



COMMONWEALTH of VIRGINIA
Office of the
SECRETARY of TRANSPORTATION

VTrans Update

Transportation Technical Committee –
Roanoke Valley Transportation Planning Organization

Jitender Ramchandani, AICP, PMP

May 9, 2019



FEEDBACK REQUESTS CHECKLIST

- Share performance measures to be used for Needs Identification (today's meeting)
- Confirm activity centers (ongoing & July regional workshop)
- Confirm presence of UDAs and UDA contacts (ongoing with localities)

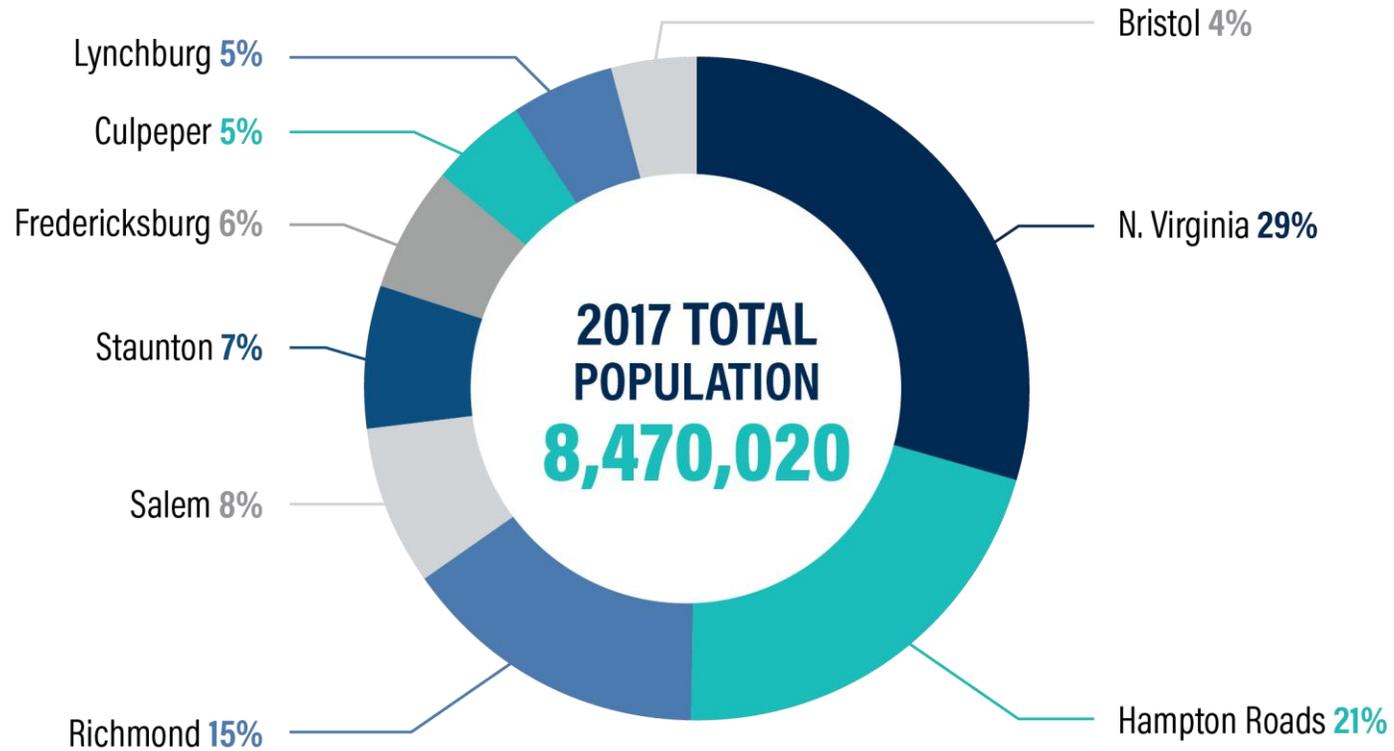


TRANSPORTATION'S ROLE IN ECONOMY

- Population and employment trends provide insight to transportation demand:
 - Economic model is changing – some businesses are choosing locations based on quality of life (workers prefer walkable places to live and work)
 - Different industry clusters have different transportation modal demand
 - Transportation plays an important role in attracting future workforce
 - Generational values/expectations guide where people choose to live and work

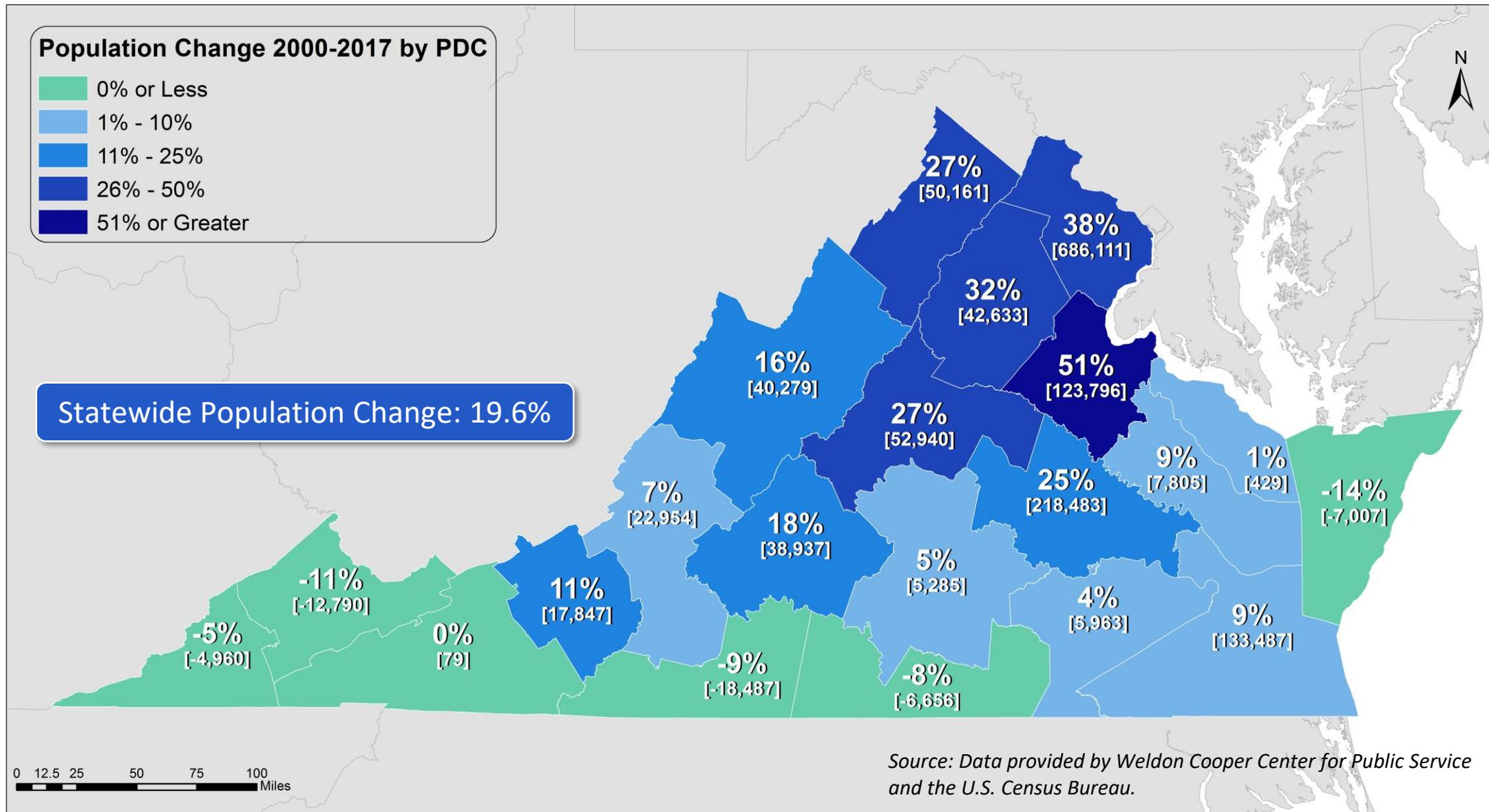


Percentage of Population (By CTB District)



