



## REGIONAL CONNECTORS STUDY

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### SCENARIO PLANNING WEBINAR #7

Michael Baker  
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# Agenda

- Recap of Suitability in the Land Use Modeling
- How Suitability Factors Relate to Scenarios
- Suitability Factors and Data Needs
- Data needs for performance measures
- Next Steps

# Overview slide – where are we now



TASK 4	CONDUCT SCENARIO PLANNING	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV
4.1	Building the Base Data, Models, and Scenarios	▲	❖	❖	♦ ❖	▲	□					
4.2	Defining Alternative Future Scenarios			❖	● ❖	♦ ❖ ●	□	➡				
4.3	Defining Measures of Success	📊			❖	❖ ●	♦	□	Develop Dashboard			
4.4	Evaluate 2015 Current Regional Conditions						❖	♦	□			
4.5	Modeling the 2045 Baseline Alternative								♦ ❖ □			
4.6	Building the Alternative Scenarios									❖ ♦	□	

- Scenario Narratives, Performance Measures and Greater Growth amt to Steering Committee 7/9
- Focusing on development of land use model Suitability Factors and performance dashboard



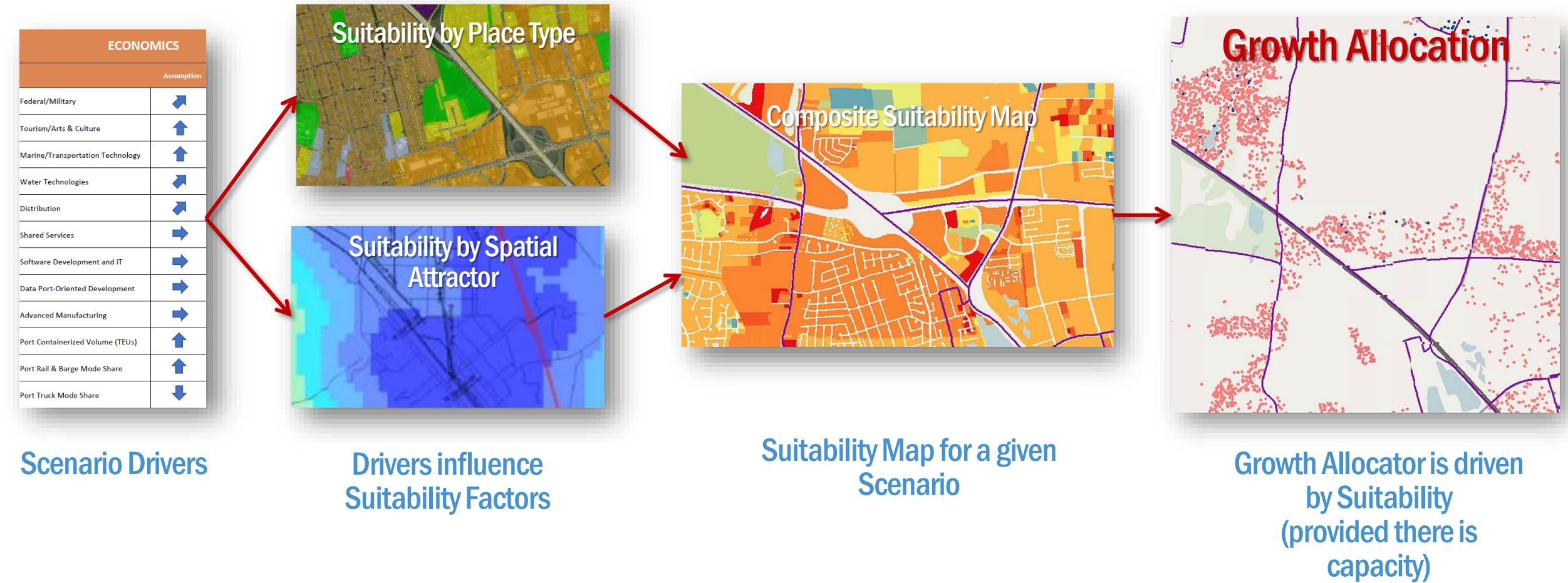
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### RECAP OF SUITABILITY FACTORS IN LAND USE MODELING

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# How Drivers Influence Growth Allocations



# Using Suitability in the Model

Assumptions

Graphical Tabular

Scenario GG Urban Centers

Use MU Commercial Place Type  Yes  No

MU Commercial Place Type Weight 0 5 10 5.0

Use MU Residential Place Type  Yes  No

MU Residential Place Type Weight 0 5 10 5.0

Use Transit Proximity  Yes  No

Transit Proximity Weight 0 5 10 5.0

Use Large Devt Parcels  Yes  No

Large Devt Parcels Weight 0 5 10 5.0

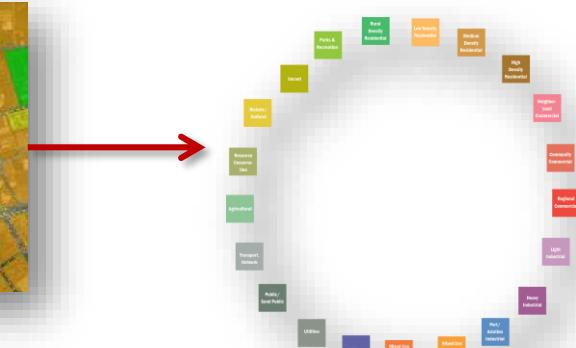
Use Public Utility Availability  Yes  No

