



# RICHMOND CONNECTS

Technical Sub Committee Meeting

May 11, 2022

# Meeting Agenda

- 9:00 – 10:15 Needs Analysis Framework
  - 3 chunks of 5-to-10-minute presentation +15–20-minute Q&A
- 10:15 – 10:30 Community Engagement Plan & Schedule
- 10:30 – 10:40 Public Engagement Round 1
  - This will be covered with greater focus during the May 24th Steering Committee meeting
- 10:40 – 10:50 May 24th Steering Committee Meeting Agenda
- 10:50 – 11:00 Overall Q&A

# RICHMOND'S STRATEGIC MULTIMODAL PLAN

Spring 2021



Policy Guide  
for Richmond  
Connects

Spring 2022



Winter 2023

POLICY GUIDE



EQUITABLE  
MOBILITY &  
ACCESSIBILITY  
ACTION PLAN



SCENARIO  
PLAN



We are here

# Basic Concepts

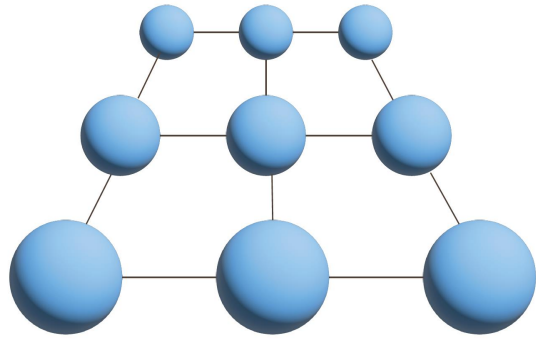
## Vision:

*“The vision for this plan, coming from our citizens and our leadership, will be to apply an equity lens as the foremost factor for understanding our multimodal transportation needs”*

## How are we defining equity in transportation?

- Equity is the fairness with which benefits and costs are distributed
  - Transportation Equity is divided into two aspects:
    - Horizontal Equity
    - Vertical Equity
- described on next slide

# Equity in Transportation



**Horizontal Equity  
(Equality):**

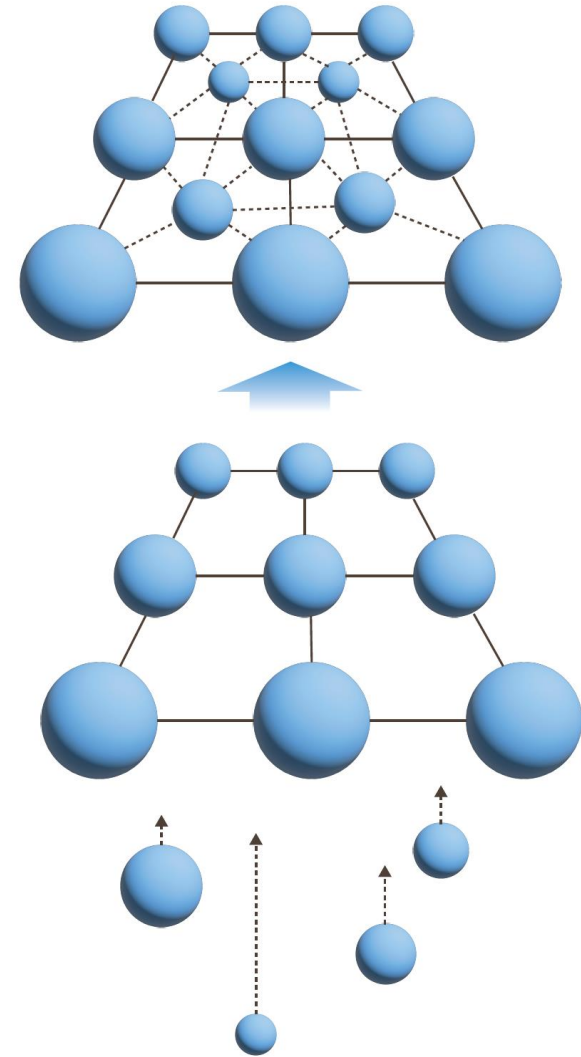
Equal access for those with similar needs and abilities



**The Goal:**  
Everyone has equal access to all destinations by all modes



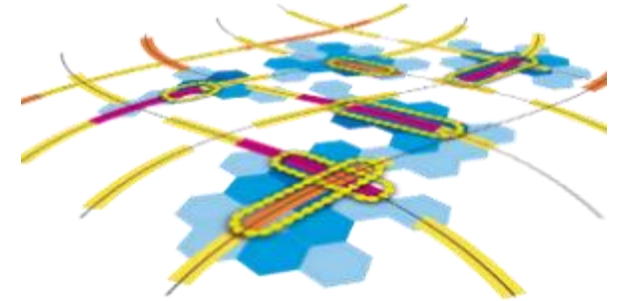
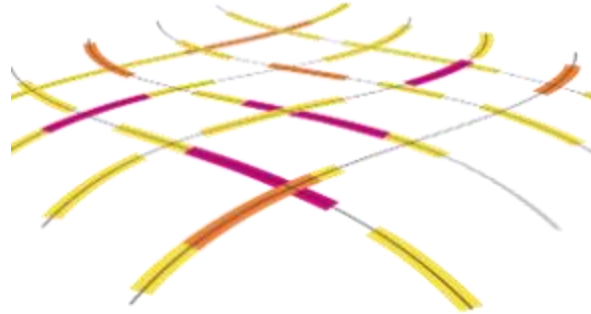
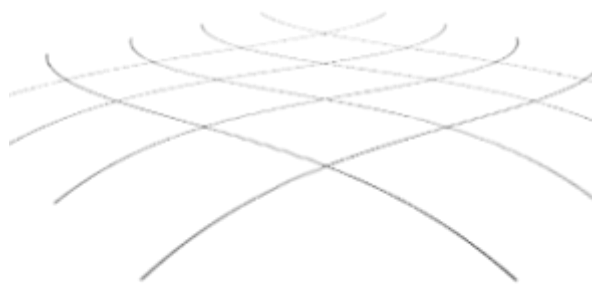
**Vertical Equity:**  
Recognizes that some people start out with different needs and abilities



