



Richmond Regional
**Transportation
Planning
Organization**

SUPPORTED BY



Scenario Planning 101

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What is Scenario Planning?

- Decision-making tool
- Considers alternate outcomes and eventualities
- Creates a responsive, resilient, and efficient plan
- Scenario planning is a process to support decision-making that helps urban and rural planners navigate the uncertainty of the future in the short and long term.

Scenario Planning Considerations

- What questions are we seeking answers to?
- What are we trying to protect?
- What are we trying to promote?
- Over what time horizon?
- Market likelihoods?
- How to communicate results?



Scenario Planning

Identify Community Priorities



Evaluate Scenarios



Create Scenarios and Establish Performance Metrics



Communicate Results



Making better decisions

- Test ideas that reinforce community values and desired outcomes
- Bridge the gap between land use and transportation
- Put a price tag on development decisions

Scenario Planning for a TPO

- Utilizes existing data sets and tools
- Can incorporate federal performance metrics
- Input to MTP goal setting, recommendations development, and prioritization
- Sustains public interest in regional planning between MTP cycles

Scenario Planning Focus Areas



Land Use



Disruptors



Transportation Recommendations

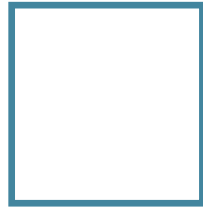


Financial



Others

Transportation Planning | Making Better Decisions



Conventional Approach

Exclusive emphasis on
transportation performance



Strategic Approach

Adds

- Safety
- Accessibility
- Mode-share
- Land Use
- Community Outcomes

Value Proposition

“Community success occurs when transportation investments are integrated with supportive land use initiatives to positively influence community outcomes.”

- Cost to serve is reduced
- Pastoral settings are preserved
- Travel times are maintained
- Affordability improves
- Access to opportunity is enhanced
- The community is more competitive



- **Safety:** Improve safety for all modes of transportation.



- **Economic Vitality:** Integrate transportation investments with land use and economic priorities to improve quality of life.



- **Environmental Sustainability:** Reduce vehicle miles traveled and provide a variety of travel options to encourage residents to travel by transit, biking, or walking, to reduce greenhouse gas emissions.



- **Housing:** Support the creation of affordable and varied housing options that meet the city's growing needs.



- **Equity:** Provide safe, affordable access to opportunities for all city residents.



- **Innovation:** Leverage existing and emerging technologies to meet 21st century challenges.

Diversity of Interests



Commute Mode
Shift



Travel Safety



Economic
Vitality



Transit-Supportive
Development



Network
Connectivity



Freight
Movement



Affordable
Housing



Traffic
Flow



Social Equity



Public Support



Environmental
Preservation



*And Many
Others...*



Broad-Based Indicators

ECONOMIC DEVELOPMENT

Predictable land use and transportation decisions encourage more public and private investment



SUSTAINABILITY

Coordinated development decisions lessen the impact on natural places



WORKFORCE ADVANCEMENT

Increased choice and connectivity better link jobs with the workforce



AFFORDABILITY

Improved choices in where we live and how we move make affordability more attainable



PROSPERITY

Intentional planning yields more efficiency and connections between our people, places, and shared prosperity