Public Utility Availability Weight 0 5 10 5.0

Suitability Factors can be turned off/on and “weighted”



Place Type Suitability can be set for any Place Type:



Spatial Suitability examples:

- Transit Proximity
- Public Utilities
- Large Developable Sites
- Redevelopment Potential
- Accessibility to Employment



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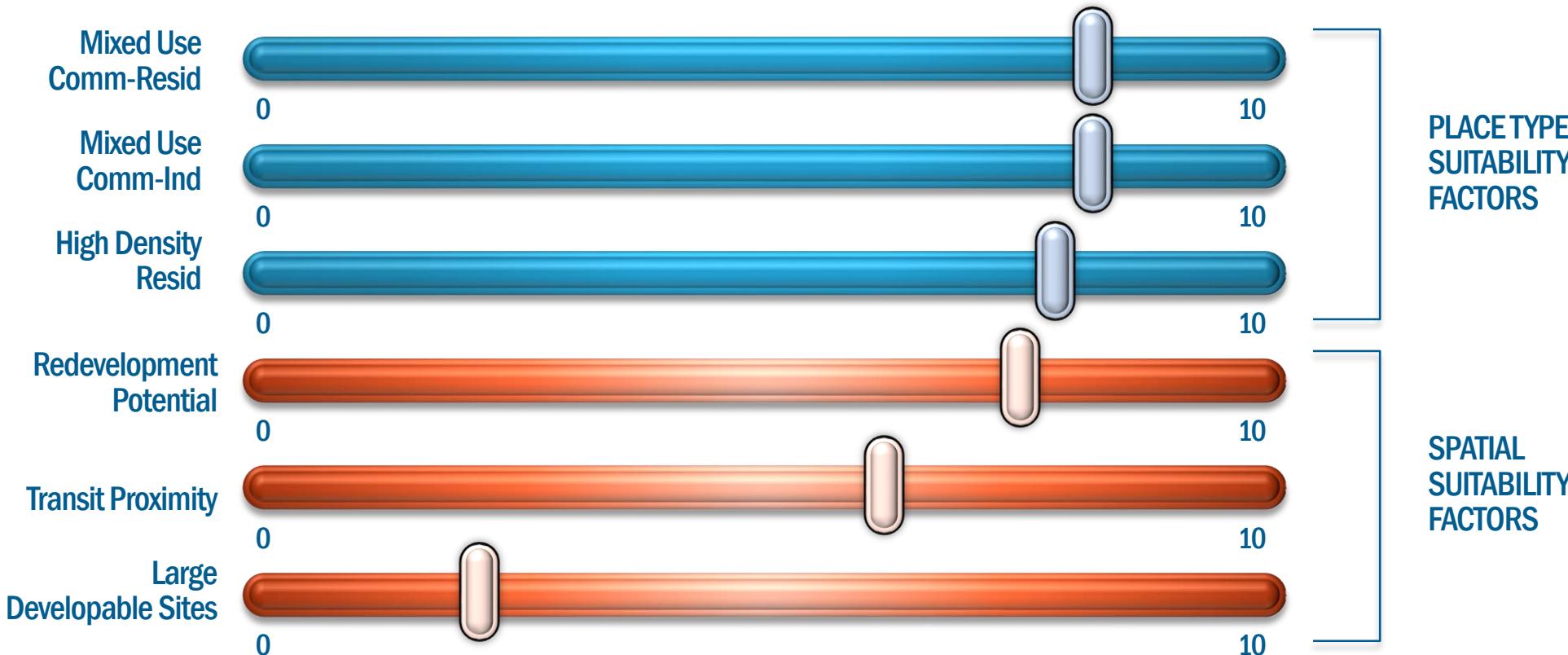
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### HOW SUITABILITY RELATES TO THE SCENARIO NARRATIVES

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# Suitability Factor Example Deployment