# How We Measure Equity in Transportation

HORIZONTAL EQUITY

VERTICAL EQUITY



The current network



Gaps in the network by mode



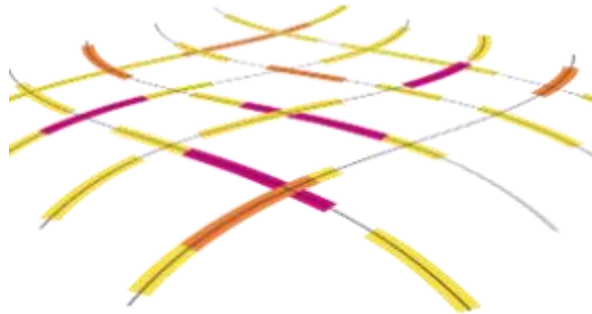
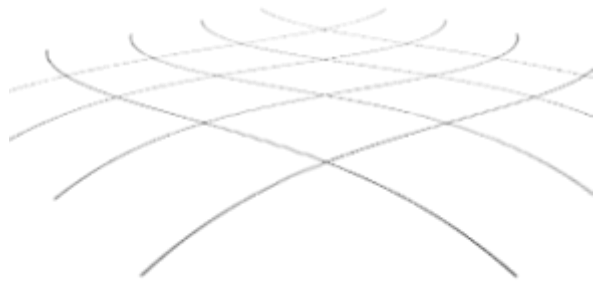
Geographic inequities in the City



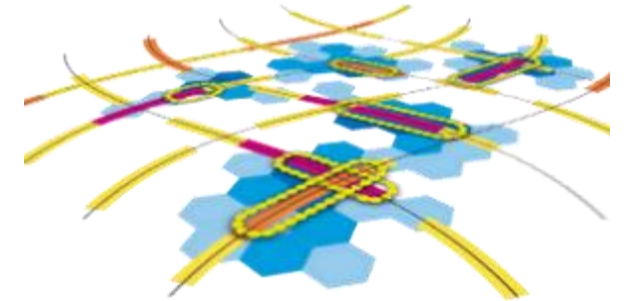
The OVERLAP – Areas of greatest Equity Need

# What we are Presenting Today

Potential Metrics for  
Horizontal Equity



Potential Metrics for  
Vertical Equity



- Today we will ask your feedback on these Potential Metrics
- You will have time to study them and respond in writing
- Next time, we will share Proposed Metrics and preliminary results of testing



# Needs Analysis Framework





# Overview

- Aims of the needs analysis
- Generalized analysis framework
- Examples
- Menu of metrics and supporting data

# Aims of the needs analysis



Identify what's wrong or missing to create an equitable multimodal transportation system across Richmond

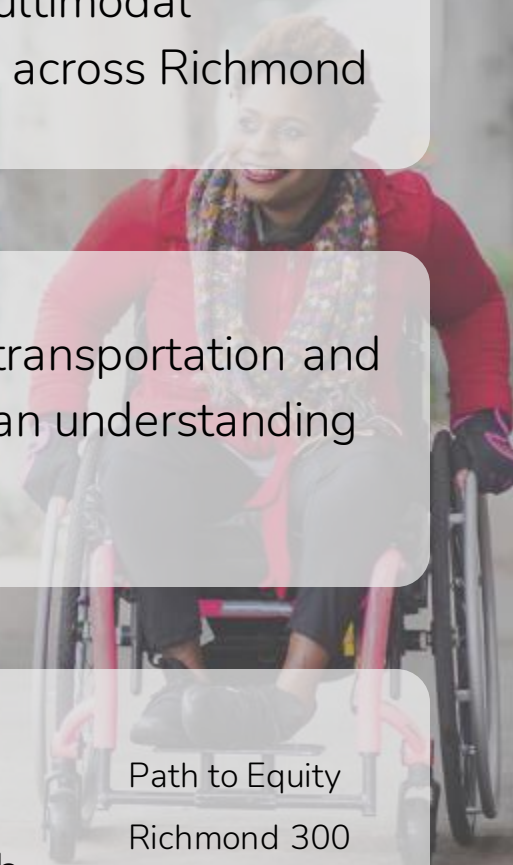


Integrate analyses of transportation and related systems with an understanding of who is affected