Scenario Planning vs. TDM

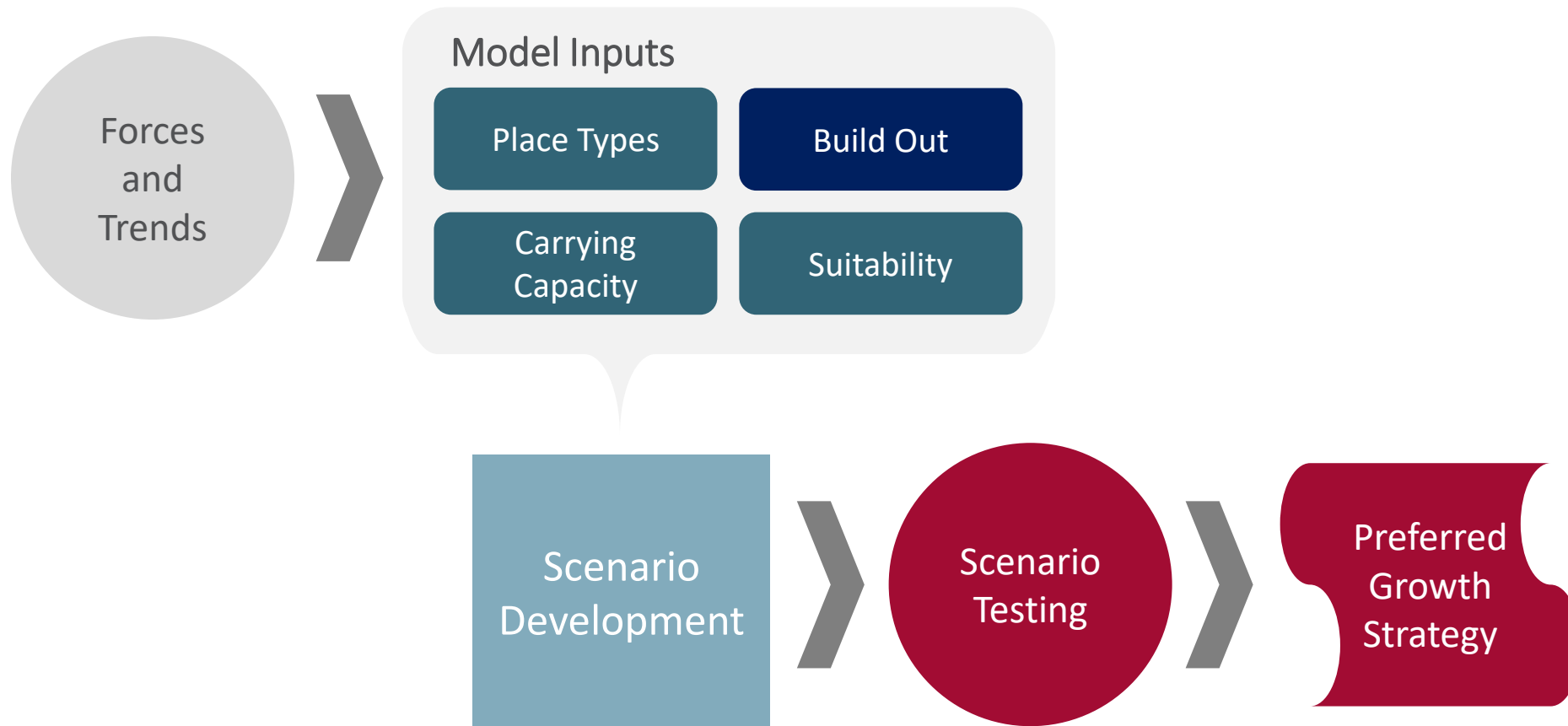
Scenario Planning

- Uses Travel Demand Model as an input
- Can make use of one or many tools to answer different questions
- Goes beyond traditional transportation metrics to understand regional performance

