



# **Using Shadow Pricing to Mediate Between Models and Visions in Forecasting**

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**We model real estate markets for transportation forecasters.**



**MINNEAPOLIS, MN**

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**LOS ANGELES, CA**

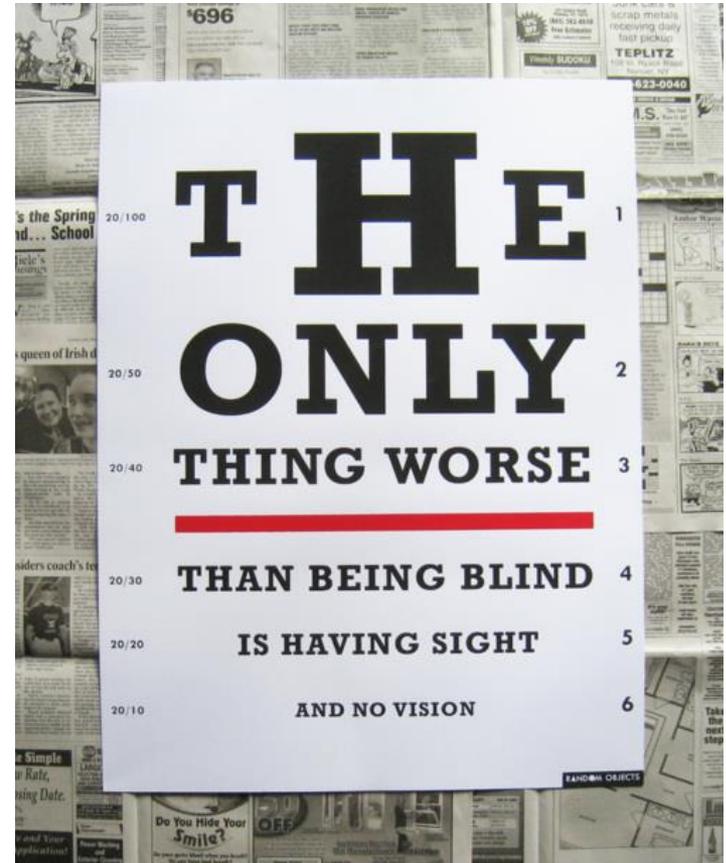
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# The “Vision Thing”

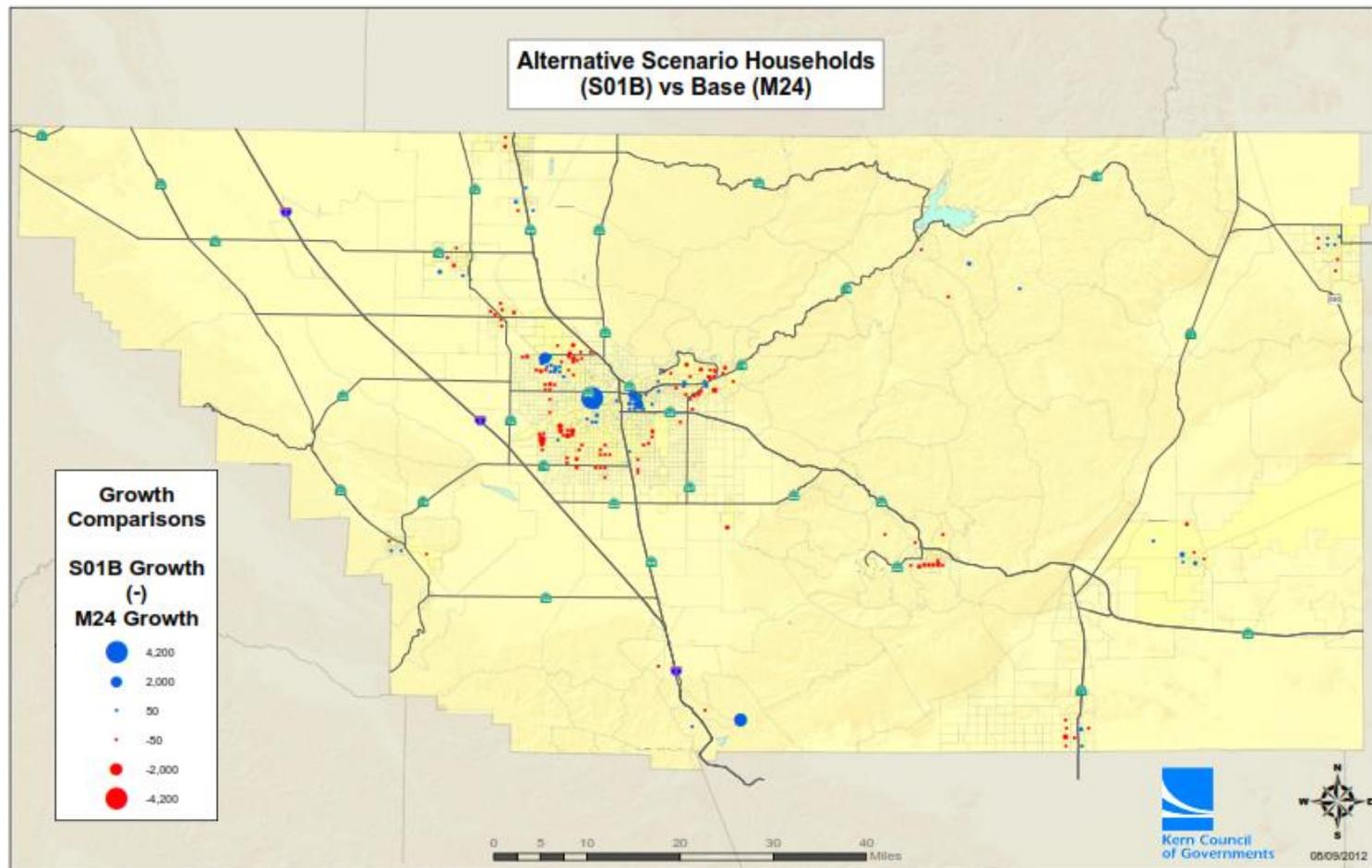
- It’s incredibly important for stakeholders to agree on goals and objectives
- This may or may not align with a forecast, however
- A vision represents the desired outcome whereas forecast is a likely outcome



