

Socioeconomic Data Workgroup Meeting



Kick-Off Meeting

July 13, 2022
1:00 p.m.



Agenda

- 1. Welcome and Introductions**
- 2. Public Comment Period**
- 3. 2050 LRTP update & PlanRVA Scenario Planning Overview**
- 4. Socioeconomic Data Purpose/Schedule**
- 5. 2022 Virginia Population Projections**
- 6. Horizon Year (2050) Baseline Projections Methodology**
- 7. Closing**

Agenda Item 3
2050 LRTP update
&
PlanRVA Scenario Planning Overview

2050 LRTP update

- The Long-Range Transportation Plan (LRTP) is a federally required tool to guide how the RRTPO and its partners will meet the transportation needs of the Richmond region over the next 20 years and beyond.
- Vision Component – Vision and Goals for the region.
- Financial component that demonstrate how the recommended transportation plan can be implemented
- ConnectRVA 2045 is RRTPO's latest long-range transportation plan.
- The LRTP must be updated at least every five years to remain consistent with existing conditions, and to re-evaluate proposed plans, programs, and projects.
- The scope development for 2050 update of the LRTP for the Richmond region is underway.



2050 LRTP Update

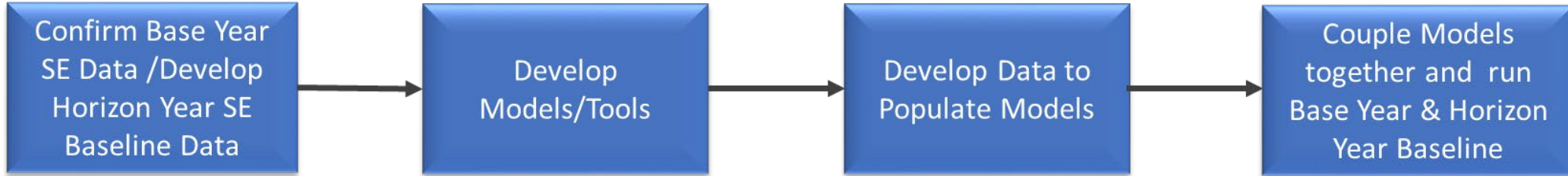
- The plan has to be compliance to Performance-Based Planning and Programming (PBPP)
- PBPP - Systematic review of transportation system performance – past, present and possible future – to define the regions investment priorities.
- Various Tools will be used for accessing transportation system performances – the Regional Travel Demand Model -Richmond/Tri-Cities (RTC) Model being the key.
- The RTC model will be used to identify future needs for the highway and transit network, and to evaluate the potential impact of investments.
- System Performance Measures: Person Throughput, Person Hours of Delay , Vehicles Miles Traveled, Vehicle Hours Traveled, Travel time Improvements, Transit Ridership, Accessibility to Jobs and Destinations, GHG mobile emissions, etc.
- The RTC Model needs to updated to a Future year of 2050 – SE data Key.

PlanRVA Scenario Planning

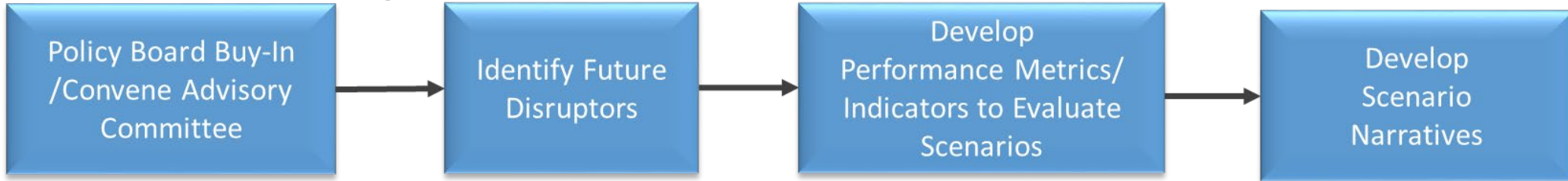
- Scenario planning is a practice through which communities plan for an uncertain future by exploring multiple possibilities of what might happen.
- Scenario planning helps to guide policy makers, planners, and community members through consideration of various future conditions and how to effectively respond to and plan for them.
- **Exploratory Scenario Planning Process** - In this process, we first identify all the factors that are causing challenges in the present as well as those likely to cause challenges in the future. Then, we combine these “disruptors” or “driving forces of change” into plausible future end states at a certain point in the future. These combinations become scenarios, or depictions of what the future could be like.
- The outcome of this scenario planning process will communicate the risk and opportunities of each scenario to different program areas of PlanRVA - housing, environment, emergency management and transportation.