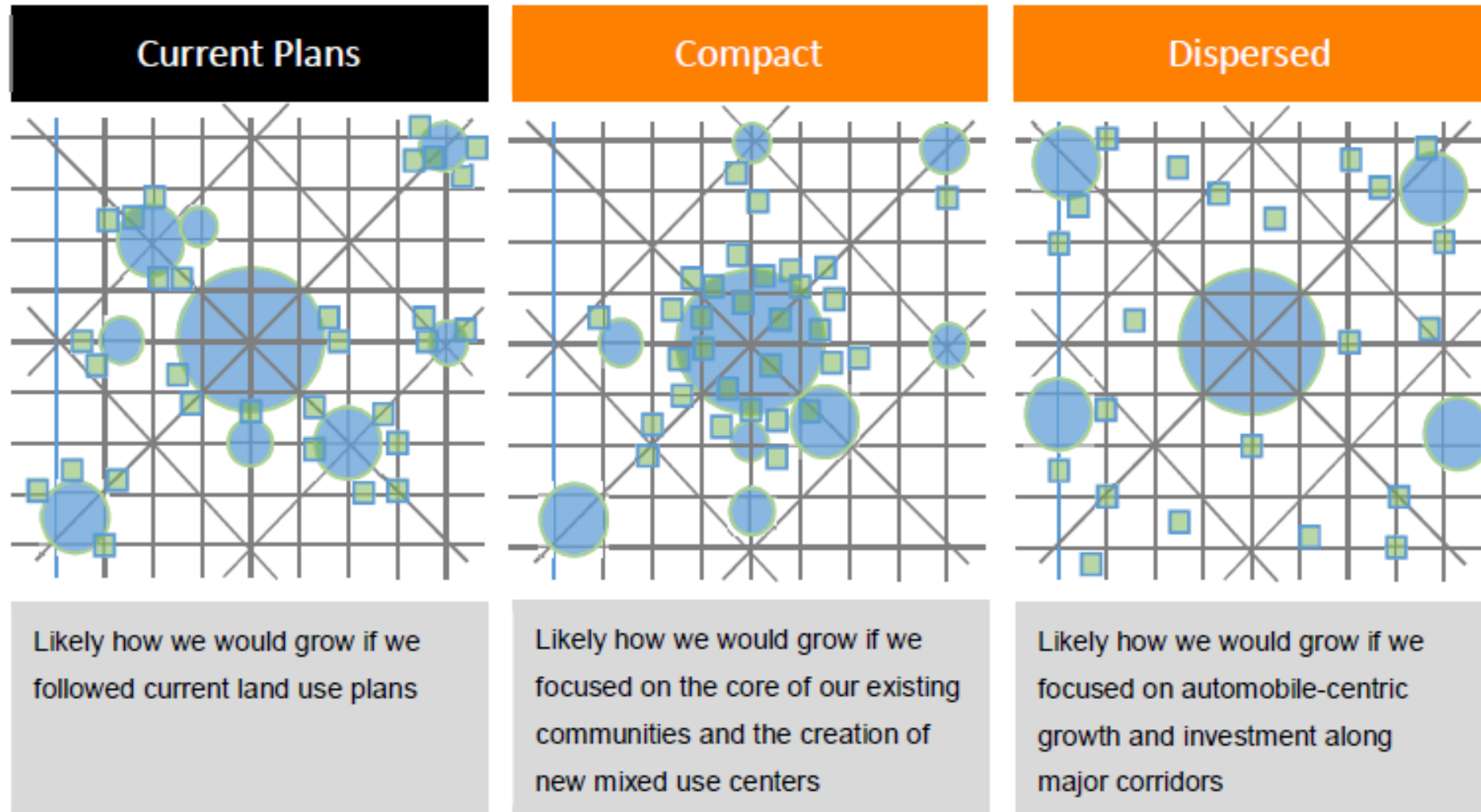
Travel Demand Model

- Uses land use information to arrive at transportation outcomes
- Single tool that is updated over time
- Helps determine traditional transportation metrics such as congestion, delay