Align analysis, reporting, and recommendations with key policy documents

Path to Equity  
Richmond 300  
RVAgreen 2050

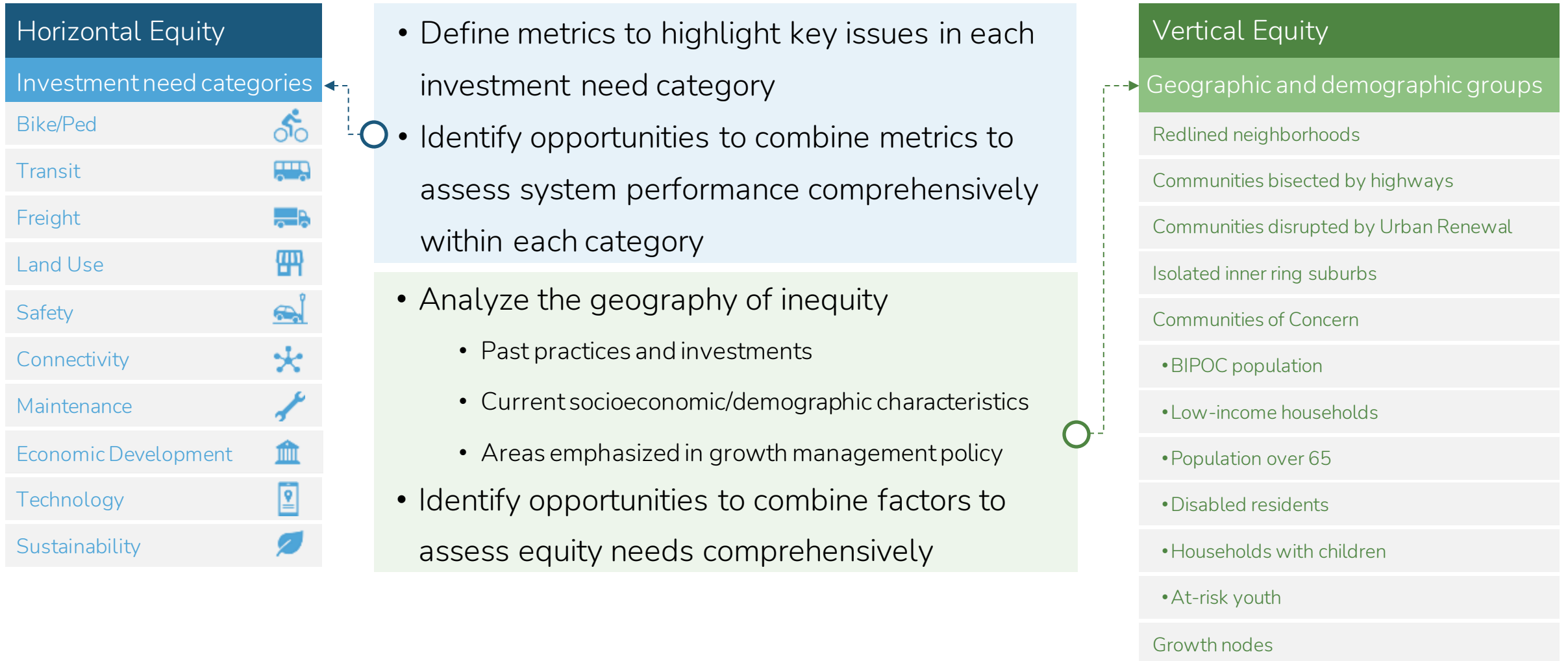




# Objectives of the needs analysis

- 
- Identify needed investments across a diverse range of categories
  - Elevate needs of communities and users that are or historically have been marginalized in the planning process
  - Elevate needs that directly support goals and objectives of key policy documents

# Connecting transportation issues and the geography of equity



# Integrate transportation and equity analyses to assess needs based on policy

Policy
Values that shape planning & investment
Path to Equity: Equity Factors
Richmond 300 Goals and Objectives
RVAgreen 2050

## Align analytics with policy emphases

- What transportation needs/issues are emphasized?
- What populations and/or sources of inequity are emphasized?
- How can we combine these considerations to define needs that reflect the City's policies and values?

# Generalized analysis framework

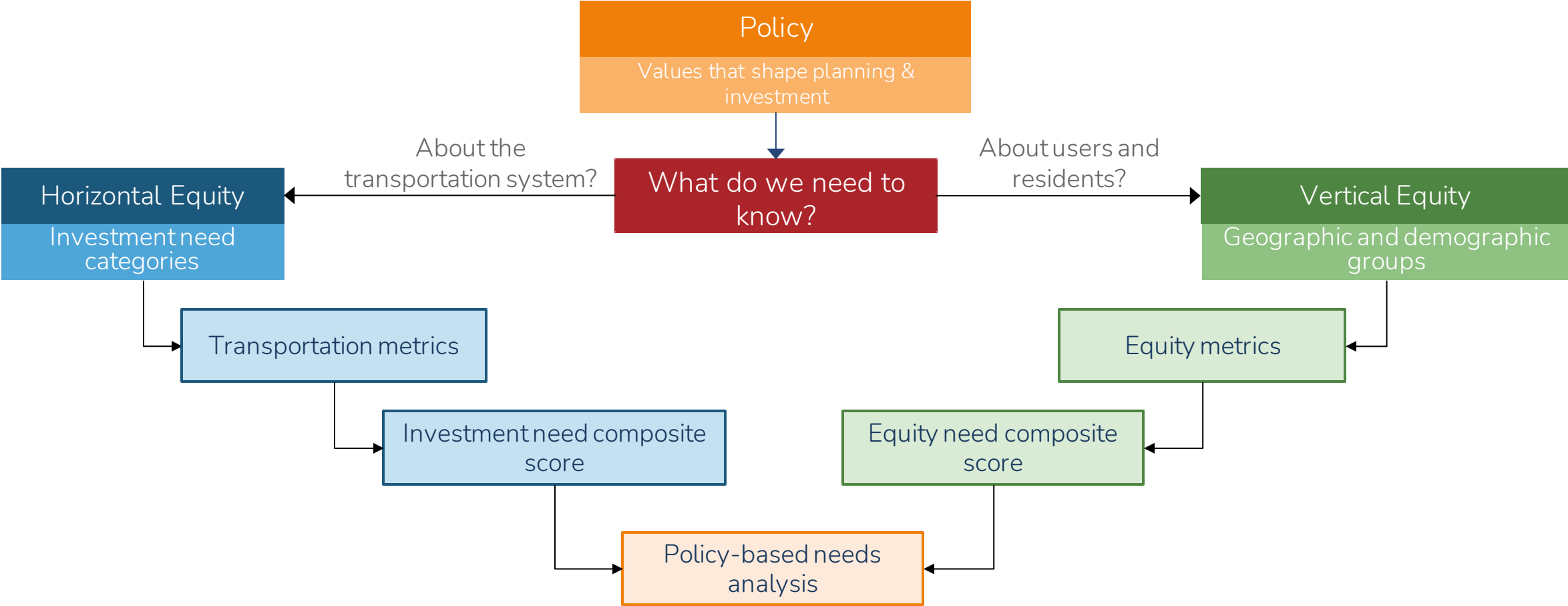
Horizontal and vertical equity analysis tracks

Simple metrics and composite scores

Policy-based needs analyses

Accumulation of needs indicators

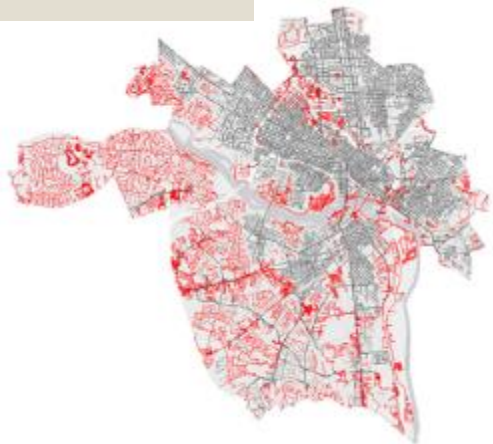
# Horizontal and vertical equity analysis tracks



# From simple metrics to composite scores

- Simple metrics are intuitive, non-reducible analytical findings that describe performance within an investment need category
- Composite scores combine multiple simple metrics to summarize performance within an investment need category