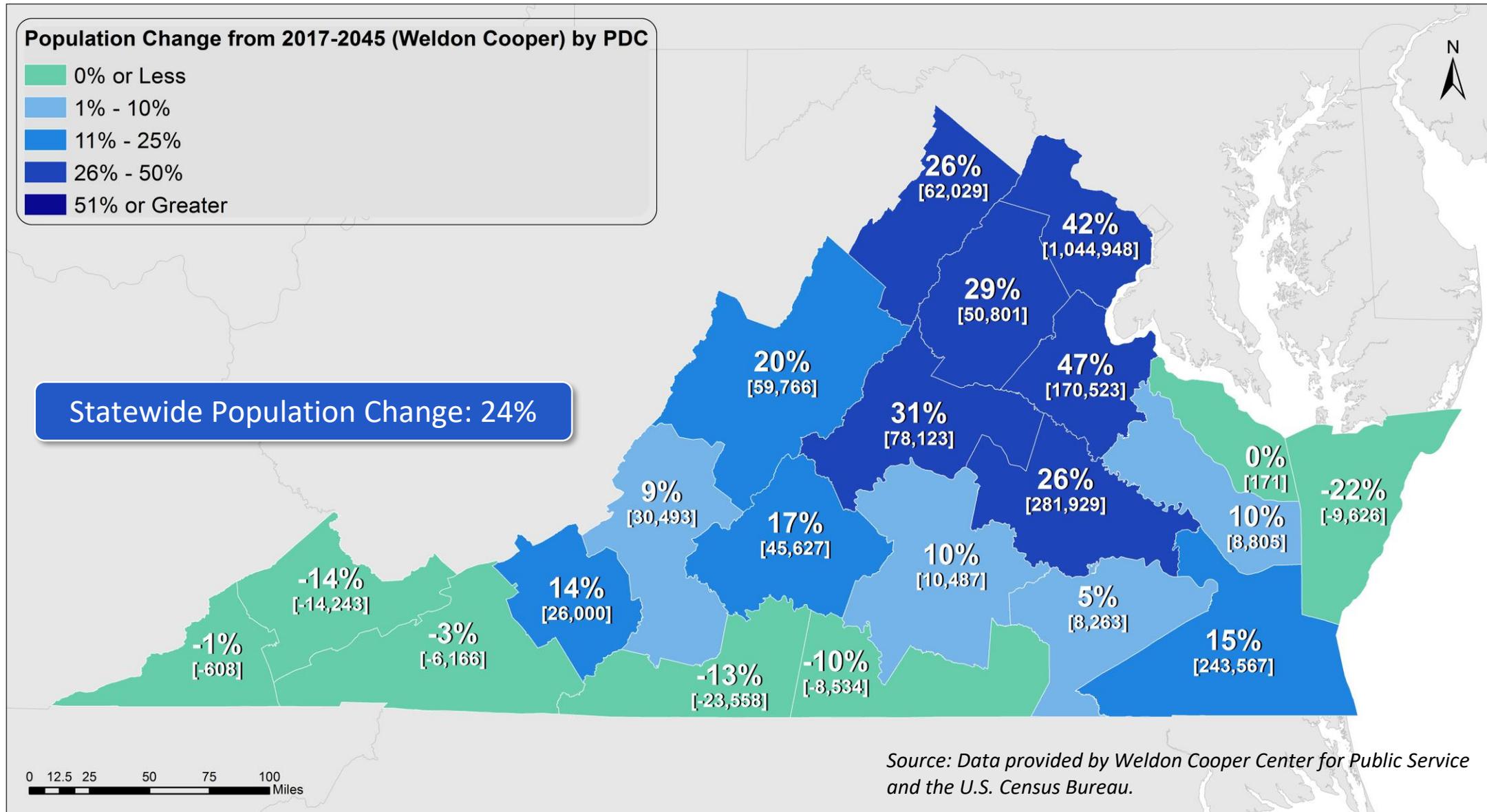
HISTORICAL POPULATION CHANGE BY PDC – 2000-2017

Note: This slide from the original presentation was updated on 6/18/2019



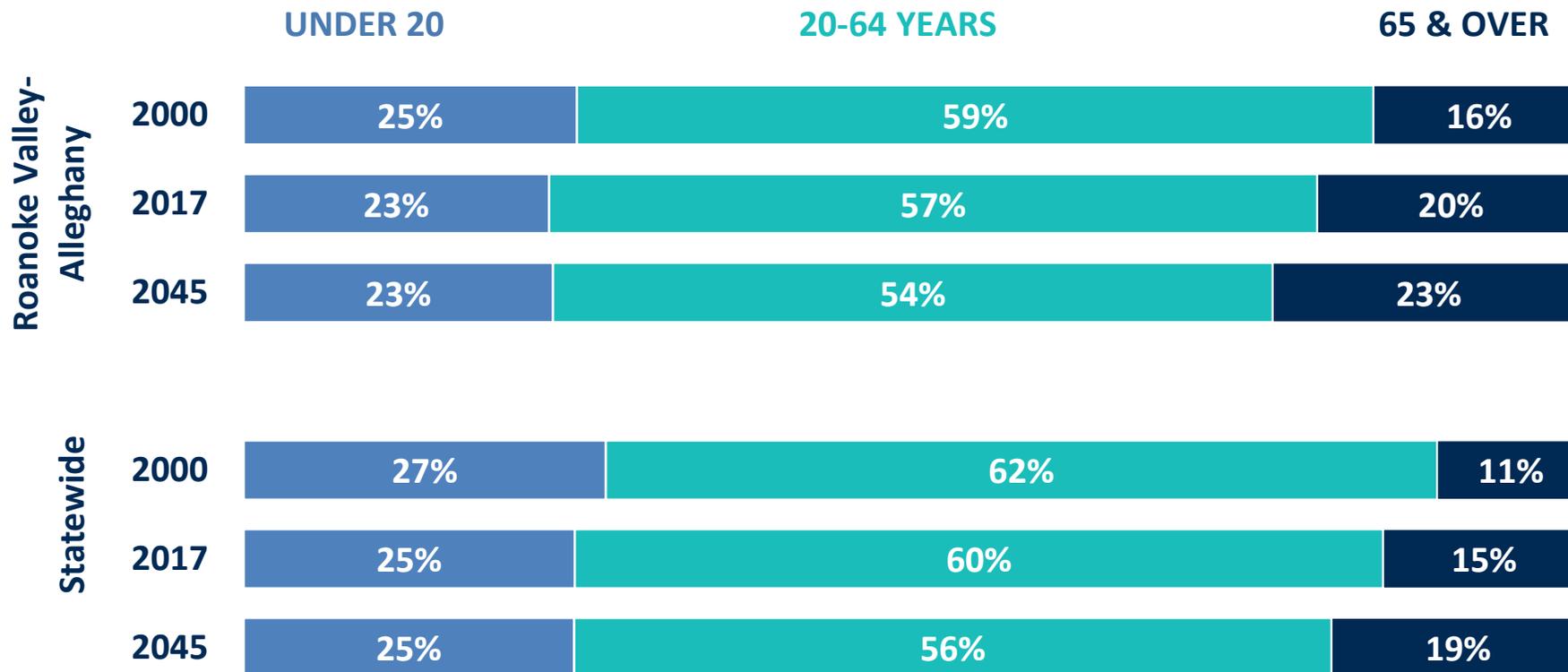
POPULATION FORECAST CHANGE BY PDC – 2017-2045

