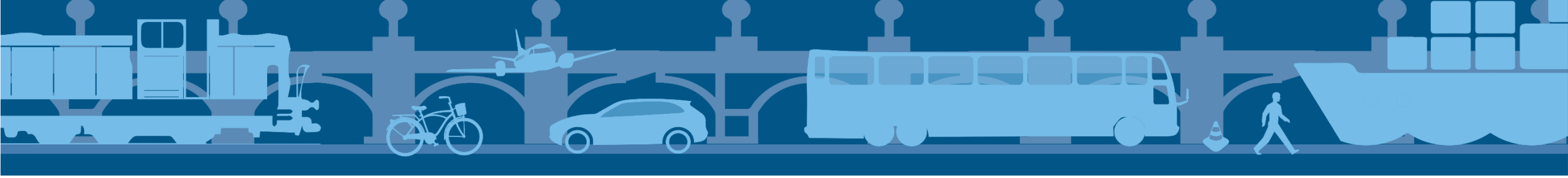
For more information, please visit www.VTrans.org or email comment@VTrans.org.



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