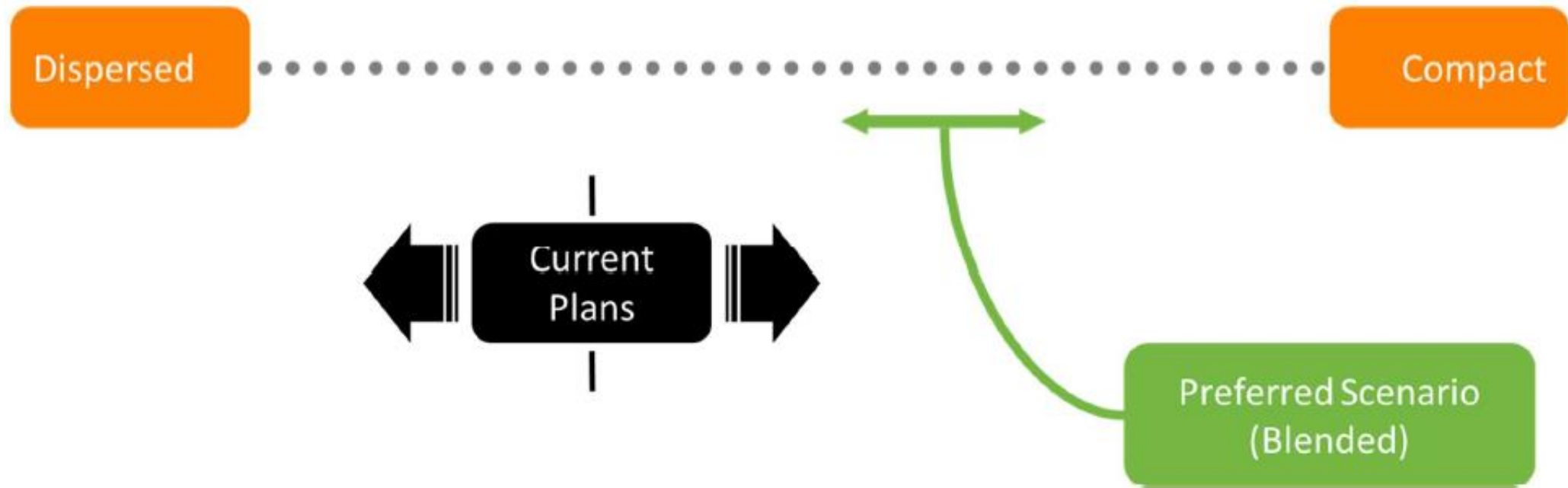
Scenario Planning In Action

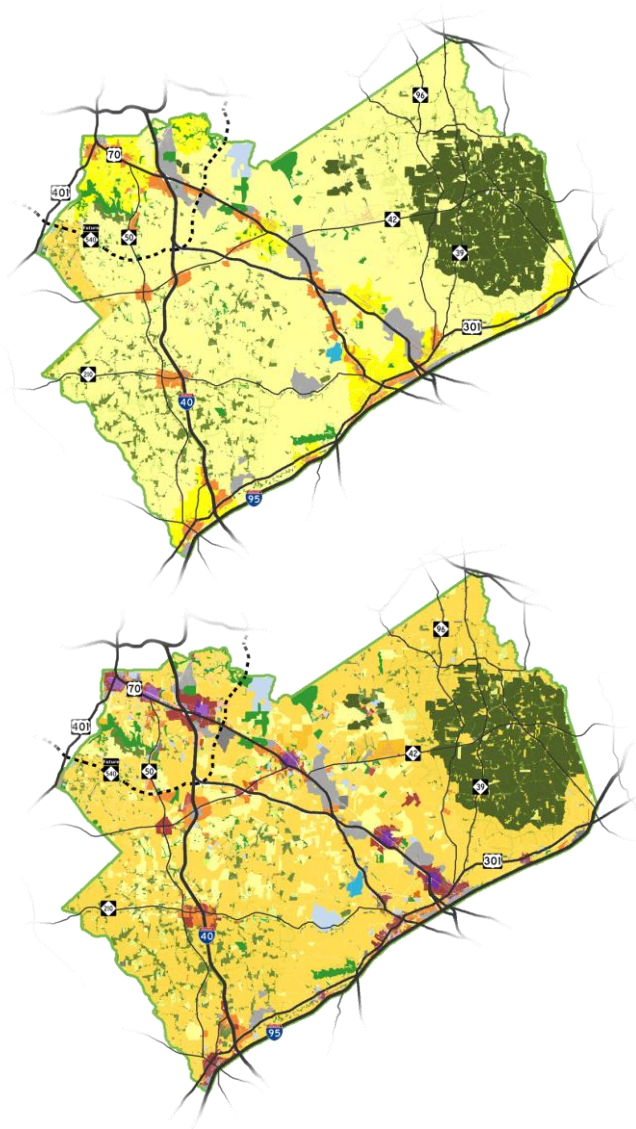


Scenario Identification



Scenario Identification





SEAS SOUTHEAST AREA STUDY

Report Card

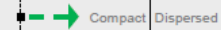
Performs WORSE than Current Plans ← — — — — — → Performs BETTER than Current Plans

Archer Lodge • Benson • Clayton • Four Oaks • Garner • Katty • Minto • Raleigh • Selma • Smithfield • Willard's Mills • Johnston County • Wake County