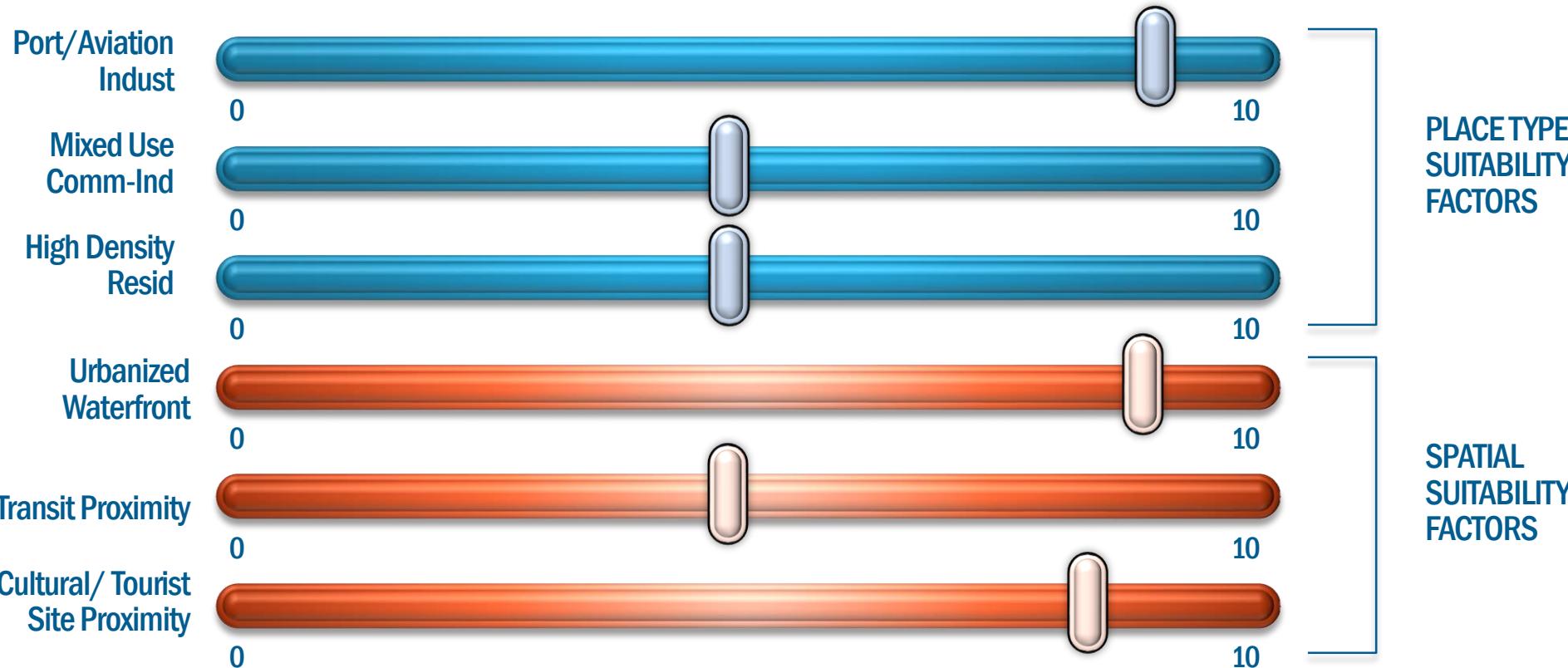
## “Greater Growth in Urban Centers”



NOTES: Slider Bar values are hypothetical and for illustration purposes only. Suitability Factors are determined separately for job and population growth.

# Suitability Factor Example Deployment

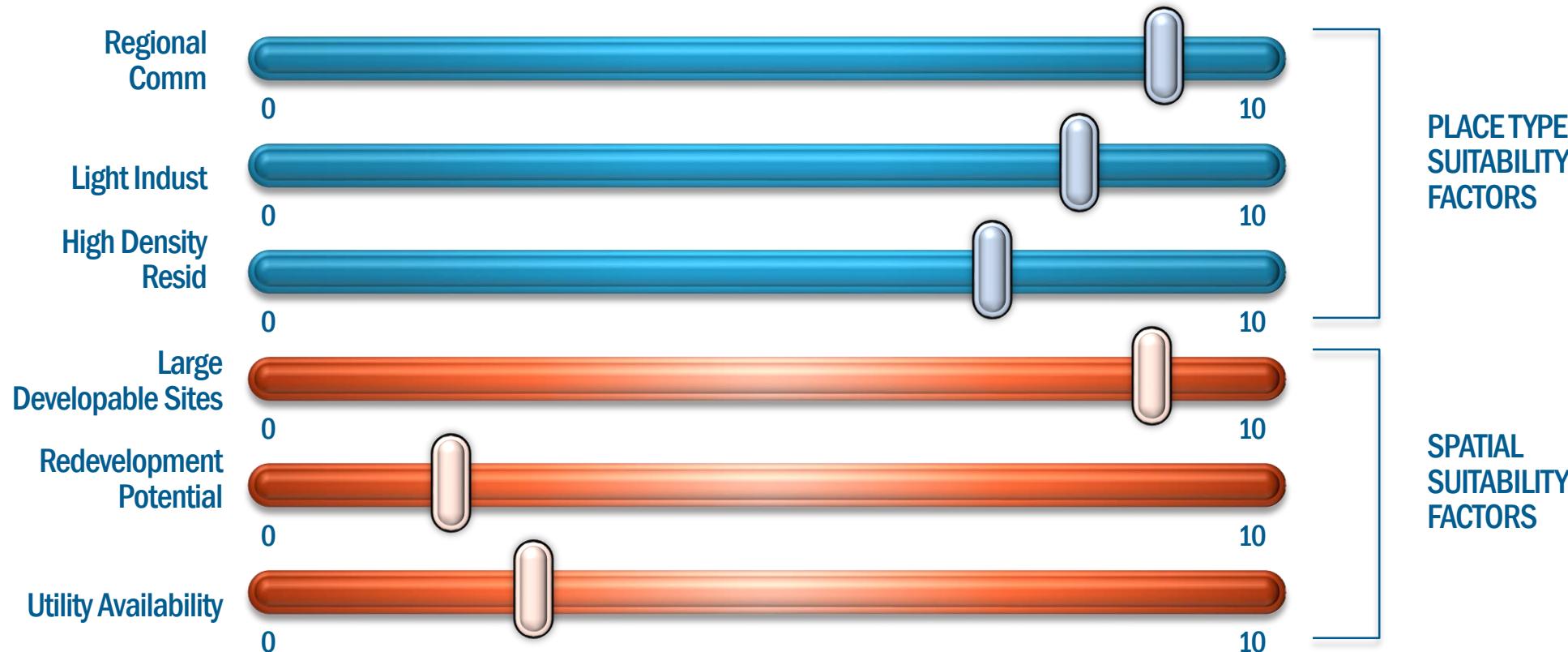
## “Greater Growth on the Water”