PlanRVA Scenario Planning

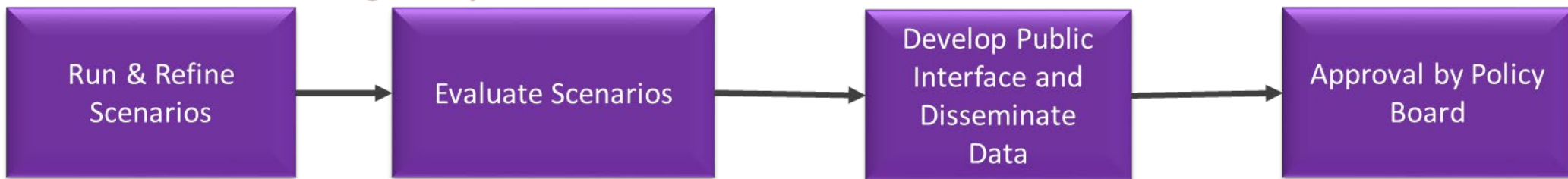
Phase 1- Development of Baseline Data & Models/Tools



Phase 2- Scenario Development



Phase 3- Scenario Testing, Analysis and Communication



Phase 4- Application within different program areas of PlanRVA

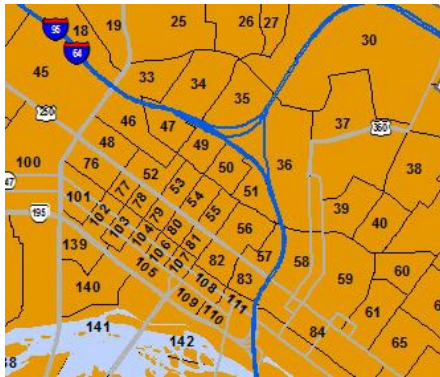


Agenda Item 4

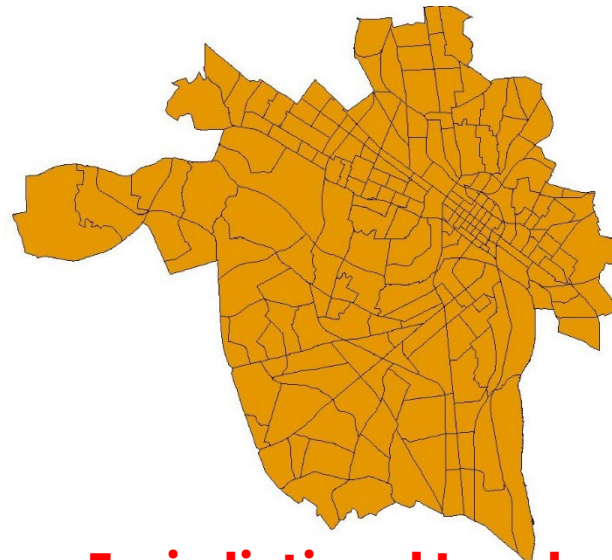
Socioeconomic Data Purpose/Schedule

Socioeconomic Data Purpose

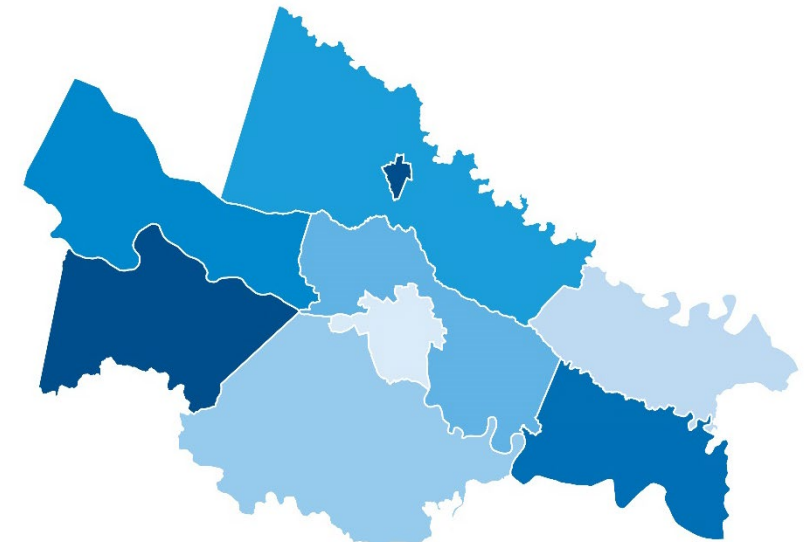
- The Socioeconomic Data provides estimates and projections of population, employment and other socioeconomic data of the Richmond Region within small geographic areas called Transportation Analysis Zones (TAZs).
- It is an input into the RRTPO's Regional Travel Demand Model (The RTC Model).
- TAZs form the basic geographic division used in travel demand modeling.
- Population and employment within each TAZ create productions and attractions, which in turn create trips between zones. These trips are loaded onto the road network, enabling traffic volumes to be generated on a particular roadway segment.



TAZ Level



Jurisdictional Level



Regional Level

Socioeconomic Data Purpose

- The data is also used by local governments, regional and state agencies, and other organizations for a variety of demographic planning purposes since it provides estimates of demographic data at the TAZ level.
- Regional transportation plans (multimodal, highway, transit, active transportation)
- Comprehensive economic development analysis
- Infrastructure planning on a local or regional basis
- Sustainability plans
- Local comprehensive planning in the context of the region

Covid-19 Pandemic Implication

- Base year candidate Year 2020 and 2021 have been very unreliable year for long term projections due to Covid implications.
 - Decrease in Employment
 - Decrease in Overall Travel including AM and PM commutes
 - Decrease in Transit Ridership
- 2022 could a reliable year to become the next base year but data for 2022 will only be available in 2024 at the earliest.
- **Staff Proposal**
 - 2050 horizon year baseline data to be developed using 2017 data (ignoring Covid implications) and looking at Census 2020 population numbers.
 - Base year to remain same - 2017