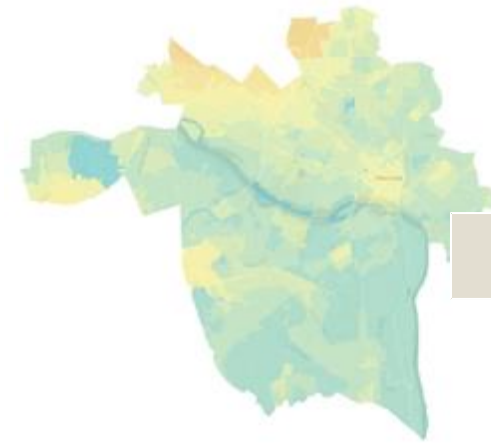
## Simple metrics



Sidewalk gaps



Sidewalk condition



Competitive walk access to jobs

## Composite score



Walkability index



# Policy-based needs analysis

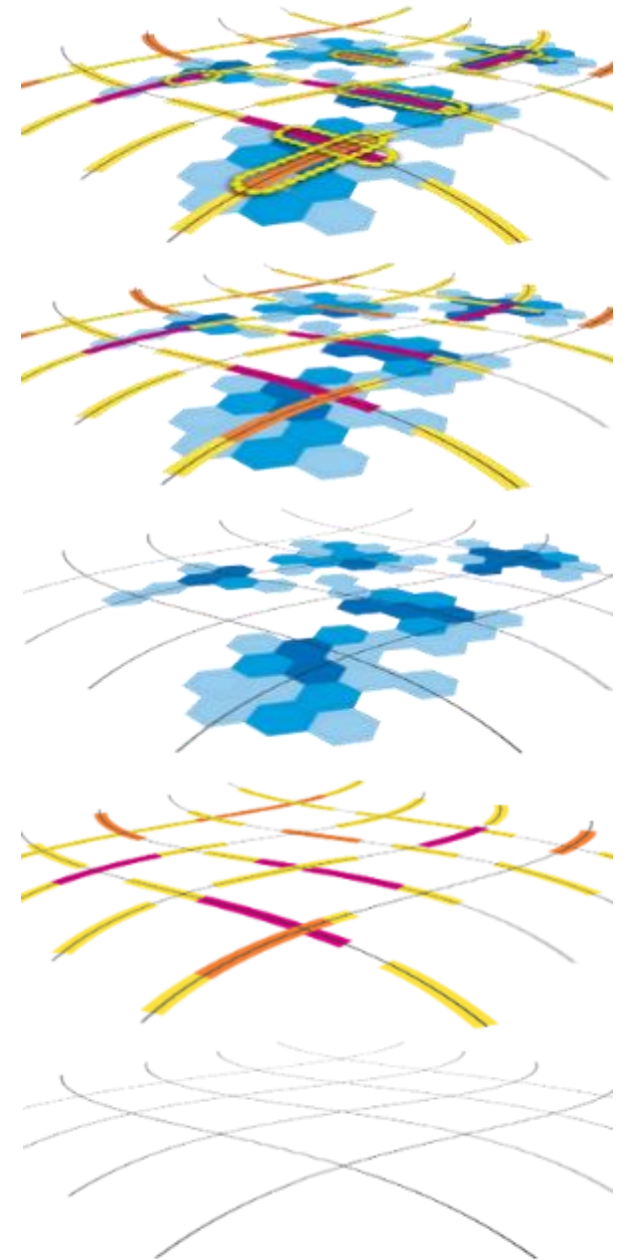
Needs scoring – showing areas that will register high equity needs scores

The overlap – showing where transportation inequities overlap with demographic inequities

Demographic inequities by location - the geography of prior inequitable practices (Vertical Equity)

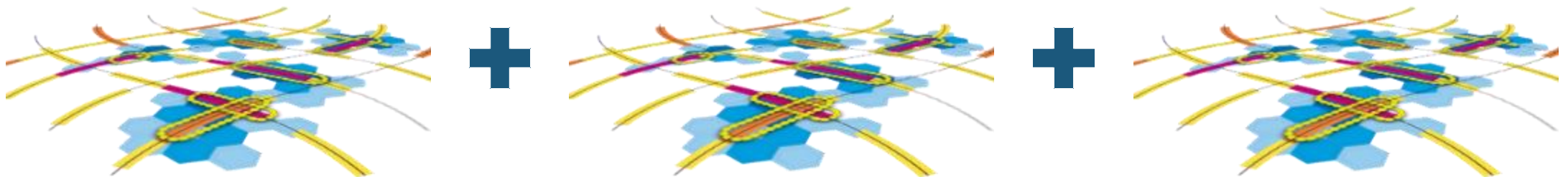
Transportation inequities by mode - gaps or problems in the transportation network (Horizontal Equity)

The current transportation network



# Accumulation of needs indicators

- Each policy-based needs analysis will highlight areas of needed investment
  - Within particular investment need categories
  - Relative to the communities and users impacted
  - Describing the underlying cause(s) and/or nature of the need
  - Having a distinct geography of need
- Multiple analysis results may indicate multiple needs in the same area



# Specification of policy-based needs

- Highlight key policy directives to guide needs analysis
  - Path to Equity (PTE) Equity Factors
  - Richmond 300 Goals
  - RVAgreen 2050
- Define simple metrics that are needed to understand the nature and geography of the need for both vertical and horizontal equity tracks
- Define composite scores that summarize the transportation and equity dimensions of the policy statement
- Define the overlay of horizontal and vertical equity composite scores to clearly articulate investment needs relative to that policy