Note: This slide from the original presentation was updated on 6/18/2019

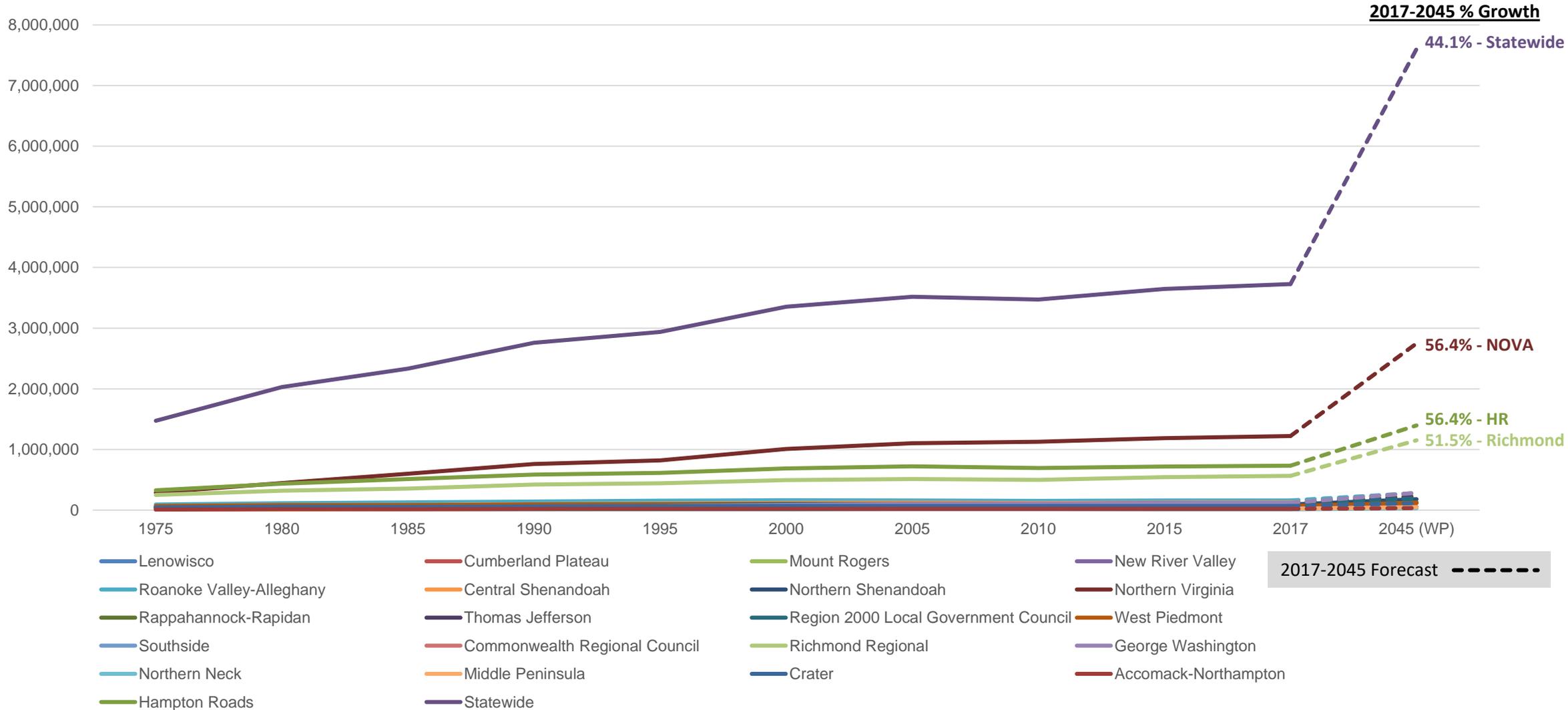


DEMOGRAPHIC TRENDS: AGE DISTRIBUTION BY PDC

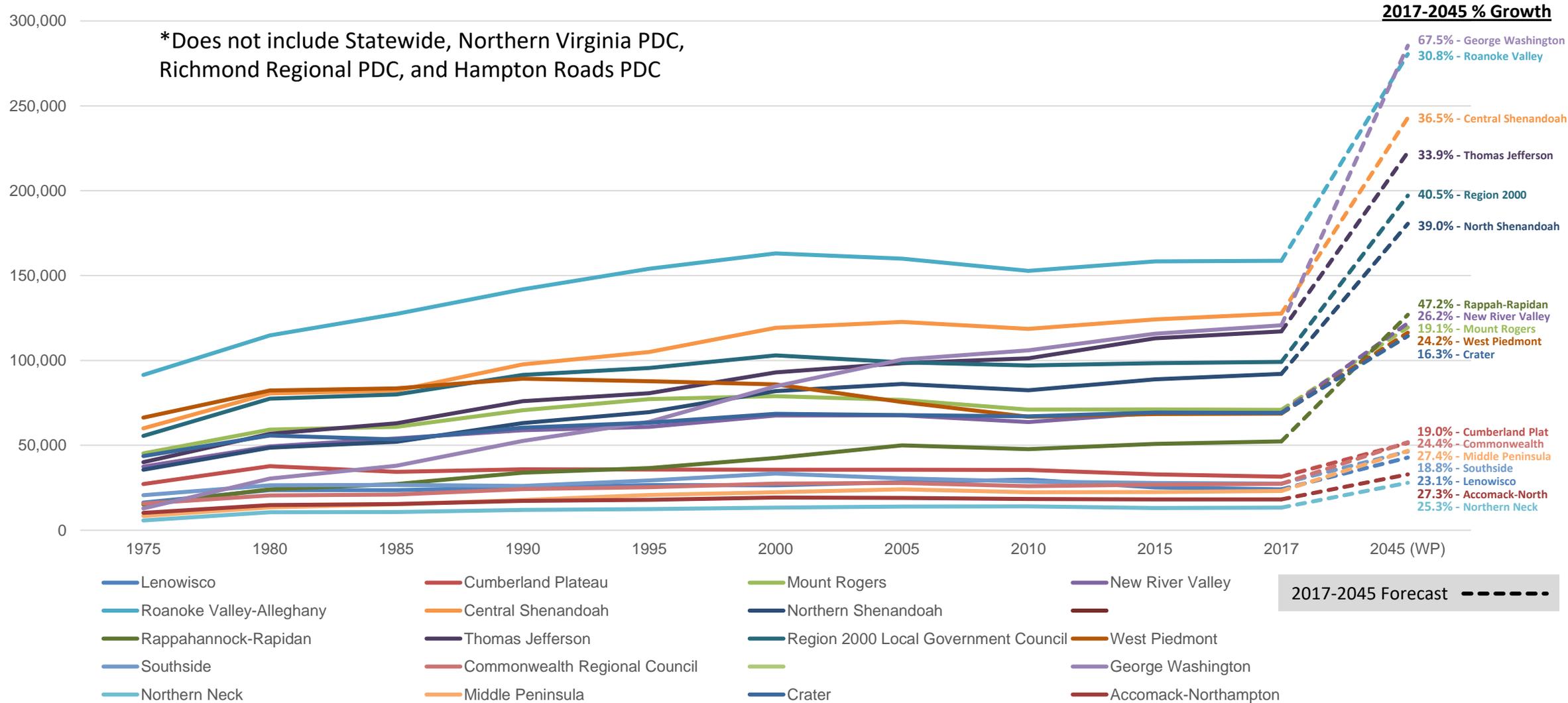
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DEMOGRAPHIC TRENDS: EMPLOYMENT BY PDC – 1975 TO 2045