 - A scenario assuming that Covid-Implications will be long term will be developed as one of the scenarios in the Scenario Planning Process.

Socioeconomic Data Development Schedule

Task Objective:

- Develop Socioeconomic Data for the Horizon Year (2050) Baseline for the Richmond Region at the TAZ level
 - Population – Total Population, Group Quarters Population, Population in Households
 - Housing Units – Total Housing Units, Occupied Housing Units (Households)
 - K-12 Enrollment and College Enrollment
 - Automobiles
 - Employment – Total, Retail, Non-Retail, 2-Digit NAICS

Timeframe:

July 2022 – November 2022

- SE Data Workgroup Approval – Late September/Early October 2022
- TAC Approval: October 2022
- Policy Board Approval: November 2022

Agenda Item 5

2022 Virginia Population Projections

Agenda Item 6

Horizon Year (2050) Baseline

Projections Methodology

Proposed Basic Methodology

- Top-Down Approach. Develop Jurisdictional Control total first, then distribute to TAZs
- Distribute to TAZs based on current trends.
- Population and Employment to be two independent projections. Other attributes to be directly dependent on population
- PlanRVA Scenario Planning - Scenarios will be based on
 - Different Control Totals
 - Same Control Totals but Different Spatial Distribution
 - A mix of both
- Scenario Planning Advisory Committee and the RRTPO Board to take decision on what each scenario will look like. Staff recommendation will be to only consider plausible scenarios.

Population

Countywide

- Establish Countywide Control Total First
 - Weldon Cooper 2050 thresholds
 - +/- 10% variance allowed without providing supporting documentation. (Historically)
 - RRTPO staff will also develop cohort component model by 5-year age cohort and sex for 5-year intervals

Jurisdiction	Census	Weldon Copper Projections		
	2020	2030	2040	2050
Charles City	6,773	6,200	6,033	5,957
Chesterfield	364,548	406,942	452,492	504,814
Goochland	24,727	27,339	30,810	34,742
Hanover	109,979	118,374	128,283	140,113
Henrico	334,389	356,656	386,910	422,954
New Kent	22,945	27,067	31,340	36,081
Powhatan	30,333	32,152	35,598	39,576
Richmond	226,610	245,437	256,015	270,425
Region Total	1,120,304	1,220,168	1,327,480	1,454,662

