

Implementing Sustainable Development at the Local Level: Governance, Institutions and the Effectiveness of Policy Implementation

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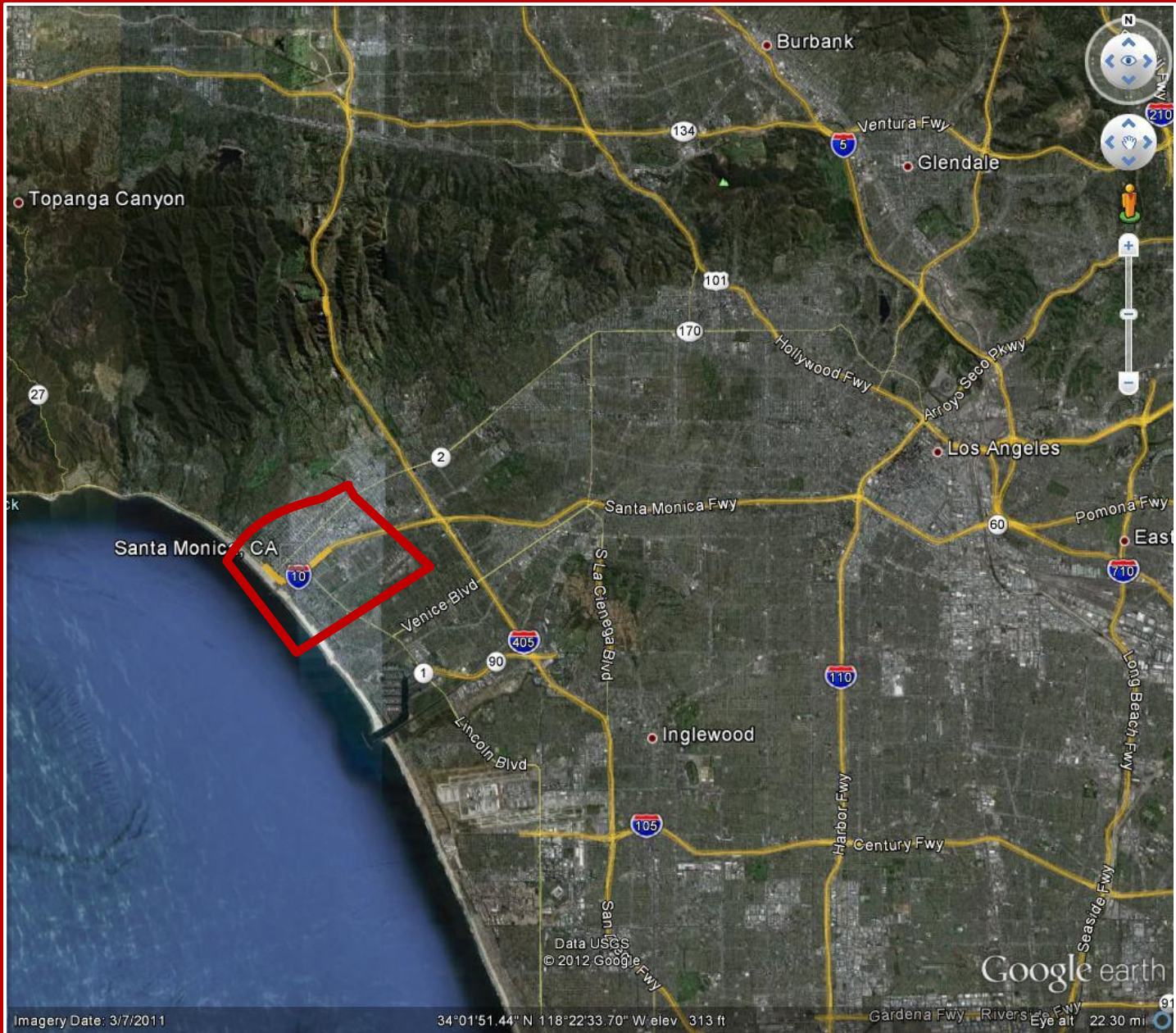
Key Research Questions