# Review of policy-based needs

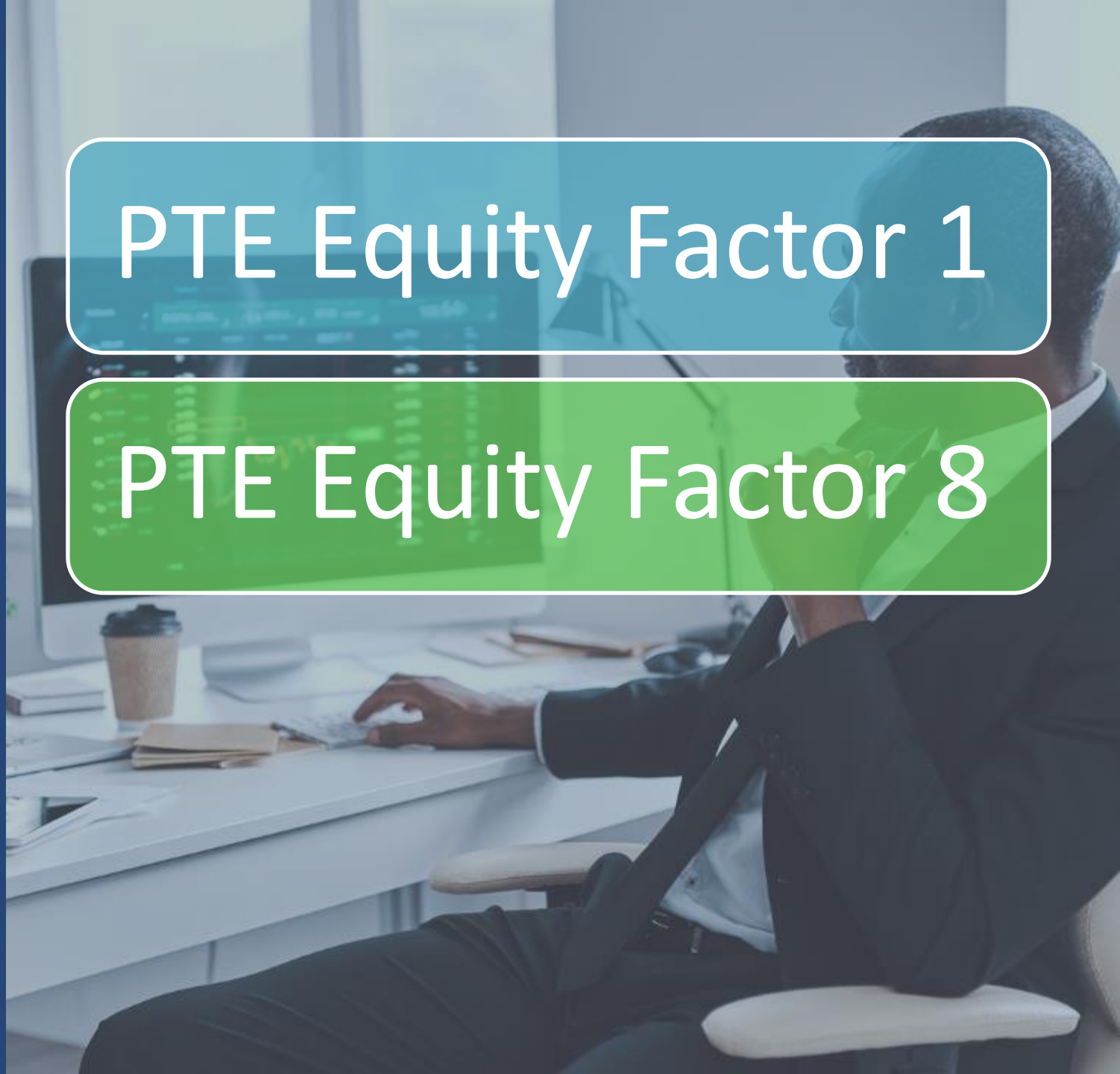
- Is each policy directive comprehensively analyzed? Are qualitative considerations needed for a complete needs assessment?
- Are any investment need categories left out or under-represented after we have analyzed the major policy directives?
- Where do needs overlap/affect the same facility across multiple policy-based analyses?



# Examples

PTE Equity Factor 1

PTE Equity Factor 8



# Policy: Path to Equity – Equity Factor #1

Improve access to housing, jobs, services, recreation, and education, addressing remaining inequities created by redlining.

	What do we need to know...	
	About the transportation system: Where is access poor?	About users and residents: Where do inequities created by redlining persist?
Simple indicators	<ul style="list-style-type: none"> <li>• Access to housing, jobs,... education by mode</li> <li>• Sidewalk gaps, condition, crosswalk gaps</li> <li>• Bike facilities, bike protections, bikeshare proximity</li> <li>• Transit reliability, transit service frequency, stop proximity</li> </ul>	<ul style="list-style-type: none"> <li>• Redlined neighborhoods</li> <li>• Presence of communities of concern</li> </ul>
Composite scores	<ul style="list-style-type: none"> <li>• Composite accessibility</li> <li>• Walkability</li> <li>• Bikeability</li> <li>• Transit quality index</li> </ul>	<ul style="list-style-type: none"> <li>• Areas with remaining inequities created by redlining</li> </ul>
Policy-based needs analysis	<ul style="list-style-type: none"> <li>• Overlay of low composite accessibility scores and areas with remaining inequities created by redlining</li> <li>• Overlay of facilities contributing to poor walkability/bikeability and areas with remaining inequities created by redlining</li> <li>• Overlay of areas with poor transit service and areas with remaining inequities created by redlining</li> </ul>	

# Policy: Path to Equity – Equity Factor #8

Prioritize the needs of socially vulnerable users and address climate and environmental equity as identified in RVAgreen 2050

	What do we need to know...	
	About the transportation system: Where are travelers likely to be impacted by climate risks?	About users and residents: Where are socially vulnerable users and residents?
Simple indicators	<ul style="list-style-type: none"><li>• Flood plain</li><li>• Urban heat island</li><li>• Negative air quality generators</li><li>• Access to jobs by mode with facility resilience factors applied</li></ul>	<ul style="list-style-type: none"><li>• Presence of communities of concern</li></ul>
Composite scores	<ul style="list-style-type: none"><li>• Air quality index</li><li>• Resilient accessibility index</li></ul>	<ul style="list-style-type: none"><li>• Communities of concern hot spots</li></ul>
Policy-based needs analysis	<ul style="list-style-type: none"><li>• Overlay of air quality index with communities of concern hot spots</li><li>• Overlay of resilient accessibility index with communities of concern hot spots</li></ul>	

# Menu of metrics and supporting data



Equity metrics

Many policy-based analyses rely on the same or similar metrics and/or composite scores. Each policy-based workflow can therefore be constructed from a broad menu of metrics related to transportation and equity.



# Potential Transportation metrics

## Investment Need Category: Bike/Ped

### Simple Metrics

Walk/bike access to jobs

Walk/bike access to essential services (education, health care, healthy food, shopping, etc.)