Quality of Place

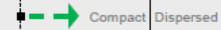
Learning Centers

Proximity to libraries and schools



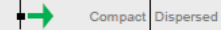
Housing Diversity

Mix of dwelling unit types within the study area



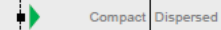
Access to Parks and Greenways

Proximity to parks and greenways



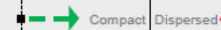
Jobs and Housing Balance

Ratio of jobs to households within urban place types



Walkability

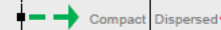
Dwelling units within walkable place types



Sustainable Growth

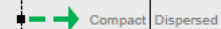
Urban Footprint

Growth in urban place types



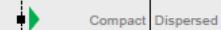
Urban Density

Density within urban place types



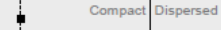
Water Consumption

Average water consumption



Energy Consumption

Average energy consumption



Growth Distribution

Context Distribution

Percent of land area by community type

	Current Plans	Compact	Dispersed
City & Town	1.6%	4.2%	0.5%
Suburban	74.4%	74.3%	79.9%
Rural	15.7%	14.1%	13.6%
Protected Green Space	2.8%	2.3%	2.0%
Other	5.6%	4.9%	4.0%

Household Distribution

Percent household growth allocated by community type

	Current Plans	Compact	Dispersed
City & Town	4.2%	26.6%	0.4%
Suburban	90.9%	69.0%	96.9%
Rural	2.0%	1.0%	1.2%
Protected Green Space	1.1%	1.1%	0.0%
Other	1.8%	1.5%	1.5%

Employment Distribution

Percent employment growth allocated by community type

	Current Plans	Compact	Dispersed
City & Town	15.2%	60.7%	1.2%
Suburban	55.0%	21.9%	80.4%
Rural	1.5%	0.3%	0.5%
Protected Green Space	1.2%	1.3%	0.0%
Other	26.7%	15.4%	17.9%

Regional Transportation

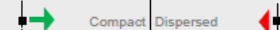
Vehicle Miles Traveled

Vehicle miles traveled (Triangle Regional Model)



Vehicle Hours Traveled

Vehicle hours traveled (Triangle Regional Model)



Congested Corridors

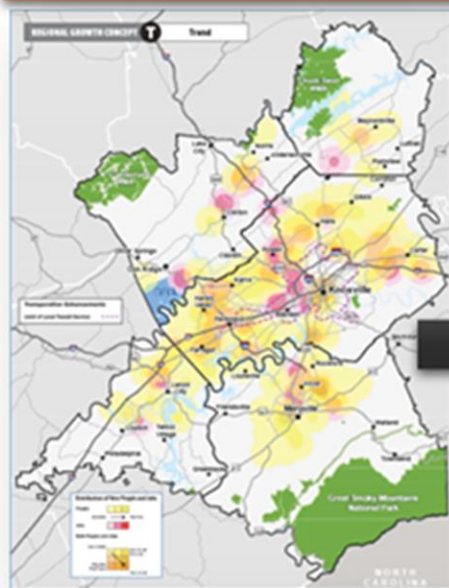
Miles of congested corridors (Triangle Regional Model)



Measuring Results

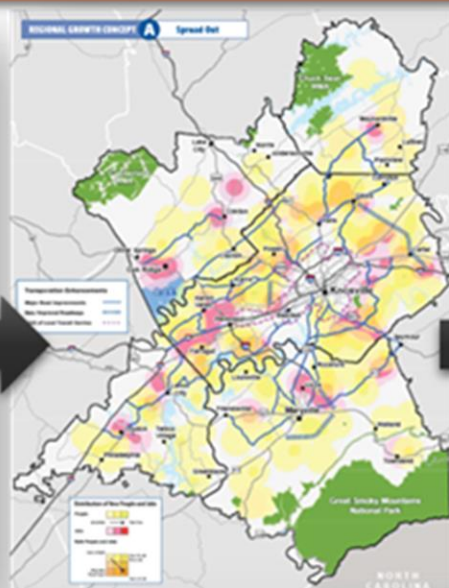
Understanding how we want the region to grow allows each jurisdiction to make better transportation and land use decisions

PlanET Growth Concepts



Business as Usual

- Continuation of current trends.
- Growth in suburban areas and along major corridors.
- Single family subdivisions, some apartments.
- Car is primary form of transportation.