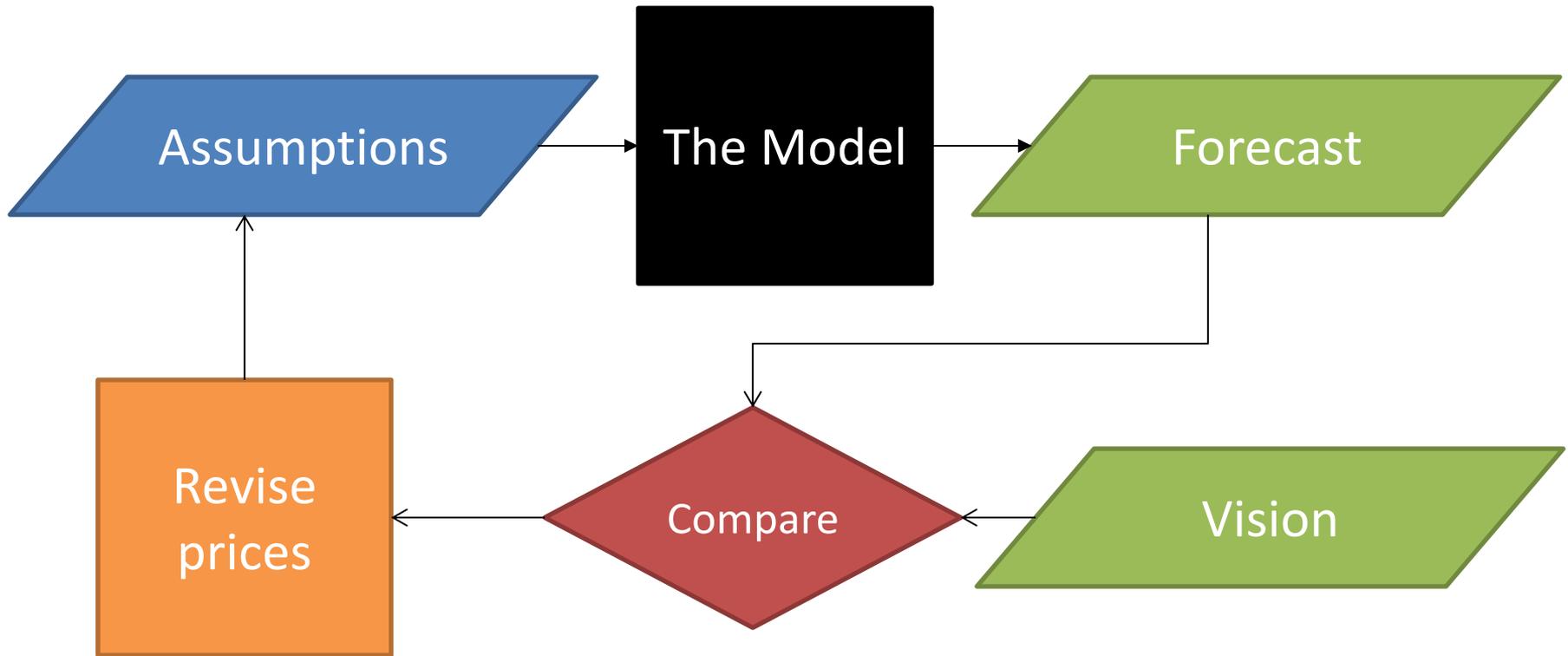
# Land Use Forecasting Example

- California MPOs are required to set targets for greenhouse gas reductions and develop sustainable community strategies (SCS) that are demonstrated to achieve these targets
- Kern COG, like many, used a “scenario planning” tool (UPlan) to develop their SCS
- Also has an econometric forecasting model (Cube Land)