Sidewalk gaps

Sidewalk condition score

Crosswalk gaps

Bike lane gaps

Trail/path gaps

Bike/ped facility-based detriments score

Bikeshare station locations

Bike lane protections

Pavement condition

Bike/ped trip-making

### Composite scores

Walk/bike composite accessibility

Walk/bike connectivity hotspots

Walk/bike gap hot spots

Walk/bike trip-making hot spots/cold spots

Walk/bike destination relevance index

Walk/bike opportunities index

# Transportation metrics

## Investment Need Category: Transit

### Simple Metrics

Transit access to jobs

Transit access to essential services  
(education, health care, healthy  
food, shopping, etc.)

Transit reliability/on-time  
performance

Transit service frequency

Transit stop accessibility

Transit amenities locations

Transit trip-making

### Composite scores

Transit composite  
accessibility

Transit quality of service  
index

Transit trip-making hot  
spots/cold spots

Transit propensity/need  
index

Transit destination  
relevance index

Transit opportunities  
index

Transit stop accessibility  
index

# Transportation metrics

## Investment Need Category: Freight

### Simple Metrics

Truck routes

Freight generators

Truck traffic

Goods movement bottlenecks

Last-mile freight connectors

### Composite scores

Trucking needs score

Freight and land use  
compatibility

Freight workforce access  
index

# Transportation metrics

## Investment Need Category: Land use

### Simple Metrics

Current Land Use/Zoning

Future Land Use/Zoning

Density Supportive Needs

### Composite scores

Land-Use Supportive  
Index

Complete Street Index

Curb Management  
Opportunities Index

# Transportation metrics

## Investment Need Category: Safety

### Simple Metrics

Crash Points

Crime Points

Perceived Safety and Comfort

Speed Safety

### Composite scores

Crash Hot Spots

Crime Hot Spots

Safety Hot Spot

# Transportation metrics

## Investment Need Category: Connectivity

### Simple Metrics

Regional Connectivity

Node Connectivity

Mobility Corridors

Circuitous Routes

Redundancy

Trip Making

### Composite scores

Multimodal Connectivity  
Gap Score

Composite Accessibility  
Score

Multimodal Travel Time  
Comparison

# Transportation metrics

## Investment Need Category: Maintenance Needs

### Simple Metrics

Roadway Condition Score

Structural Conditions Score

Sidewalk Condition Score

Bike Share Condition Score

Transit Vehicle Age

Transit Shelter Age

### Composite scores

State of Good Repair

Transit Maintenance

# Transportation metrics

## Investment Need Category: Economic

### Simple Metrics

Virginia Opportunity Zones

### Composite scores

Impoverished Community  
Index



# Transportation metrics

## Investment Need Category: Technology

Simple Metrics

Technology Accessibility (GAP TA)

Composite scores

# Transportation metrics

## Investment Need Category: Sustainability

### Simple Metrics

Air Quality

Electric Vehicle Charging Stations

Sea Level Rise/Flooding Areas

Urban Heat Vulnerability

Urban Heat Island

Natural Gas Leaks

Household Car Ownership

### Composite scores

Unsustainable Options  
Index

# Equity metrics

## Investment Need Category: Other

### Simple Metrics

User Satisfaction

Equitable Investment

Affordability

Outcome Linked Accessibility

Mobility Substitutes

Programmatic and Education  
Needs

Barriers to Access

Community Priority Needs

### Composite scores


# Equity metrics

## Equity Focus: Communities of Concern

### Simple Metrics

BIPOC population

Low-income households

Population over 65

Disabled residents

Households with children

At-risk youth

Zero-car households / average  
vehicles owned per person

### Composite scores

Communities of concern  
hot spots

Hot spots of low vehicle  
availability

# Equity metrics

## Equity Focus: Geography of Equity

### Simple Metrics

Redlined neighborhoods

Neighborhoods bisected by highway construction

Neighborhoods disrupted by Urban Renewal projects

Inner ring suburbs

### Composite scores

Areas with remaining inequities created by redlining

Neighborhoods with remaining inequities created by highway construction

Neighborhoods with remaining inequities created by Urban Renewal

Underserved/isolated suburban neighborhoods

# Please send us your comments:

## By May 13:

- Any changes to the slides for presenting to the Steering Committee

## By May 27<sup>th</sup>:

- Detailed comments on the Needs Metrics

*We are happy to schedule calls with you as needed to go over your comments/questions!*



