ALPACA: AN ECONOMIC EVALUATION ADD-ON FOR SCENARIO PLANNING
Project Goals

• Integrate bid-rent calculations into scenario planning process (tools & data) across three distinct, independently generated case studies
  – MAPC / CommunityViz
  – FresnoCOG / Envision Tomorrow +
  – SCAG / Urban Footprint

• Investigate effects of new economic measures enabled by these tools on planning process
Measures & Topics

• Proposed:
  – Fiscal effects
    • Taxes and subsidies
    • Value capture revenues
  – Affordable housing
  – Income inequality
  – Gentrification

• Others revealed by lit. review & interviews
Bid-Rent Land Models in California

- VTA model under development
- Pre-existing Cube Land models
- Envision Tomorrow case study
- Urban Footprint case study
SCAG Cube Land Pilot Study

- 531 Land Use Zones (LUZ)
- Calibrated using available data
- Average res. rent (darker blue=higher)
New Bid-Rent Module: “mu-land”

Bid and rent function tables reference data in the other input tables by column number (similar format to Cube Land).

Outputs include:
- Predicted rents
- Predicted households / jobs by type
- Underlying “bids” (willingness to pay)
“Mu-land” SCAG Case Study

- 196,858 Scenario Planning Zones (SPZ)
- Bid-rent evaluation of UF “Base Canvas”
- Average res. rent (darker blue=higher)
Housing Affordability Case Study
Alpaca Web Service for Mu-Land

• “Wraps” bid-rent functions with a scripting engine to offer API as a service
• Scenario planning tools (such as Urban Footprint) could call this API & get info
Integration with ArcGIS
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