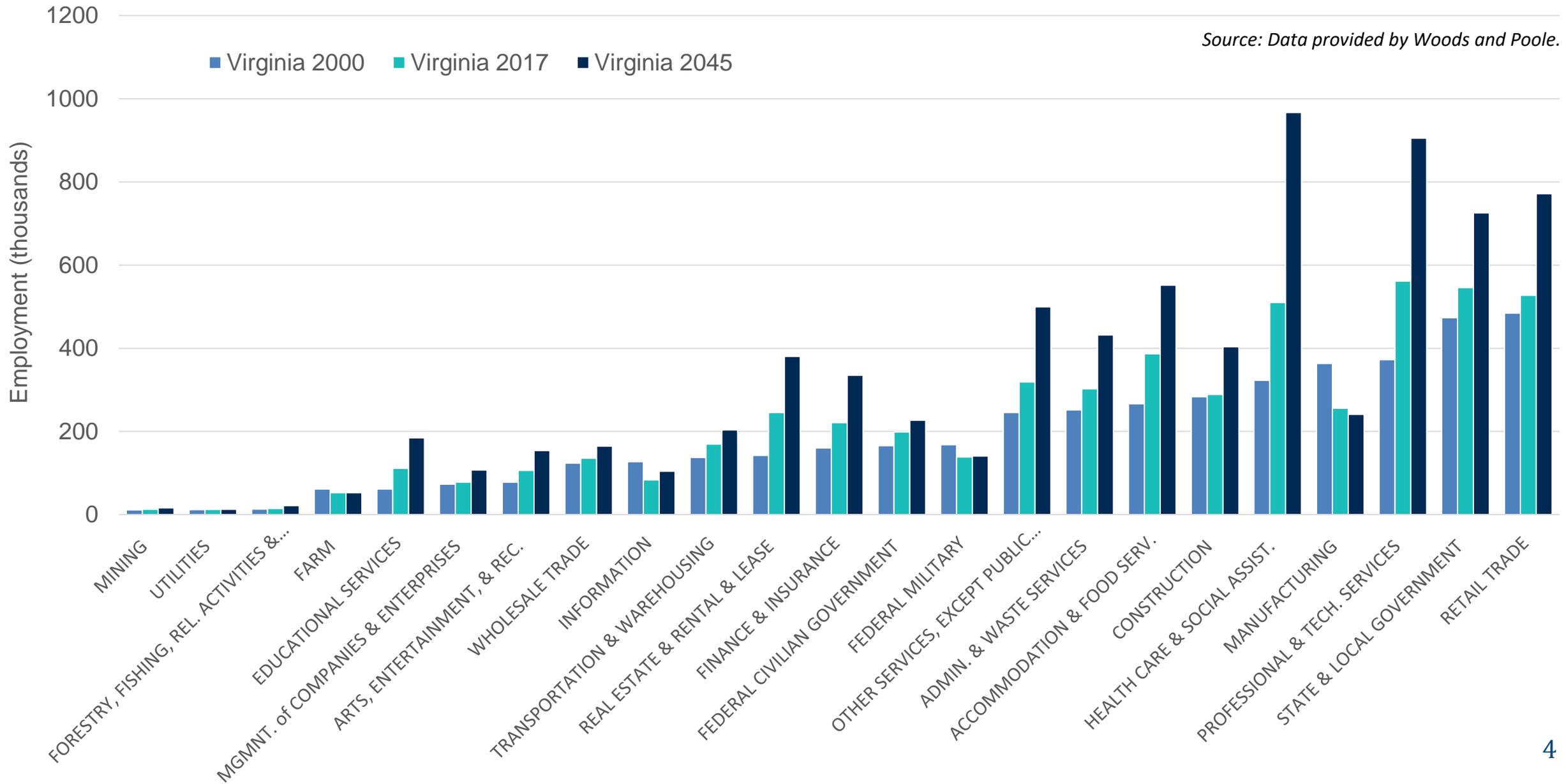


DEMOGRAPHIC TRENDS: EMPLOYMENT BY PDC – 1975 TO 2045*

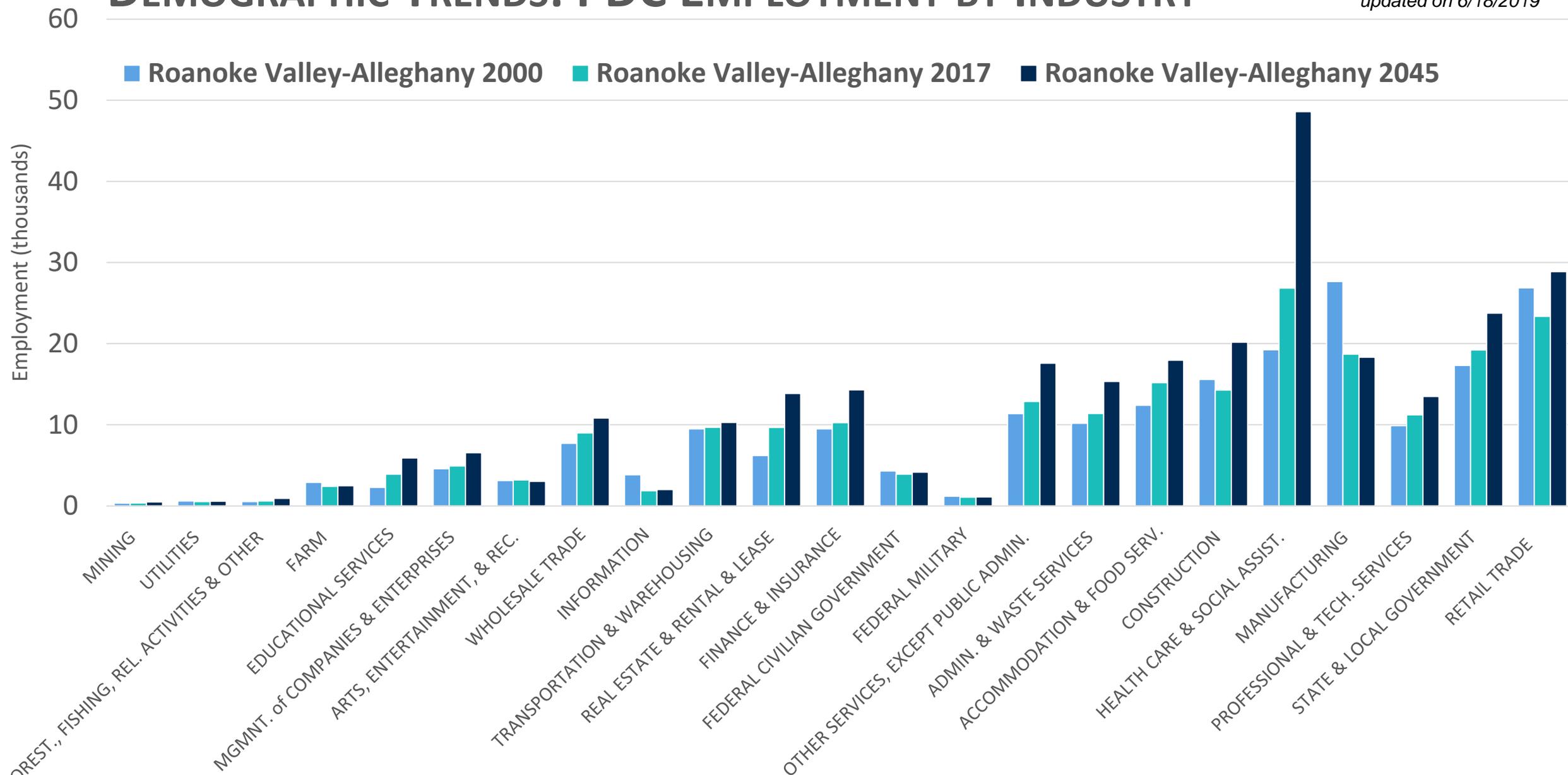


DEMOGRAPHIC TRENDS: STATEWIDE EMPLOYMENT BY INDUSTRY

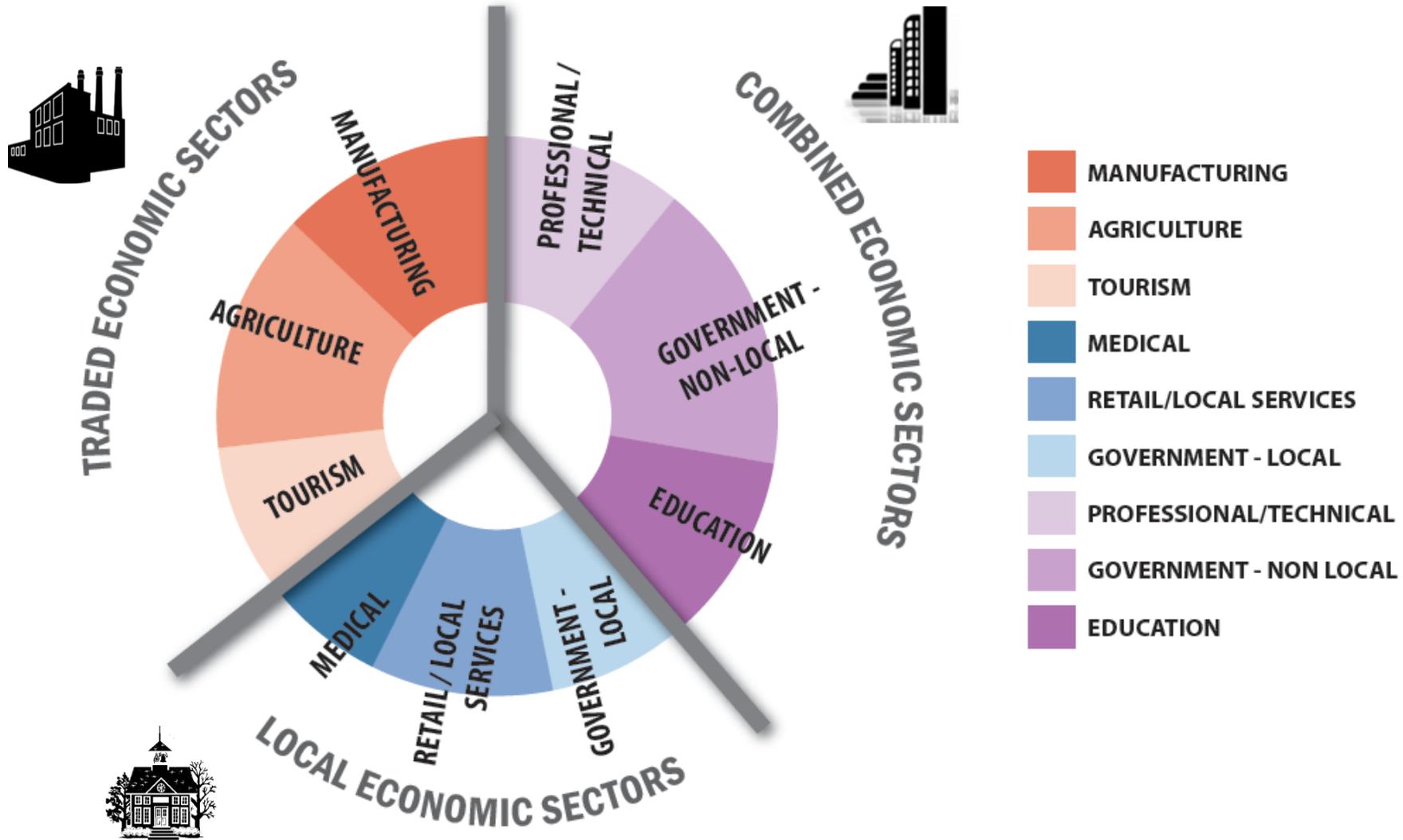
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DEMOGRAPHIC TRENDS: PDC EMPLOYMENT BY INDUSTRY



ECONOMIC-TRANSPORTATION LINKAGES | INDUSTRY CLUSTERS



ECONOMIC-TRANSPORTATION LINKAGES | TRANSPORTATION

Different industry clusters have different *Needs, Opportunities and Constraints* for efficient transportation



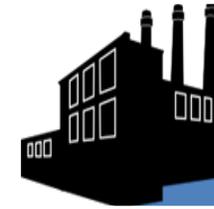
Knowledge-Based

- Mixed-use development
- Walking between destinations
- Traditional peak commute times
- Airport access



Local Serving

- Different peak commute times
- Customer traffic
- Trip-chaining destinations
- Truck deliveries