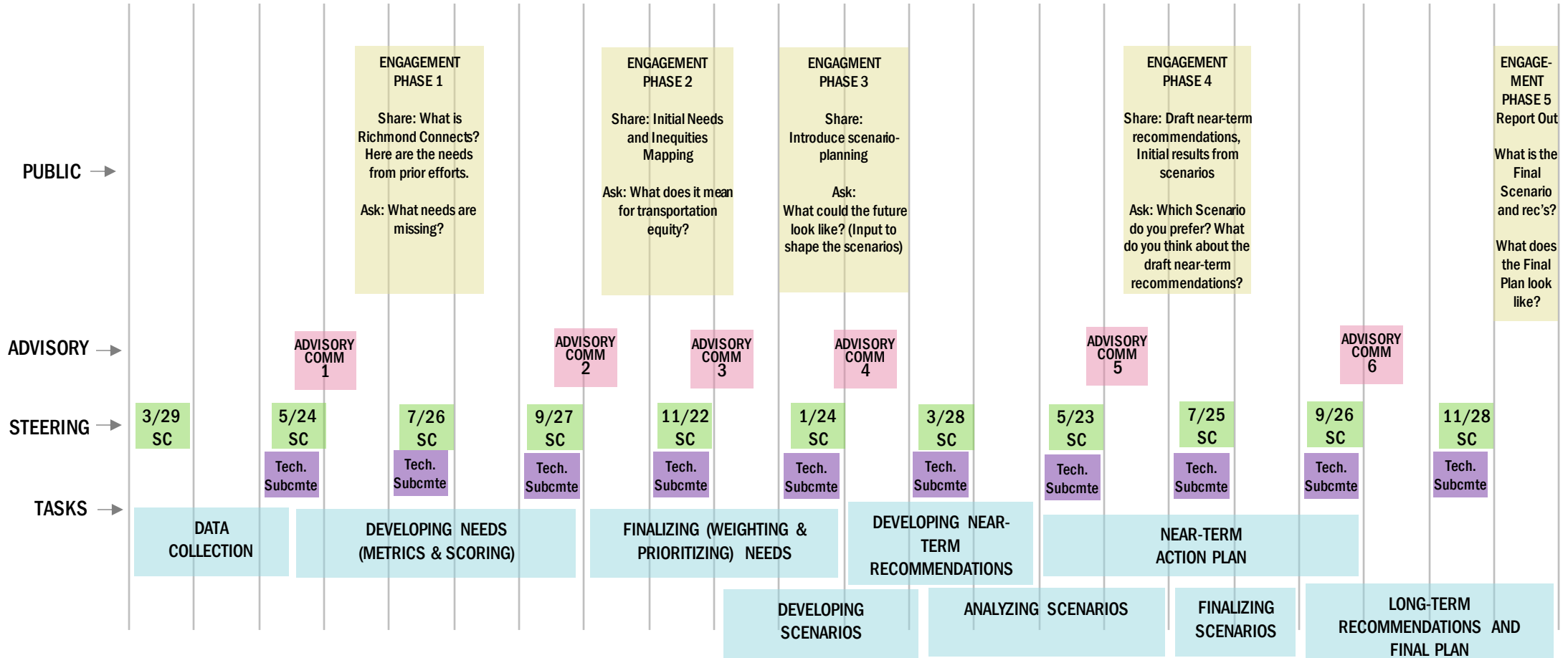
# Community Engagement Plan & Schedule



# 2022

# 2023

Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



Each PUBLIC MILESTONE would include:

1. Virtual public meeting or webinar
2. New website content
3. Online Survey - to supplement in person input
4. Pop up events or focus group meetings to solicit additional public/stakeholder input

Each STEERING COMMITTEE MEETING would be structured to:

1. Shape upcoming Advisory Committee Meetings
2. Review public engagement & redirect as needed
3. Update progress to date & direct the next steps

Each ADVISORY COMMITTEE MEETING would be structured to:

1. Guide the next milestone of public engagement
2. Direct which people/groups need to be engaged
3. Update progress to date & advise on the next steps

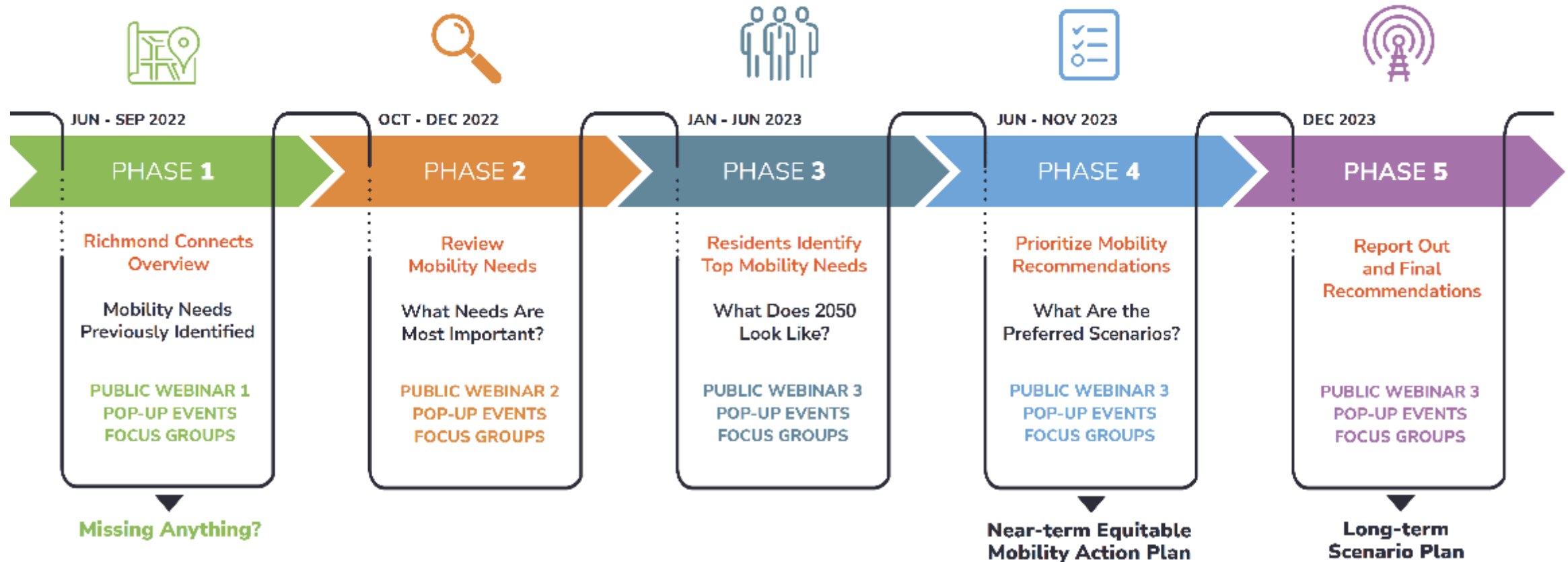


DRAFT  
Public Facing  
Schedule

# RICHMOND CONNECTS

## COMMUNITY ENGAGEMENT TIMELINE

Powered by Path To Equity: Policy Guide



Community-based insights guided by the Richmond Connects Advisory Committee, Steering Committee and Technical Committee.