Grow Everywhere

- Growth in suburban and rural areas.
- Primarily single family subdivisions, large-lot rural.
- Car is primary form of transportation.



Grow Corridors

- Growth along highway corridors.
- Mix of suburban growth and new town centers.
- Primarily single family subdivisions.
- Car is primary form of transportation.



Grow New Centers

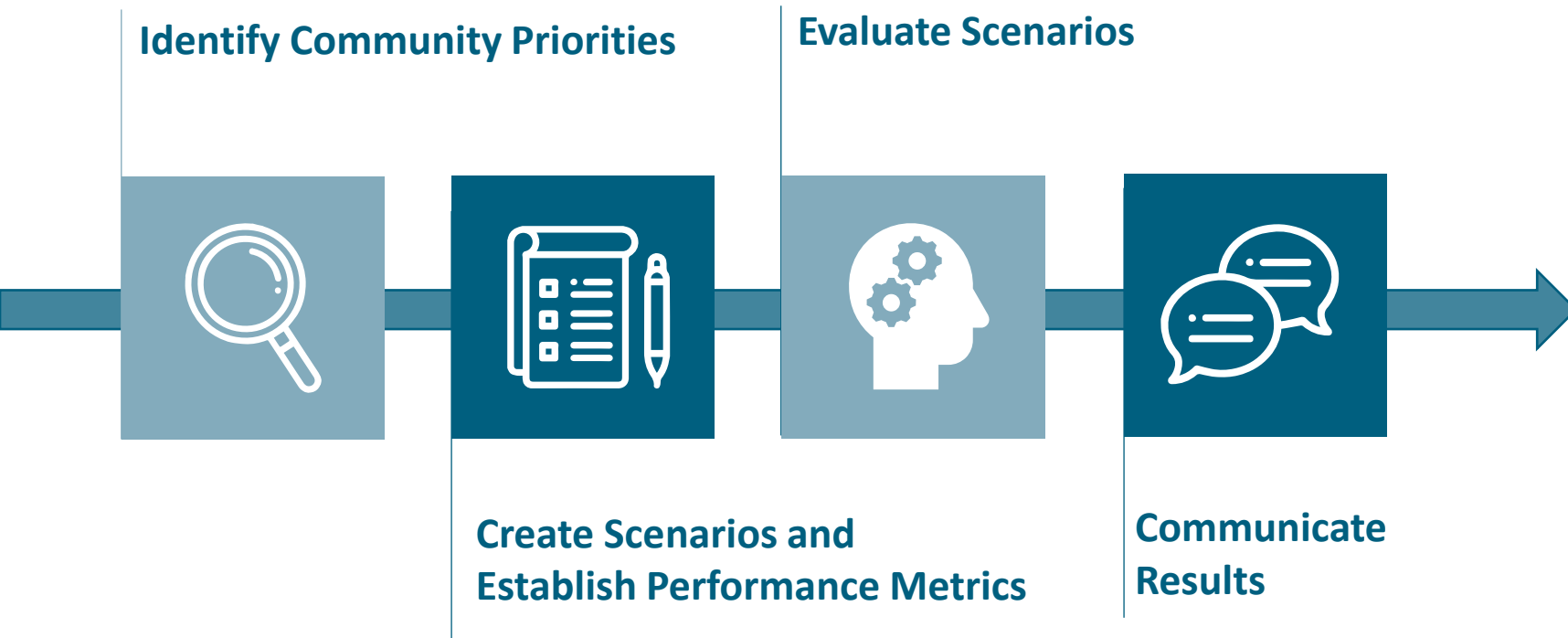
- Walkable mixed-use centers.
- Compact growth.
- Nearby neighborhoods.
- Mix of housing options.
- Mix of transportation options.