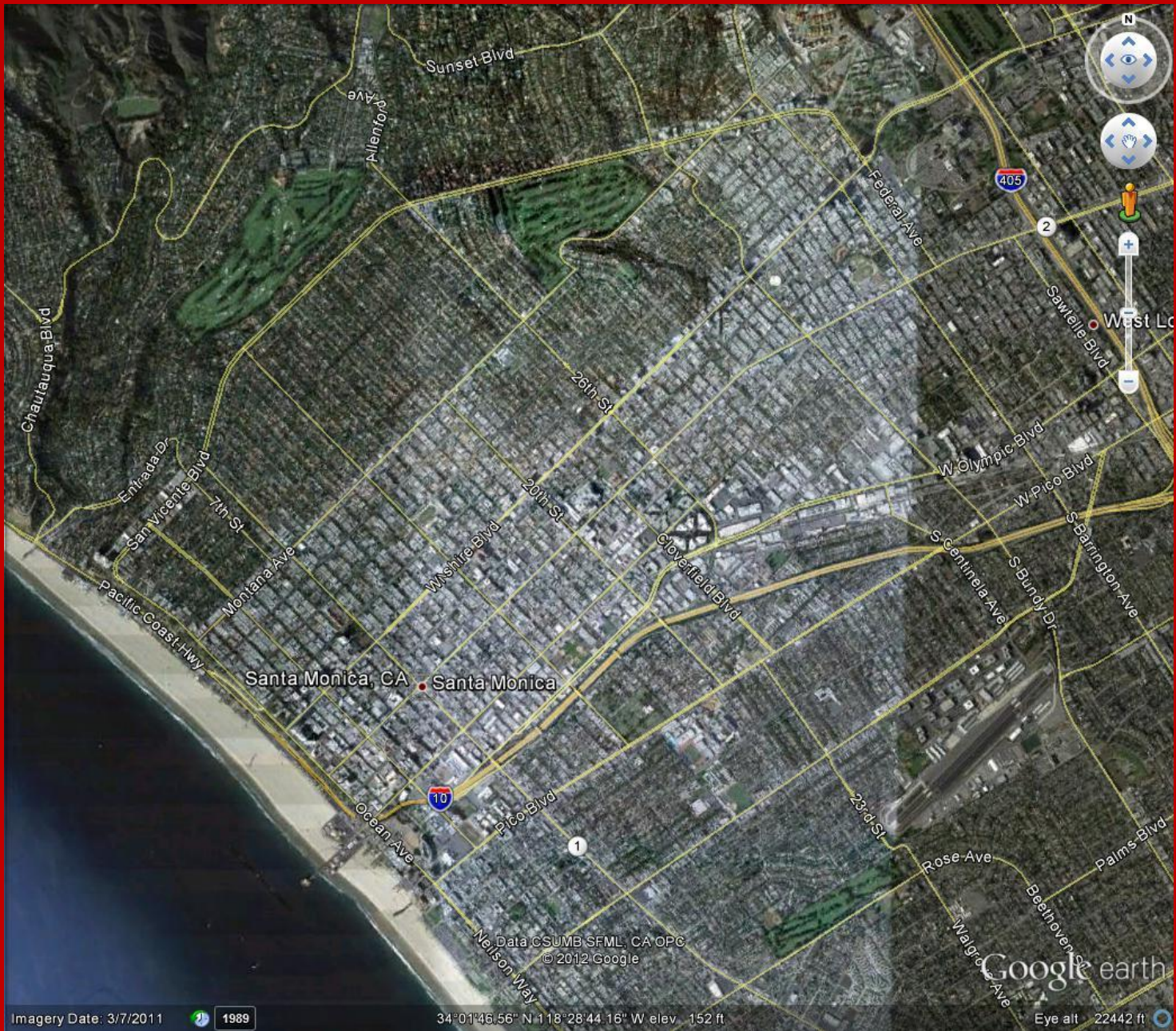
- ✓ How well do local governments implement sustainable development policies?
- ✓ Do these policies drive outcomes?
- ✓ What lessons can we learn about alternative institutional arrangements for implementing local policies?
 - ✓ If direct government action doesn't work, what might?



Why Santa Monica?

