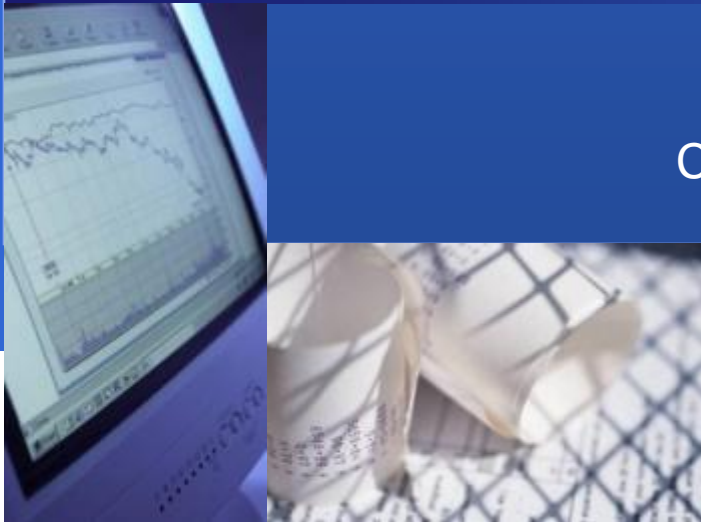




3D GIS for Urban Planning

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Chief Technology Officer
City of Santa Rosa



City of Santa Rosa
Downtown Committee July 1, 2008



Urban Planning: 3D GIS Objectives

Traditional 2D GIS

1. **Ease of Doing Business with the City**
 - Aerials, maps, land-use analysis, parcel information, etc
 - Streamline planning and permitting processes
2. **Improve Staff Efficiencies**
 - Do more from the desktop

3D GIS

3. **Improve visualizations and decision-making capabilities**
 - **Departments:** deliver “what-if” scenario modeling
 - **Policy makers:** enhance communication of key concepts
 - **Public:** increase awareness and/or participation (“an informed public”)



Today's Usage of 2D GIS

"Do more from the desktop..."

1. Residents and Businesses

- Roughly 200 external GIS users per day through srcity.org
- Land use, zoning, permitting (residential and commercial)



2. GIS Map Services

- Roughly 100 FREE maps available through srcity.org/maps
- Fee-based GIS services for fee.

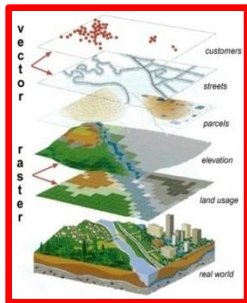


3D Visualization Platforms



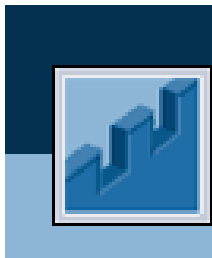
▪ Google Earth

- Easy to use, very accessible
- Only usable for **current** 3D objects
- Will not accept “what-if” or planned developments
- Does not include streetscape (trees, etc)
- Limited “walk/fly around” capability



▪ City GIS platform

- Integrated view: streetscape, trees, etc
- Allows “what-if” modeling
- More sophisticated analysis
 - Ridgeline
 - Shadowing
- Moderate graphics



▪ Maraizon International platform

- Photo-realistic (amazing)
- Expanding downtown model

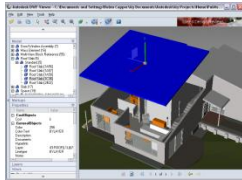


City Of Santa Rosa

3D GIS for Urban Planning

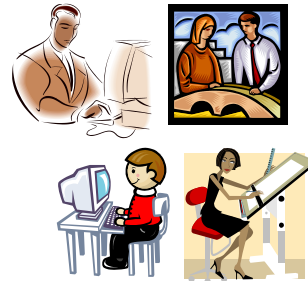
3D Objects

- CAD models
- ESRI 3D models
- Google Sketch-Up



Community

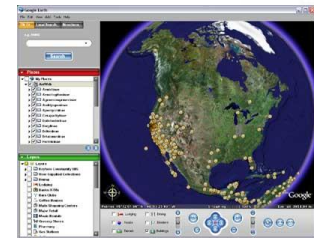
- City
- MainStreet
- Architects
- Developers
- Students



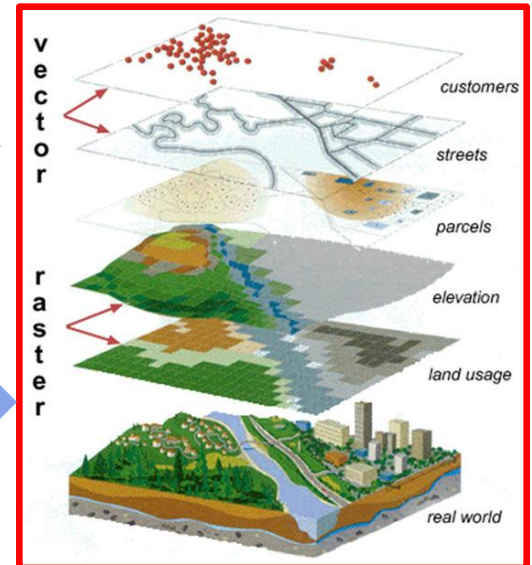
2D Objects



- Parcel information
- Aerials
- City assets
- Permits



City GIS Database



- Hundreds of Layers
- Hundreds of thousands of Objects



What's Going On / Next Steps...?

- Early planning tools
 - Transit Mall
 - Courthouse Square
 - Mendocino Avenue corridor

- Streetscape
 - Street furniture palette project
 - Newspaper racks, benches, etc
 - Signage, way-finding
 - Street trees project
 - ???

- Sightline and ridgeline analysis
 - Water towers
 - Golf driving range
 - Ridgeline development, etc





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Background Material



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3D GIS for Urban Planning

Improve visualizations and decision making capabilities