NOTES: Slider Bar values are hypothetical and for illustration purposes only. Suitability Factors are determined separately for job and population growth.

# Suitability Factor Example Deployment

## “Greater Growth in Suburban Centers”

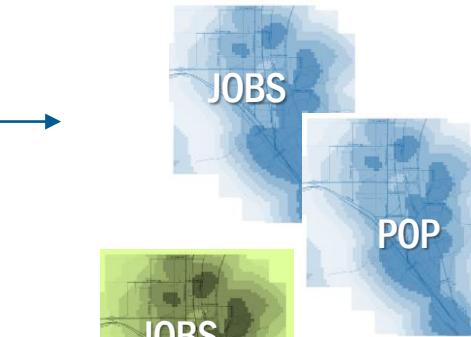


NOTES: Slider Bar values are hypothetical and for illustration purposes only. Suitability Factors are determined separately for job and population growth.

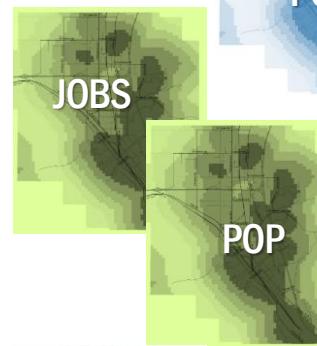
# Suitability “Map” Deployment

## Six separate Suitability “Maps”

Greater Growth ON THE WATER



Greater Growth IN URBAN CENTERS



Greater Growth IN SUBURBAN CENTERS



Each Scenario will have a separate set of Suitability Factor Weighting for Jobs and Population Growth Allocation

# Suitability Factor Deployment Sequence

Working Group  
Recommendations  
to SC for July 9 Mtg



- Determination of the Greater Growth Control Totals
- Affirmation of the Scenario Narratives
- General affirmation of the Goals, Objectives & Performance Measures

STARTED



- Obtaining Datasets needed for Suitability

THIS SUMMER



- Building Greater Growth Scenarios using Suitability

THIS FALL



- Potential for “Tweaking” of Suitability to better match and differentiate Scenario Narratives

