

# **Utilizing Community Viz in SE Data Development for the Triad Model**

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# Triad SE Data Forecasting

- Two step process
  - Forecasting
  - Allocation
- Forecasting guided by control totals approved by local jurisdictions
- Allocation performed by Community Viz and approved by local jurisdictions

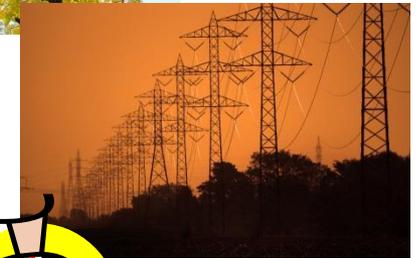
# Traditional Approach to Forecasting and Allocation

- Stakeholders carry forward current trends to a pre-defined future planning horizon
- Growth areas identified through knowledge of local planning staff



# Problems with Traditional Approach

- Growth patterns and intensities observed in a region are influenced by:
  - Natural features
  - Transportation network
  - Available utilities
  - Market conditions
  - Local policies



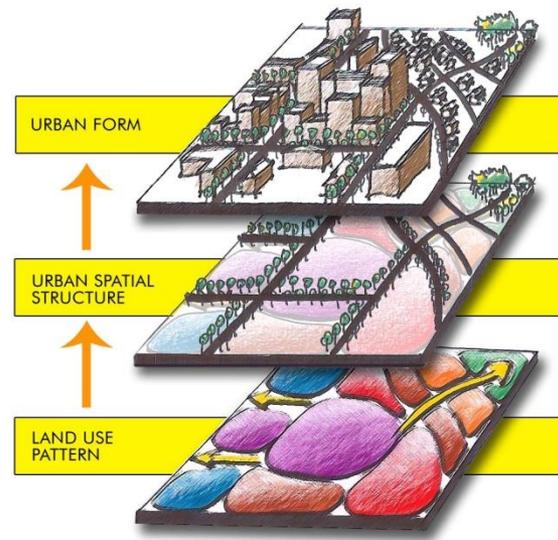
# Problems with Traditional Approach

- NOT necessarily influenced by current trends or what the local planner thinks is going to happen in 30 years



# New Approach

- Growth areas identified through GIS exercise first, then have local planners tweak based on their knowledge



# Piedmont Together



- Comprehensive Regional Plan
- Large component was a regional Community Viz model
- Included all Triad Model counties except Orange
- This was our starting point for the Triad SE data forecasting work

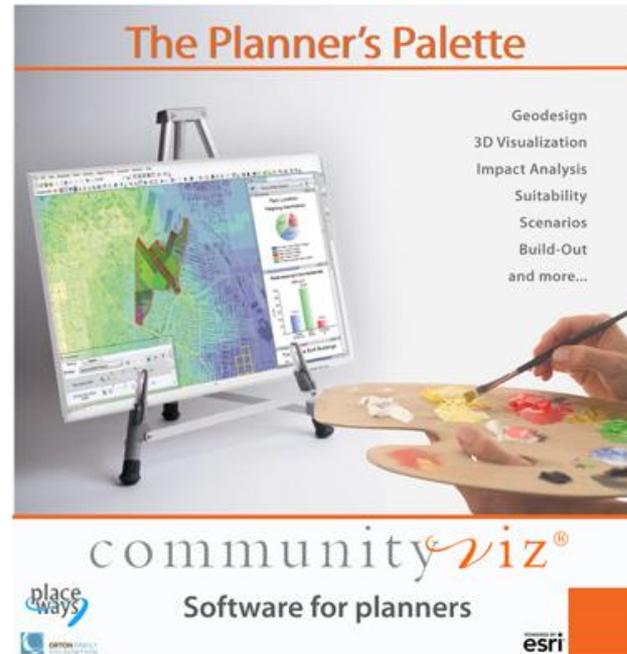
# Community Viz

- A land use planning decision-based software that allocates data based on input information (attributes and equations)
- Uses GIS based analysis to determine location and intensity of growth
- Can also evaluate competing future year growth scenarios under consideration for a region



# Community Viz

- Build-Out Potential Analysis
- Land Suitability Analysis
- Growth Allocation



# Build Out Potential

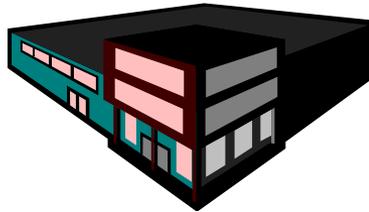
- Strives to simulate the type, location, and intensity of development for a theoretical condition where all grid cells in the region are developed consistent with assigned development types and lookup table values
- Information used to represent available supply for the internal scripts in Community Viz

# Land Suitability Analysis

- Measures the appropriateness of an area for a specific condition or use
- Used to identify locations attractive for growth based on known physical features or policies unique to the region
- Normalized scale used to rank the grid cells from least to most suitable for development

# Suitability Weights

- Based on features:
  - Urban Footprint and Development Activity Centers
  - Transportation
  - Environmental Features



# Growth Allocation

- Determine where growth would likely occur using a supply-and-demand approach and a series of probability-based models
- Build out potential analysis and land suitability analysis feed directly into growth allocation

# Triad Allocation Targets

*Table: Household Allocation Comparison, 2013-2040*

County	2013 Households	Source (2013 - 2040 Increase)				
		W&P	OSBM	TREND	ALLO	ACTUAL
Alamance	62,215	16,900	8,228	19,930	17,203	16,600
Davidson	65,561	28,779	6,707	24,753	11,473	13,512
Davie	4,795	2,607	513	2,034	474	999
Forsyth	145,404	46,101	22,843	49,651	39,063	38,482
Guilford	204,209	28,890	69,154	72,537	54,897	55,458
Orange	3,009	2,241	1,053	1,449	0	1,892
Randolph	15,816	1,375	824	6,380	3,611	2,200
Rockingham	1,666	170	16	506	28	200
Stokes	8,234	2,899	-336	3,669	1,305	1,701
<b>TOTAL</b>	<b>510,909</b>	<b>129,962</b>	<b>109,002</b>	<b>180,909</b>	<b>128,054</b>	<b>131,044</b>

# Triad Allocation Targets

*Table: Employment Allocation Comparison, 2013-2040*

County	2013 Employment	Source (2013 - 2040 Increase)				
		W&P	OSBM	TREND	ALLO	ACTUAL
Alamance	63,158	26,395	NA	25,244	17,748	20,736
Davidson	54,921	25,187	NA	26,466	12,307	15,919
Davie	2,945	1,447	NA	2,308	550	5,966
Forsyth	174,329	55,593	NA	85,973	55,040	55,586
Guilford	289,157	61,509	NA	128,206	88,805	92,912
Orange	3,116	1,294	NA	2,558	0	2,264
Randolph	12,122	3,737	NA	6,425	1,539	2,384
Rockingham	785	63	NA	178	15	49
Stokes	4,328	1,861	NA	1,937	755	1,108
<b>TOTAL</b>	<b>604,861</b>	<b>177,086</b>	<b>NA</b>	<b>279,294</b>	<b>176,759</b>	<b>196,924</b>

# Other Aspects

- Attributes
  - Land use model versus travel demand model
  - Additional model attributes
- GIS versus local knowledge

# What Have we Learned

- Community Viz is a pretty cool allocation tool
- Only grazed the surface of how to use this type of tool
- GIS cannot completely replace local knowledge
- Locals will be locals