# Comparing the Land Use “Vision” to an Economic Land Use “Forecast”

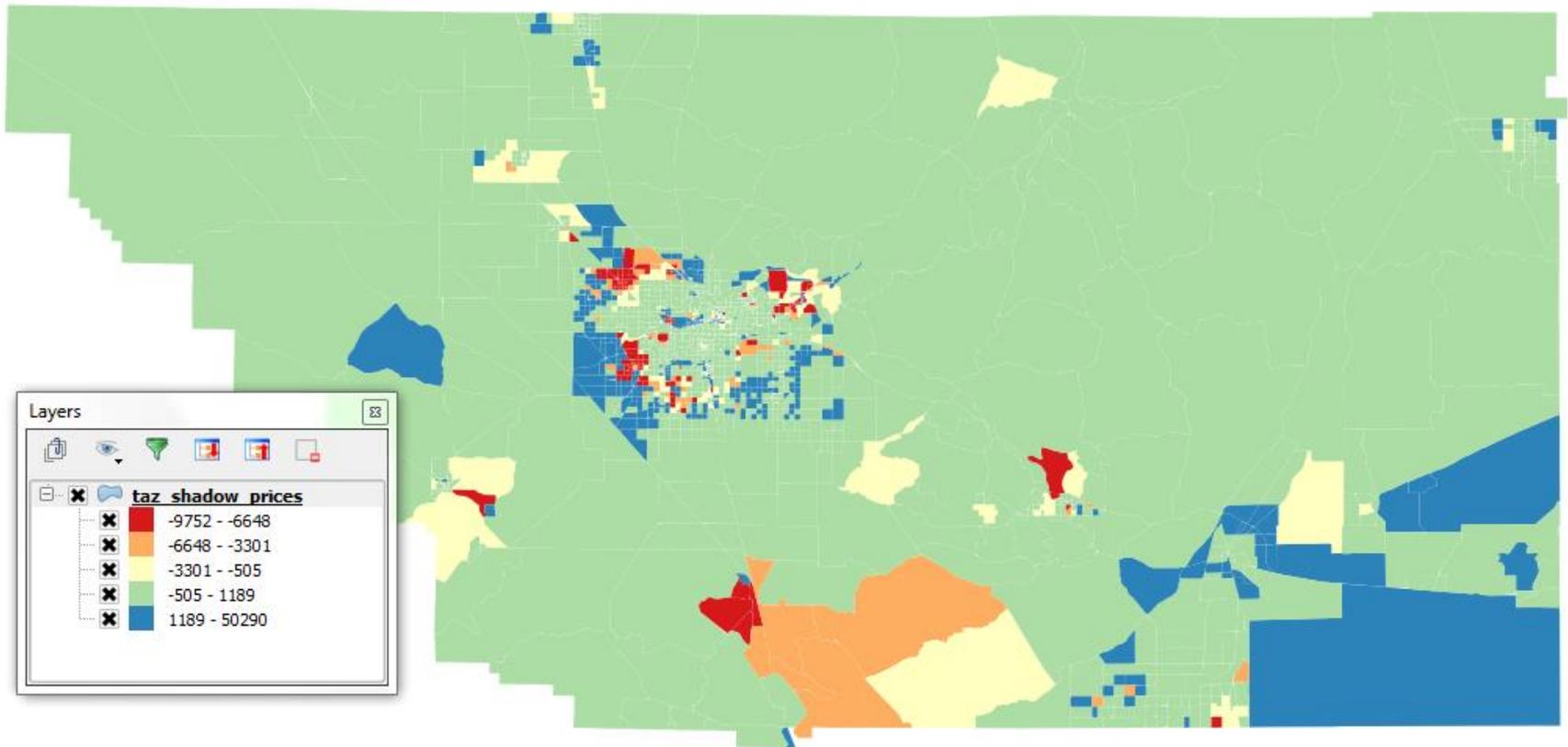


# Building A Better Black Box With Shadow Pricing



# Shadow Pricing Outputs

Supplier Cost Adjustments – Residential Market



*Disclaimer: not an official KernCOG model result!*

# Applications Outside Land Use

- **Managed Lanes**
  - Pricing strategy & operational policy
- **Transit Planning**
  - Fare structure & mode share
- **Parking Policy**
  - Impacts on trip distribution
- **Travel Demand Management**
  - Gas taxes and VMT pricing



**Have you ever been asked to evaluate a “vision” that differed markedly from your forecast?  
How did you respond?  
What did you do?**

**SHARE YOUR STORY**