- Draft Land Use Modeling / TDM Results for Review

- Final Land Use Model runs to go into TDM & TREDIS



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# DRAFT (SPATIAL) SUITABILITY FACTORS AND DATA NEEDS

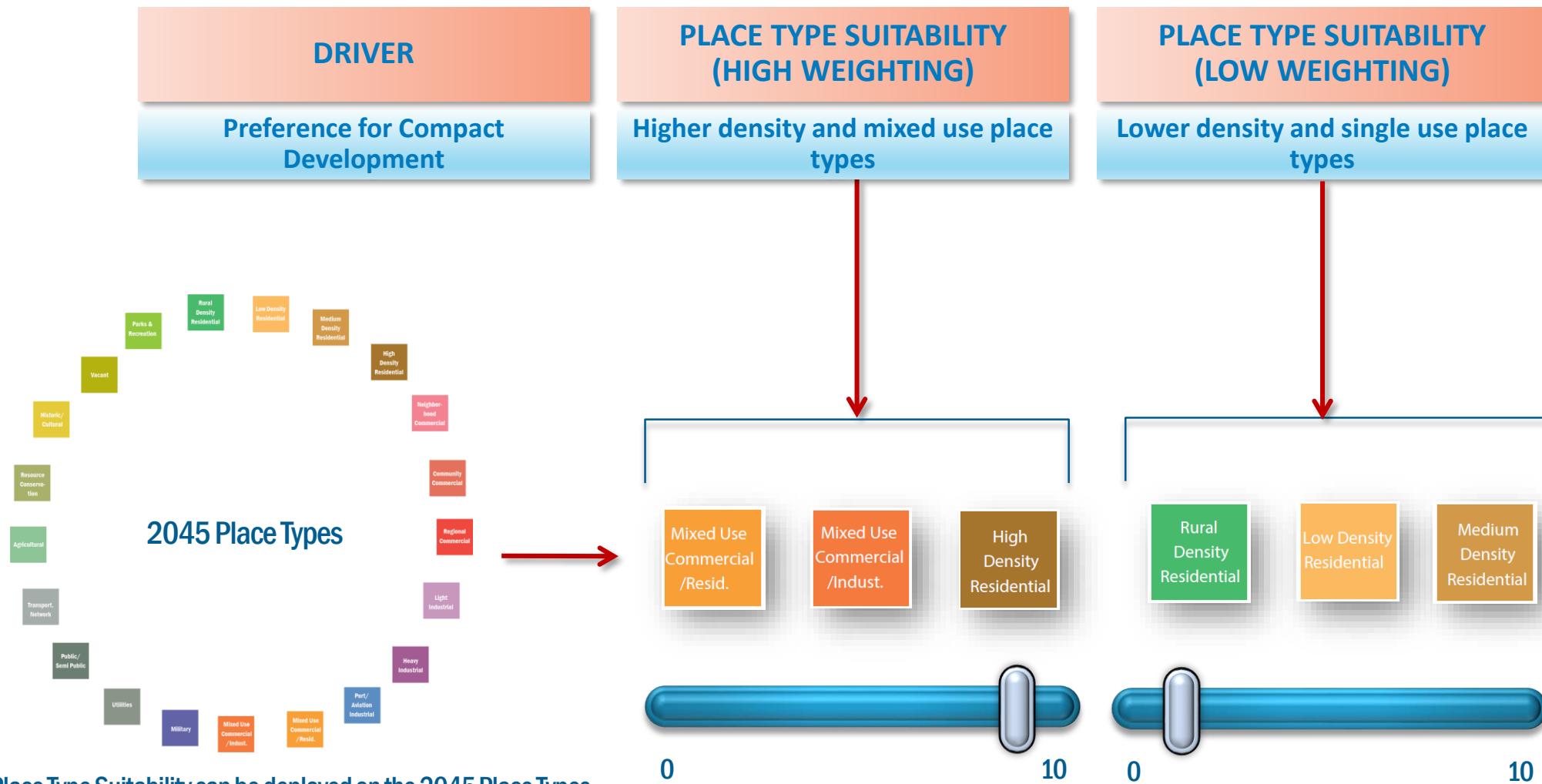
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# Spatial Suitability Factors & Datasets

## Current Data Needs for Sample of Suitability Factors

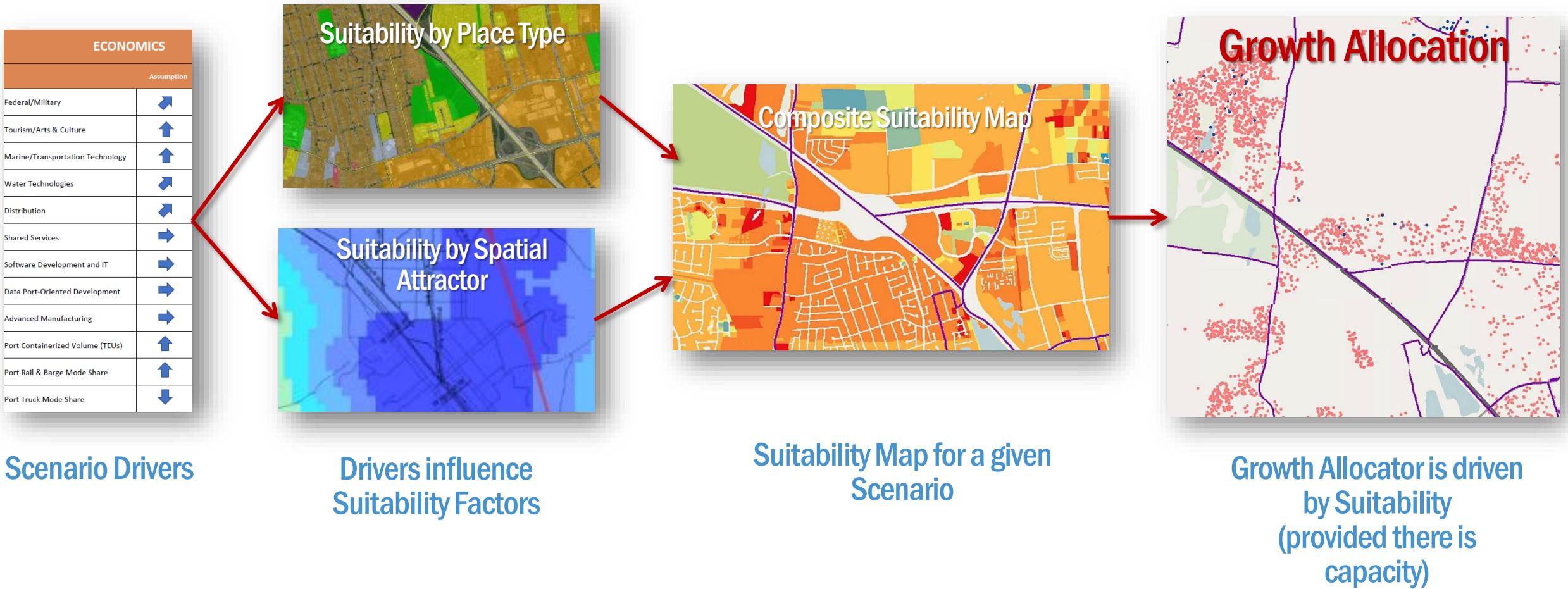
DRIVER(S)	SUITABILITY FACTOR	DATASET	DATA SOURCE
Marine / Transportation Technology	Port or Shipbuilding Facilities	Parcels with Port/Shipbuilding	HRTPO
Urbanization on Water	Urbanized Waterfront	Chesapeake Bay IDA	Localities via HRPDC Chesapeake Bay Pres. Area Working Group
Tourism, Arts & Culture	Cultural / Tourist Attraction Sites	Point or Parcel Data for Sites	HRTPO/Localities
Active Transportation Propensity	Active Transportation Proximity	TPO dataset on Active Transp. Facilities	HRTPO
Urbanization	Redevelopment Potential	Assessed Value of Land & Improvements	HRGEO / Localities
Dispersion of Employment/Transportation Industries	Large Developable Sites	Parcel Data	HRPDC
Dispersion of Housing / Employment	Major Roadway Proximity	STRAHNET Roads	HRGEO