Freight Dependent

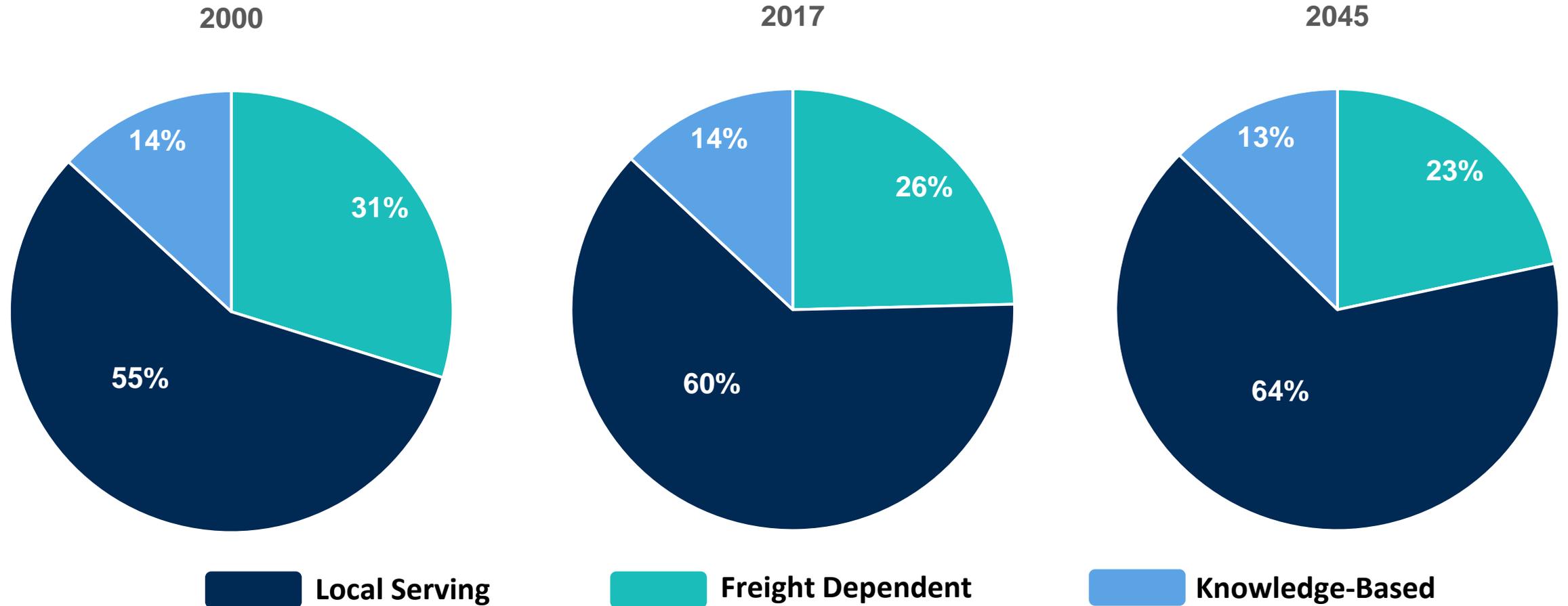
- Shift hours
- Truck origins and destinations
- Rail, port and/or airport access
- Remote locations



DEMOGRAPHIC TRENDS: PDC EMPLOYMENT BY INDUSTRY

Note: This slide from the original presentation was updated on 6/18/2019

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DEMOGRAPHIC TRENDS: FUTURE PROJECTIONS

Population forecasts have higher levels of uncertainty because they require assumptions about:

- Future changes in the economy
- In- and outmigration patterns
- The environment
- Policies that influence where people choose to live

TRAVEL MARKETS OVERVIEW

- **Corridors of Statewide Significance (CoSS)** [Code of Virginia [§ 33.2-35](#)]
 - Serve inter-regional travel
- **Regional Networks** [Code of Virginia in in [§ 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

Corridors of Statewide Significance*

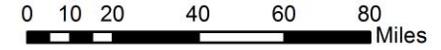
- Coastal Corridor
- Crescent Corridor
- East-West Corridor
- Eastern Shore Corridor
- Heartland Corridor
- North Carolina to West Virginia Corridor
- North-South Corridor
- Northern Virginia Corridor
- Seminole Corridor
- Southside Corridor
- Washington to North Carolina Corridor
- Western Mountain 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
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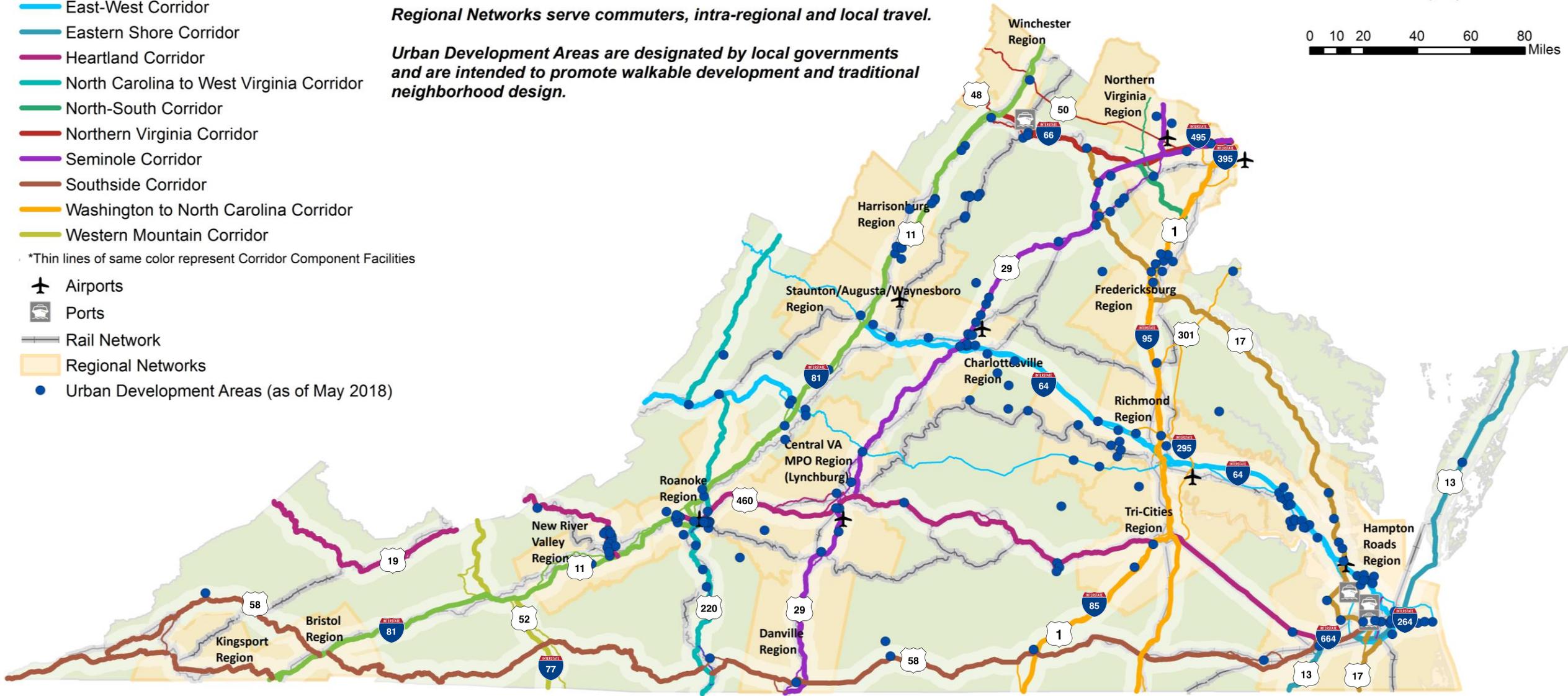
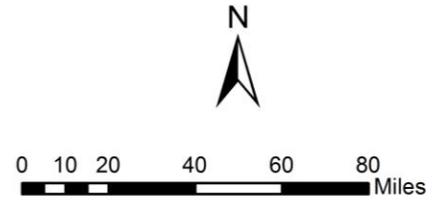
- Airports
- Ports
- Rail Network
- Regional Networks
- Urban Development Areas (as of May 2018)

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.