Grow Cities & Towns

- Mix of in-town reinvestment and new places.
- Walkable mixed-use centers.
- Compact growth.
- Nearby neighborhoods.
- Mix of housing options.
- Mix of transportation options.

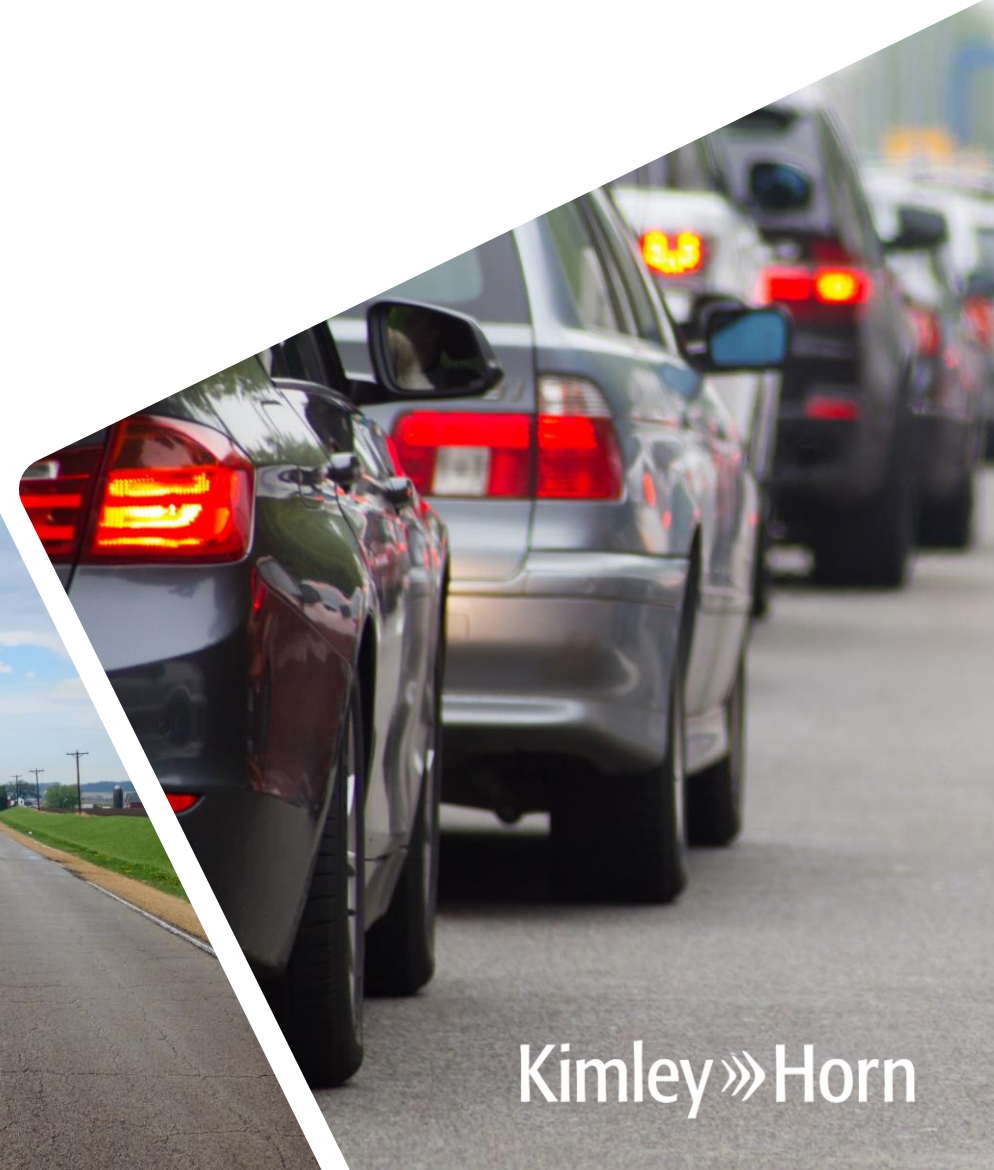
Getting the Community Involved



Public Engagement Objectives

- Understand community values that will influence scenario development
- Identify the variables that will influence the region's future
- Establish the framework for the development of the LRTP

Questions?



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