# Reminder: Suitability is also Driven by Place Type

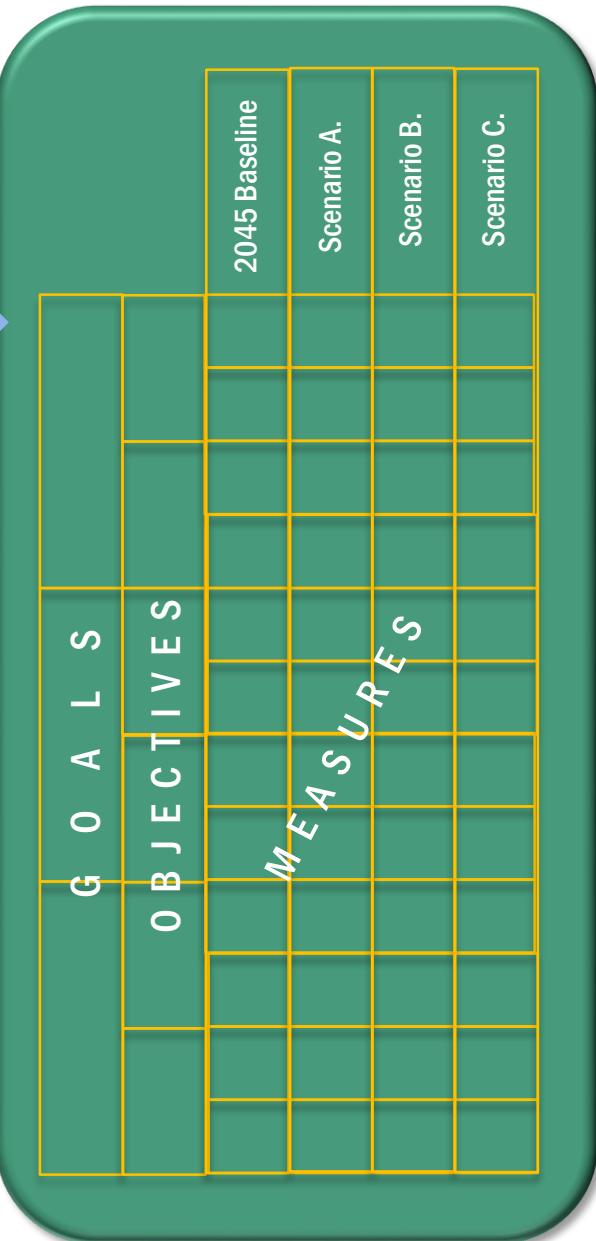