Population

TAZ Level

- Future year each TAZs retains at least the same population as its base year (2017 and 2020) unless there is a massive demolition project planned.
- TAZ population growth based on major development projects (projects in a short-term pipeline 5-10 years). To be provided by jurisdictions and researched from online and print media and press releases.
- Infill Development potential , Vacant Buildings
- Review existing land use, existing zoning and future land use to allocate the remaining population into the TAZs.
- Further review by jurisdictional staff and if needed to be tweaked based on local knowledge.

Population

Group Quarters

- Start from the 2020 Group Quarters Population.
- Research for expansion/closing for existing Dormitories, Prisons, Mental wards, etc.
- Plans for any new facility.
- Regional Group quarters Inventory
- Local knowledge/ Phone conversation.
- If no feasible data is available keep it constant as 2020.

Households/Housing Units

- Dependent Variable
- Calculate Households from Population
- Establish Average household size – Constant as 2020 or adjust based on national trend
- Establish Vacancy Rates to get Housing Units.
- It is best to keep the Vacancy Rates constant as 2020.

Autos

- Dependent Variable
- Control Total to be established based on Population Control Total.
- Auto ownership rates – constant as 2017.
- Review national future auto-ownership rates projections to tweak as needed.
- Connected and Automated Vehicles and Electric Vehicles adoption.

K-12 & College Enrollment

K-12 Enrollment

- Dependent Variable
- The total school age children (age ranges 5-9, 10-14 and 15-19) to be calculated using the cohort component model to establish the control total.
- For the K-12 schools the growth is mostly accounted for in public school enrollment.
- Private school enrollment kept constant to the 2017 base year unless projections numbers were received from individual entities.
- Drop Out Rates Trends
- Home School & Religious Exemption Trends Jurisdictional School Board Master Plan Research/Conversation on new schools or satellite school location

College Enrollment

- Web research on any potential projections for college and universities. College Master Plans/New College announcements.
- Keep the latest enrollment constant if no feasible projection data available.

Employment

Countywide

- RRTPO staff developed the employment control total by jurisdiction and by 2-digit NAICS code (by sector).
- Based on previously developed model by Chmura Economics and RRTPO.
- Uses RRTPO historic data and local, regional and national trends.
- The Individual 2-digit NAICS control-totals were developed first and aggregated to get the Jurisdictional total.
- Baseline Employment Projection – Only major development provided documentation may be added. (1000 + Jobs).

Jurisdiction	Employment	
	2017	2050
Charles City	1,668	1,850
Chesterfield	131,120	186,051
Goochland	13,966	21,704
Hanover	50,625	68,361
Henrico	191,240	246,718
New Kent	3,956	6,299
Powhatan	6,092	7,704
Richmond	152,044	176,256
Region Total	550,711	716,993

Employment

TAZ Level

- Each TAZs retains at least the same employment as its base year (2017) unless there is a massive demolition project planned.
- First 5 years
 - Allocate employment based major commercial development projects in the pipeline.
 - Information on the type of the commercial activity and the and the total area or square footage.
 - The square footage to be converted into number of employees based on industry standards
- Following 5 years – plans/rezoning submitted or approved
- Future years (10 years or more) – review of comp/small area plan for a built-out analysis. TAZ growth stops when comp plan potential is met.
- Further review by jurisdictional staff and if needed to be tweaked based on local knowledge.

Agenda Item 7

Closing

Closing

- RRTPO staff to follow-up with each locality for the establishment of Jurisdictional level Population Control Totals.
- RRTPO staff to provide each locality with Employment Control total by 2-Digit NAICS. Staff with work with each locality to finalize employment control totals.
- RRTPO staff to work on school and college enrollment and auto ownership projections.
- Locality staff to provide information on major development projects both commercial and residential. Press releases and announcements information can be helpful as well.
- Next Meeting in late August if needed.

Thank You!

Sulabh Aryal, AICP
Transportation Planning Manager

saryal@planrva.org



9211 Forest Hill Ave, Suite 200
Richmond, VA 23235
Phone: (804) 323-2033

www.planrva.org