

Wasatch Front Regional Council UrbanSim Implementation

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- WFRC Background
- History of UrbanSim at WFRC
- Use in the 2007 Regional Transportation Plan
- Challenges
- Questions and Discussion

Overview

- Formed in 1969
- Designated an MPO in 1972
- 3 Urban Counties
 - Salt Lake, Davis, Weber
- 2 Rural Counties
 - Morgan, Tooele
- 2006 Urban Population of 1.5 Million
- 100 km North-South, 25 km East-West

WFRC Background



WFRC Background

- Interest in a land use model began in 1997
- Spurred by lawsuit settlement
- WFRC lacked the ability to model alternate futures
- Inter-agency cooperation with state and adjoining MPO (the other MAG)
- Evaluated several model systems. Settled on UrbanSim

History of UrbanSim at WFRC

- Experimentation but nothing more until 2002
- Lawsuit settlement obligated WFRC to move to extensive testing
- FHWA and NAS grants financed testing
- National panel reviewed test results
- WFRC implemented recommendations

History

- Used 2003 data as base
- Current local land use plans and zoning
- ES 202 data for employment inputs
- Existing long range plan network for travel model

**Use in the 2007 Regional
Transportation Plan**

- Partnered with Envision Utah to conduct public workshops
- Four “visions” came out of the workshops
- “Preferred Vision” is a hybrid of the four visions
- Each City Council was visited to gauge support for vision
- Each city indicated whether to use vision or city plan as land use input for their city

Regional Visioning

- County assessors provided parcel data for 2003
- Department of Workforce Services provided ES202 data for 2003
- Employment data geocoded to the establishment level
- Parcel data needed work

Data Collection and Processing

- Three counties provided data at different levels of quality
- Example:
 - Davis County land use categories: 3
 - Salt Lake County land use categories: 145
- Parcels with multi-family units were reviewed and verified using aerial imagery and field review
- Davis County data had no non-residential square footage

Data Collection and Processing

- Geocoded employment points used to synthesize commercial space
- Average square footage per employee by NAICS code
- Vacancy rates applied
- Quality at the mercy of the quality of the geocoding

Data Collection and Processing

- Local peer review panel reviewed data before official use
- UrbanSim output summarized to the city and TAZ levels
- Reviewed internally and checked for reasonableness
- Data were adjusted based on internal review

Post Processing

- Adjusted data sent to cities and counties for review and comment
- Comments were primarily concerned with city level, short range projections
- Two cities had meaningful, long-range comments at the TAZ level
- Adjustments were made to the draft projections and presented to the Regional Growth Committee and Regional Council for approval
- Approved separately from the RTP (change in process)

Review and Approval

- Assessors data
- Lack of detailed input by local entities
- Care and feeding of the model
- Point of diminishing returns in data preparation
- Regional vs. Local level accuracy

Challenges

- Variables maintained in databases vary from county to county
 - Land Use categories
 - Multi-family units
 - Commercial space
- Relationships with assessors office

Assessors data

- Staff and elected officials comments focus on short-range projections
- Inability or unwillingness to review TAZ level projections
- Adjustments to projections in transportation studies

Lack of detailed input by local entities

- UrbanSim resides with travel demand model
- Model maintenance responsibility of travel model section
- Input data: Continuous maintenance vs. one-time updates
- Running model at different geographic levels

Care and feeding of the model

- Where is it?
- Resource limitations

Point of diminishing returns in data preparation

- Output is very reasonable at the county level
- Corridor level accuracy still needs improvement
- National panel recommended not using for corridor studies at present

Regional vs. Local Accuracy

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Questions/Discussion