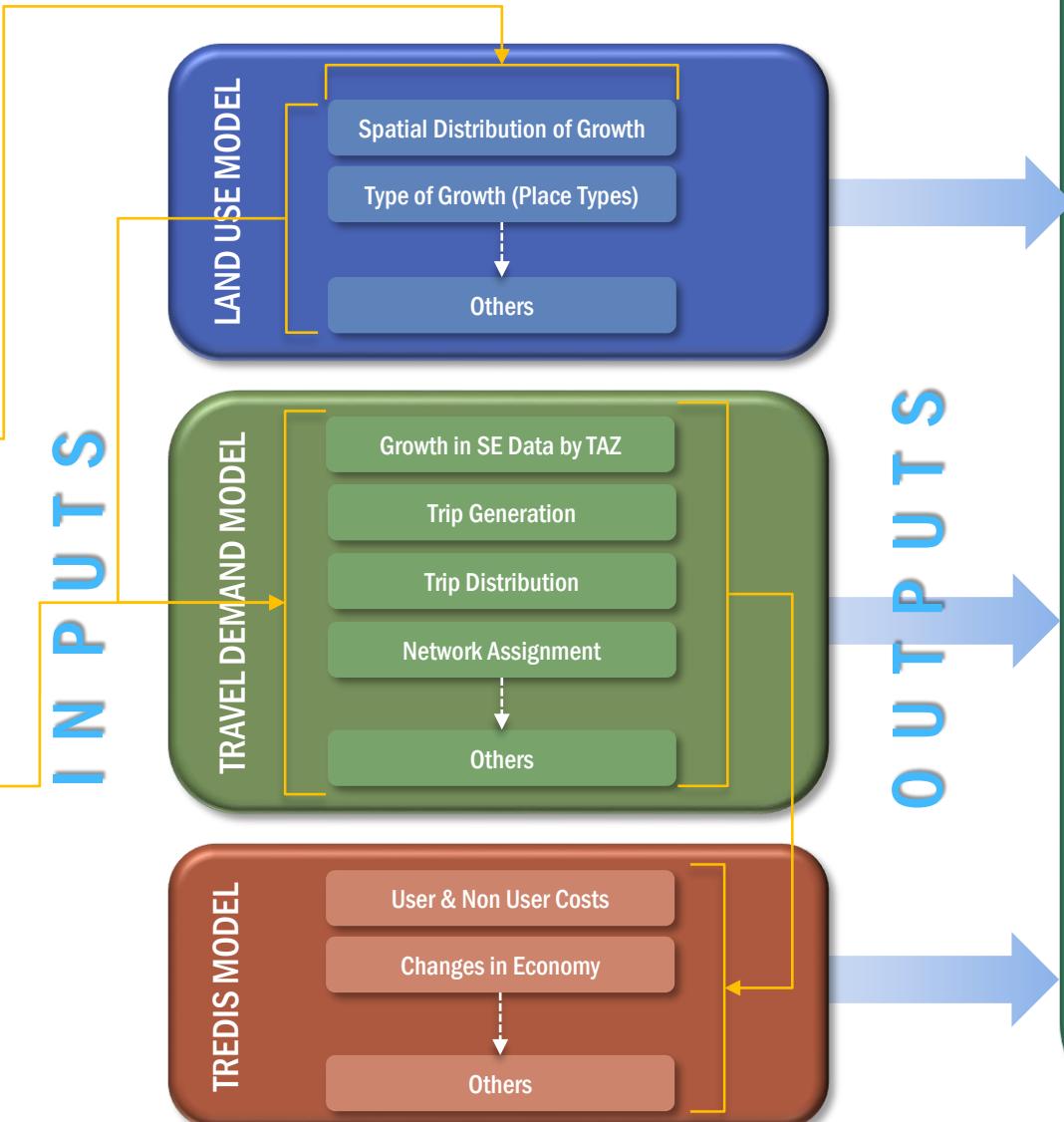
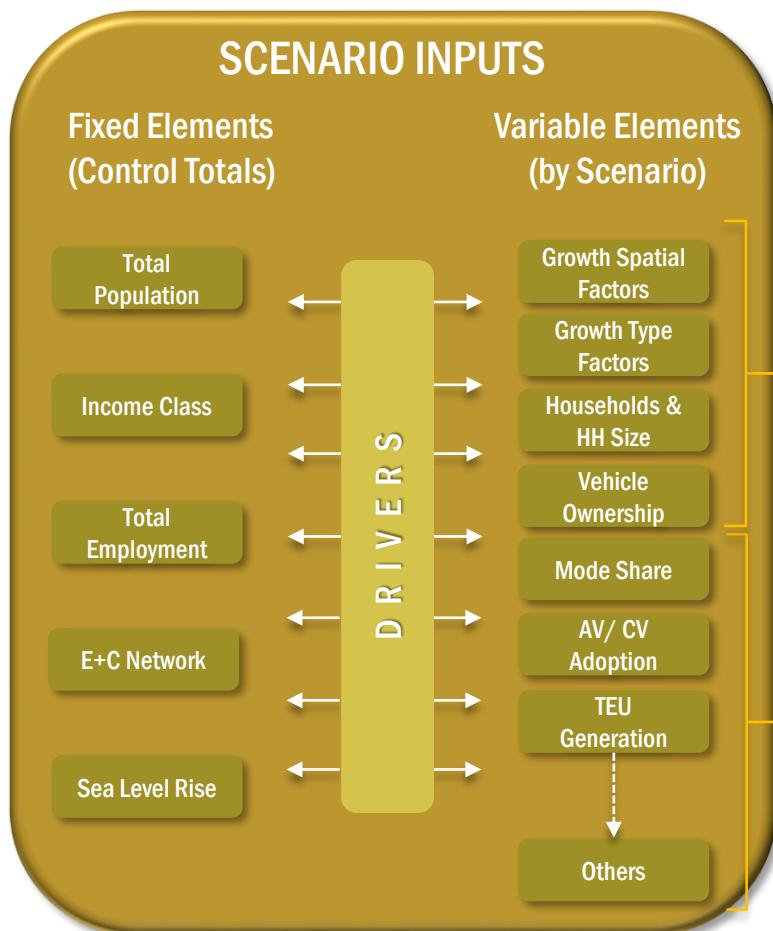