# Public Engagement Round 1

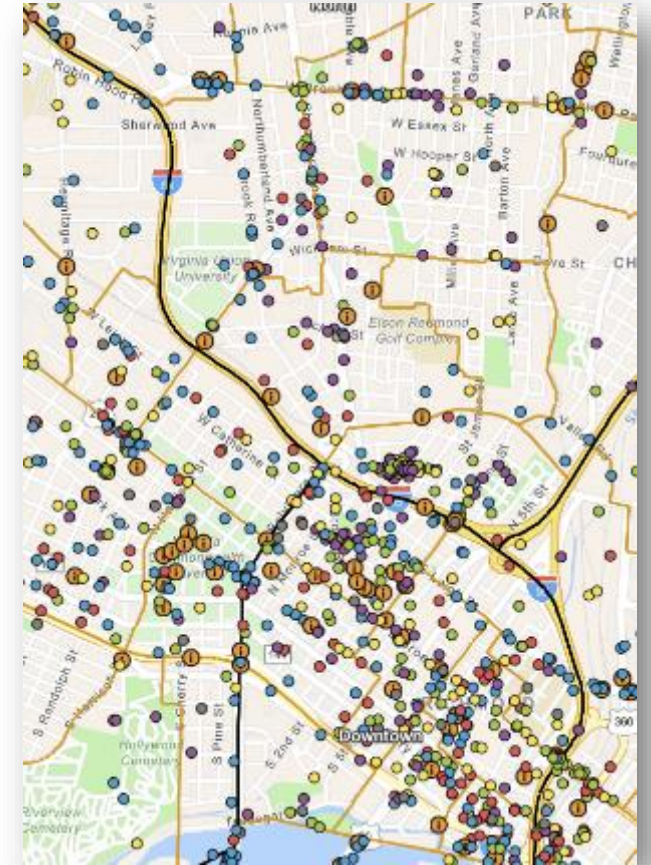
*This will be covered with greater focus during the May 24<sup>th</sup> Steering Committee meeting*



# Phase 1 Engagement – What are the Needs? (June - August 2022)

## MESSAGES:

1. The City is developing Richmond Connects! (What this project is about)
2. We heard You! (share transportation needs identified from the community engagement from Richmond 300 and Path to Equity)
3. What's missing? (web map with opportunity to add needs that are missing)
4. What's Next? (convey how the info will be used)



<https://experience.arcgis.com/experience/890afab43ca248daa3ba595d6c9036e8>

# Phase 1 Engagement (June - August 2022)

## EVENTS:

1. Kickoff Webinar/Online Input Meeting
2. Engagement Activities to Gather Public

Input:

- Survey
- Pop-up and community events
- Presentations at community meetings





# May 24th Steering Committee Meeting Agenda



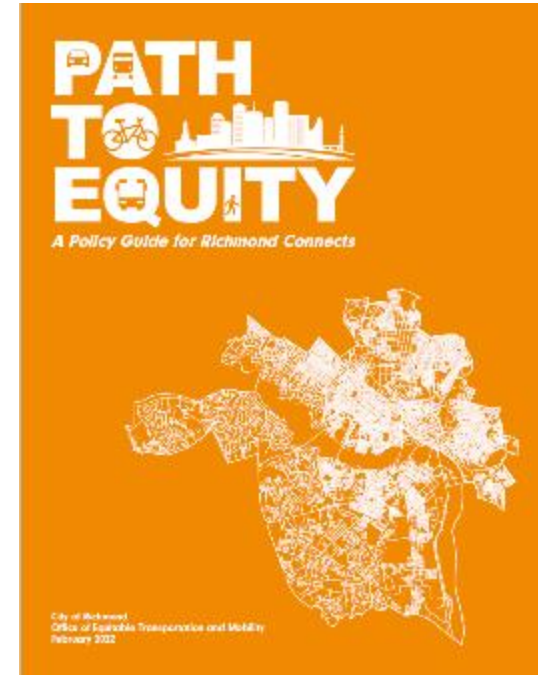
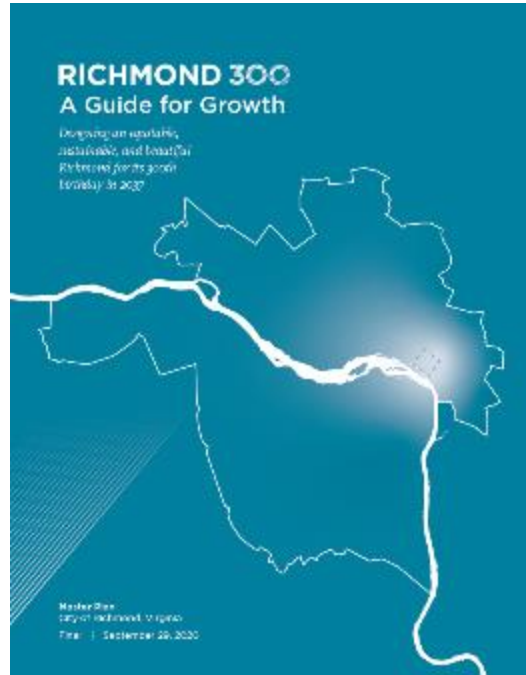
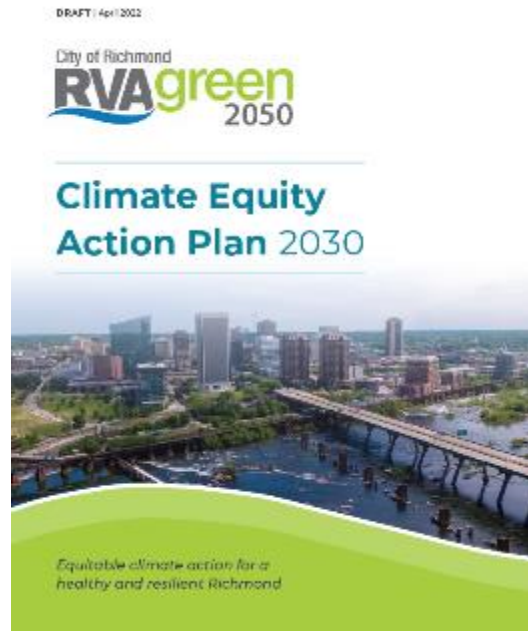
# May 24th Steering Committee

## AGENDA:

1. Needs Analysis Framework
2. Community Engagement Plan & Schedule
3. Public Engagement Round 1
4. June 6th Advisory Committee Meeting Agenda

# Question/Answer





## Summary of Plans

Reviewed more than 50 existing plans/policies/programs with an eye toward:

- What are the key project/policy recommendations
- What equity issues need to be elevated for Richmond Connects



# Summary of Plans (cont.)

- Strong basis for project recommendations that will be vetted using the Needs Framework
- Plans identify a number of relevant goals/actions that can be incorporated
- There are a number of existing tools that different groups are using to explore equity:
  - Health Opportunity Index
  - Climate Equity Index
  - CEJST
  - USDOT Transportation Disadvantaged Communities
  - RRVTPo Equity Emphasis Areas for EJ
  - Access 2 Opportunity (A2O)