Mid-Term Needs Approach:

- Validate and build upon needs identified in VTrans2040
- Introduce new/improved data sources and new measures in line with federal performance reporting requirements
- Tie measures to VTrans Goals and Objectives
- Coordinate with regional and local stakeholders to update needs

Mid-Term Needs Approach by Travel Markets:

- CoSS – more data-driven, smaller segments than last time
- RN – build on VTrans2040, verify, update, confirm/revise
- UDA – build on VTrans2040, verify, update, confirm/revise
- Safety – Potential for Safety Improvements (PSI)

TRAVEL MARKETS & MID-TERM NEEDS ANALYSIS

	CoSS	Regional Networks	UDA	Safety (Statewide)
Starting Point	Full Analysis of CoSS	VTrans2040 RN needs	VTrans2040 UDA needs	Full analysis of PSI locations
How will measures be used?	Identification of new needs	Validate of previously identified needs and identification of new needs	Needs must support UDA legislative requirements (§ 15.2-2223.1)	Identification of new needs
Stakeholder engagement required	Review and comment on identified needs	Regional workshops for needs identification with MPOs, PDCs, and localities	Survey/Needs questionnaire with localities	Review and comment on identified needs

VTRANS GOALS

VTrans2040 Goals



DRAFT - MID-TERM NEEDS IDENTIFICATION MEASURES

Goal	Mid-Term Needs Measures	CoSS	Regional Network	UDA	Safety
 A	Throughput	✓			
 A	Travel Time	✓	✓*		
 A	Person Delay During Unreliable Conditions (PDDUC)**	✓			
 A	Interstate: Heavy/medium truck*** vehicle hours of delay per lane mile	✓			
 B	[Accessibility measures – to be determined]		✓		
 B	Disadvantaged communities beyond ¼ mile access to transit		✓		
 C	PSI – Potential for safety improvements, (top X percentile and with minimum of Y crashes)	✓	✓		✓

* Based on availability of data

** Multiply the volume by the travel time beyond the 50th percentile for segment and time period

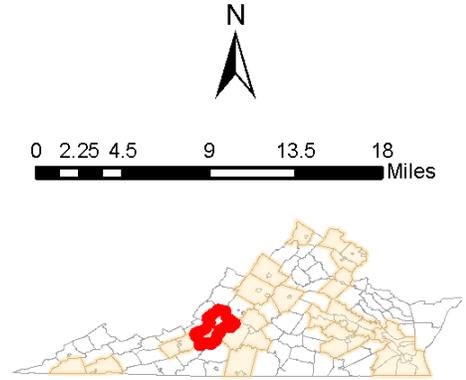
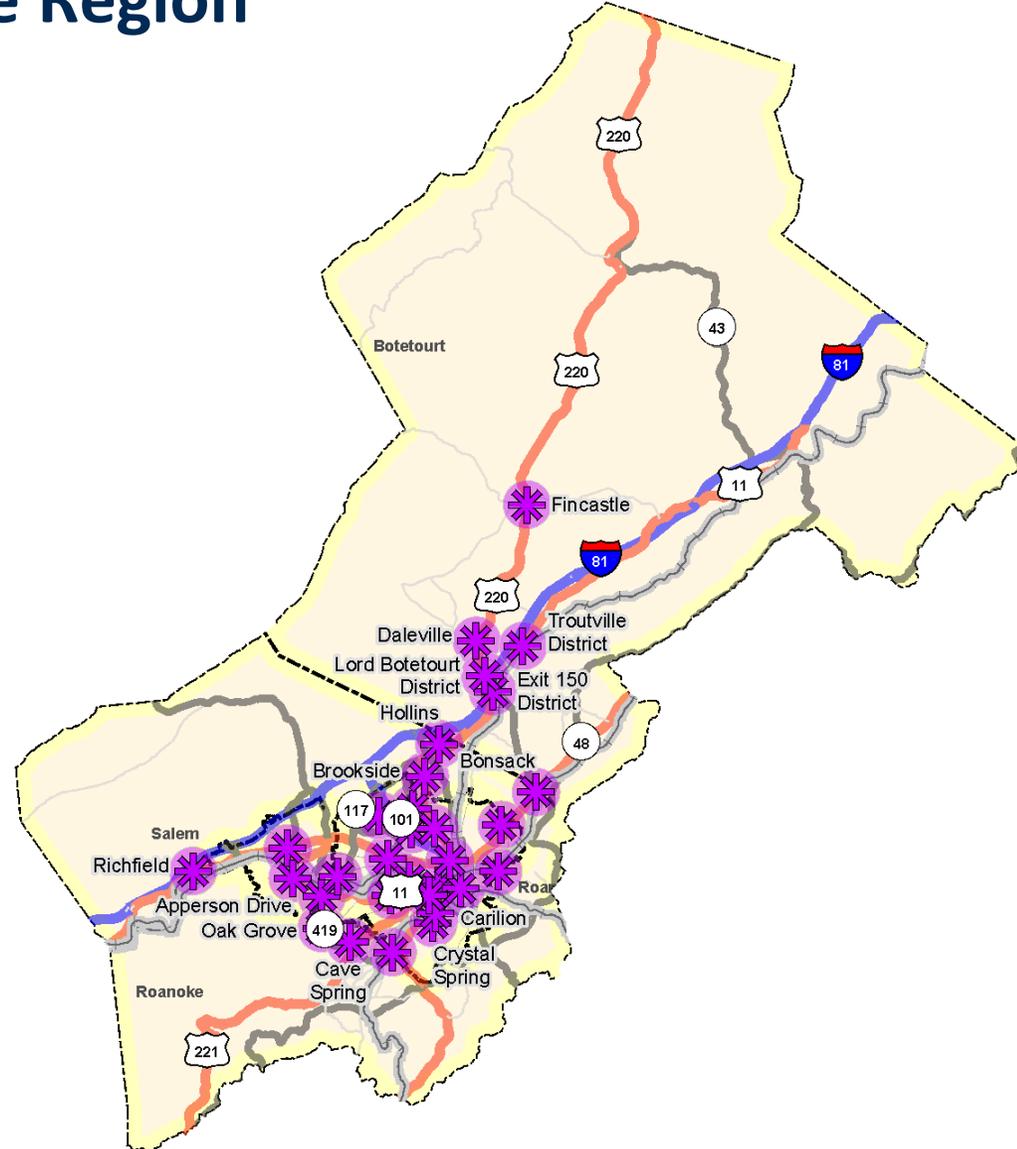
*** Vehicles defined in federal vehicle classification scheme as Class 5 or greater

REGIONAL NETWORKS | ACTIVITY CENTERS

Roanoke Region

Legend

-  2040 Activity Centers
-  Airports
-  Ports
-  Rail Network
-  Interstate
-  U.S. Route
-  State Route
-  Frontage Road
-  Secondary Route
-  Urban Road
-  Virginia Counties