Note: Place Type Suitability can be deployed on the 2045 Place Types alone without the need to use the Greater Growth Place Types

# Reminder: How Suitability Drives Growth Allocations

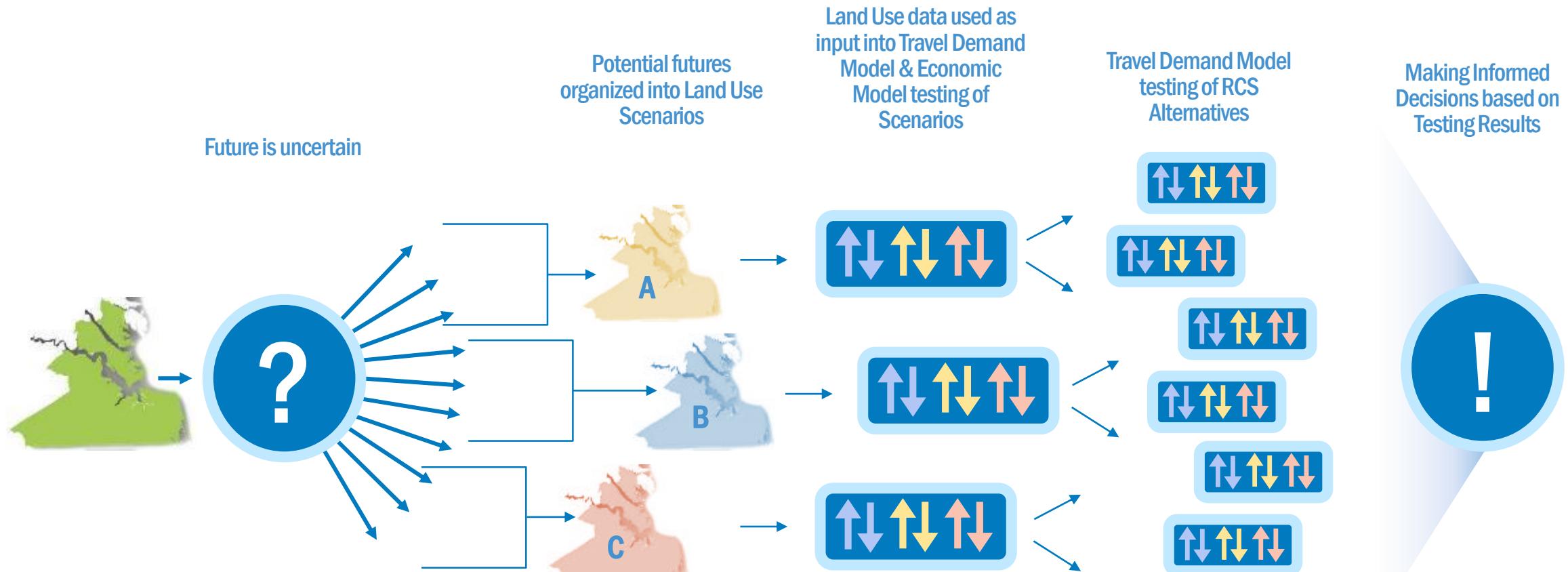


# Modeling the Scenarios



# Reminder: Exploratory Scenario Planning

- The purpose of Scenario Planning is to have plausible alternative futures against which to test Transportation Alternatives





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# ADDRESSING DATA NEEDS FOR PERFORMANCE MEASURES

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# Some Performance Measures Require Reference Data

PERFORMANCE MEASURE(S)	DATASET	DATA SOURCE
Several measures specific to freight	Freight Network	USDOT/HRTPO
Traffic volumes at at-grade rail crossings	At-Grade Rail Crossing Locations	FRA
Accessibility to major tourist attractions	Major tourist attractions (incl. cultural)	HRTPO – same as for LUM suitability factor
Bottlenecks on identified evacuation routes	Evacuation Routes	HRTPO

# Some Performance Measures Require Reference Data

PERFORMANCE MEASURE(S)	DATASET	DATA SOURCE
Bottlenecks on network serving military functions	“Military Serving Network”	HRGEO
Transportation network impact from flood-prone conditions	Sea Level Rise and static storm surge level Elevation-based GIS layer of transportation network	NOAA Data/HRPDC VDOT?

# Next Steps

- July 9<sup>th</sup> Steering Committee meeting affirmation of
  - Scenario Narratives
  - Greater Growth Control Total
  - Goals, Objectives and Performance Measures
- July 12<sup>th</sup> Webinar (if needed) – Any final update on the model sets
- Next steps
  - Develop performance dashboard
  - Populate and test the greater growth land use model
  - Begin travel demand model review and preparation
  - Develop technology components of travel demand model for scenario runs