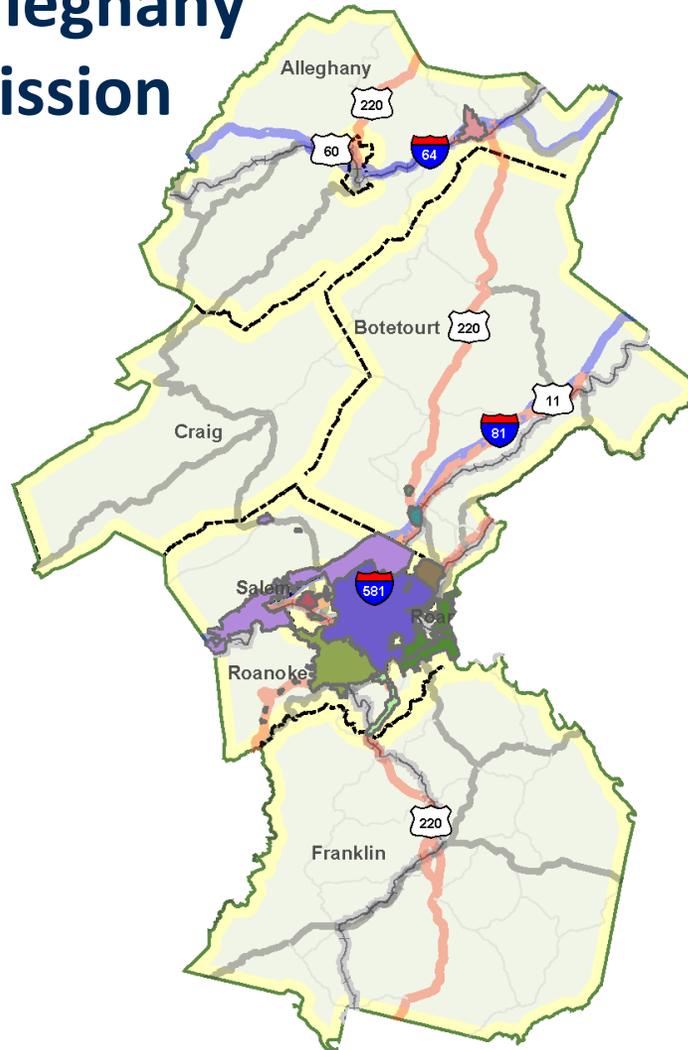
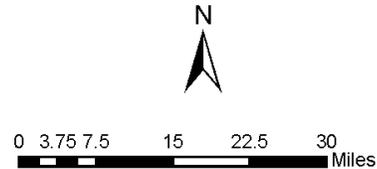


URBAN DEVELOPMENT AREAS

Legend

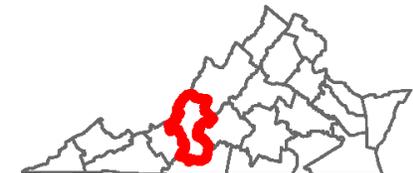
-  Airports
-  Ports
-  Rail Network
-  Virginia Counties
-  Interstate
-  U.S. Route
-  State Route
-  Frontage Road
-  Secondary Route
-  Urban Road

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UDA Boundaries as of February 2019

-  Botetourt County - Daleville Town Center UDA
-  Botetourt County - Gateway Crossing UDA
-  Clifton Forge
-  Roanoke City
-  Roanoke County-I-81/Glenvar/Hollins
-  Roanoke County-Route 220 South/Clearbrook
-  Roanoke County-Route 24/116/Vinton/Mount Pleasant
-  Roanoke County-Route 419/221/Cave Spring/Windsor
-  Roanoke County-Route 460 East/Bonsack
-  Roanoke County-Village Centers
-  Salem City-Apperson Drive
-  Salem City-Downtown
-  Salem City-East Main Street
-  Town of Vinton - Bypass Road/Virginia Road
-  Town of Vinton - Downtown-Gateway
-  Town of Vinton - Hardy Road Gateway
-  Town of Vinton - Mid-Washington Corridor
-  Town of Vinton - Virginia Avenue Corridor
-  Town of Vinton - Virginia Avenue Gateway
-  Town of Vinton - Walnut Avenue Gateway
-  Town of Vinton - Washington Ave Gateway



UDA NEEDS UPDATE PROCESS OVERVIEW

- If you have or plan to have a UDA:
 - Verify UDA Contact Name and info
 - Verify UDA list
 - Verify UDA boundaries
 - Submit updated UDA boundary shapefiles (if needed)
 - Submit new UDA boundary shapefiles
 - Complete UDA Needs Questionnaire

PSI-BASED SAFETY NEEDS APPROACH

- Historic crash data being transferred to VDOT's current linearly-referenced network
- Thresholds under review
- Desire to update to focus on “worst of the worst”
- Discussing need/desire to harmonize HSIP & SMART SCALE/VTrans measures
- CTB will approve SMART SCALE measure



MPO PARTICIPATION TIMELINE

Date	VTrans Task	MPO Role
May-early June	Presentations to MPO's	Provide feedback at MPO meetings
Mid May	Webinar - same as presentation to MPOs	Provide feedback at MPO meetings; PDC role - profile feedback
Early June	Webinar on UDA methodology and Instructions to Localities	Watch webinar, ask questions as needed and be able to provide assistance to UDA locality contacts as needed
Mid June		Provide feedback on needs measures and methodology
July-early August	Presentations to MPO's	Attend your area presentation



MPO PARTICIPATION TIMELINE, CONT'D

Date	VTrans Task	MPO Role
Mid-July	Webinar - same as presentations to MPOs	Attend
Before September 1 st	Draft Mid-Term Needs will be sent out to MPO's (and made available publicly as well)	Review
September 1 st to early October	OIPI Staff will go out to MPO's to discuss the draft Mid-Term Needs	Attend
October 16 th	October CTB Workshop: Present draft needs and any feedback we've heard	N/A
December 11 th	December CTB Meeting: CTB takes action on Vision, Goals, Objectives, measures, needs methodology, and Mid-term Needs list	Opportunity to comment
Before end of 2019	OIPI will publish final approved list of Mid-Term Needs	N/A

FEEDBACK REQUESTS CHECKLIST

- Share performance measures to be used for Needs Identification (today's meeting)
- Confirm activity centers (ongoing & July regional workshop)
- Confirm presence of UDAs and UDA contacts (ongoing with localities)



QUESTIONS/DISCUSSION

OIPI Staff Contact Information:

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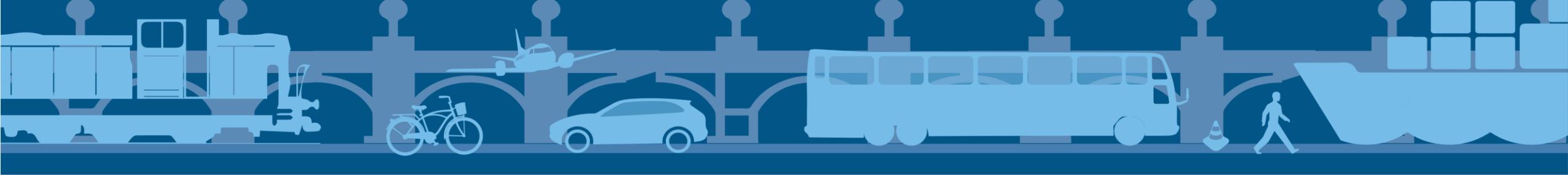
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