- **15+ years of focused effort to implement sustainability (started in 1994)**
- **Stable *and* supportive political culture**
- **Commitment to performance-based measurement**
- **City staff supportive of legislative goals**
- **Relatively high level of resource commitment**
- **Amenity-rich environment**







Basic Data

- Population of 89,736
 - 6.7% increase since 2000
 - Two decades of decline
- Population density of 10,663
- 78% white
 - 9% Asian
 - 3.9% African-American
 - 13.1% Latino
- Median Household income: \$68,842
 - Average Household income: \$108,882
 - LA: \$49,138/\$76,097



Sustainable Development in Santa Monica

- Established program in 1994
- 66 indicators
 - Benchmarks
 - Performance-driven
- 8 Strategies & Goal areas
 - Resource Conservation
 - Environmental and Public Health
 - Transportation
 - Economic Development
 - Open Space & Land use
 - Housing
 - Community Education & Civic Participation
 - Human Dignity



Performance Measures

Table 1: Targets and Performance for Selected Sustainability Indicators in the City of Santa Monica

<i>Indicator</i>	<i>2010 Target (citywide)</i>	<i>Performance 1994-2000</i>	<i>Performance 2000-2010</i>
Energy use (btu)	Pending based on study of greenhouse gas emission study in 2003	Energy use increased 22.2% between 1994 and 1997	Electricity & natural gas consumption higher than 2005 but lower than 1990; electricity generation is 35% higher than California average (but significantly lower than the national average).
Water use (million gallons per day)	Reduce use by 20% by 2010 (2000 baseline)	Increased 9.8% between 1995 and 2000	Water use increased and peaked in 2006 before falling to 11.9 MGD, higher than the target of 10.7 MGD
Solid waste generation (tons)	Do not exceed 2000 levels	Increased 20.9% between 1995 and 2000	Volume increased 20% between 2003 and 2006.
Solid waste recycling (tons)	Increase amount diverted to 70% of total by 2010	Share diverted increased from 14% in 1995 to 55% in 2000.	Diversion from landfills exceeds state targets and remains stable at about 70%.
Wastewater flows (million gallons per day)	Reduce flows 15% by 2010 (from 2000 levels of 10.8 MGD)	No change between 1995 and 2000.	Increased to 12.0 MGD in 2006 and fell to 10.6 MGD in 2009; only year below 2000 levels was 2008, but well above target.
Organic Food	Increase percent of organically grown and low-chemical produce sales	Not available.	Sales of conventionally growth produce at four local farmers markets has fallen 14.2% to \$1.2 million in 2008 as the share has fallen from 20% in 2001 to 9 percent.
Food choices	Increase % of residents reporting vegetable-based protein as primary source of protein for at least half their meals	Not available	No trend data available; 8% of residents are vegetarian according to a 2003 survey.
Vehicle ownership	Reduce average number of vehicles per person by 10% by 2010	Not available	Vehicles per driver has fallen from 0.94 in 2000 to 0.86 in 2003 and remained steady through the mid-2000s, effectively meeting the target of 0.85.
Vehicle ridership	Increase ridership per vehicle to 1.5 by 2010 for businesses > 50 employees	23% increase between 1997 and 2000 to 1.39 riders per vehicle	Riders per vehicle increased to 1.61 in 2008, exceeding target.
Transit ridership	Upward trend	Increased 17% between 1990 and 2000.	Ridership dropped from 23 million 2001 to 20-22 million riders.
"Green" construction	100% of all buildings greater than 10,000 square feet in 2010 eligible for LEED certification.	Not available	Cumulative share of buildings greater than 10,000 sq. ft LEED certified is 8.4%
Economic diversity	No single economic sector more than 25% of total economic activity/output	Not available.	

Source: Targets from Santa Monica Sustainable City Plan published in revised edition adopted October 24, 2006; performance data through 2000 from *Sustainable City Program: Status Report 2002*, City of Santa Monica, Environmental Programs Division; performance data through 2010 taken from City of Santa Monica, Office of Sustainability and the Environment, accessed by author on February 8, 2012.



Other indicators

- **Greenhouse gas (GHG) emissions**
 - Emissions have declined by less than 1% below 1990 levels
 - City target is 30% below 1990 levels by 2015 for city operations and 15 percent below 1990 levels citywide by 2015.
 - GHG emissions decreased from 1990 to 1995, but increased from 1995 to 2000.
 - City expects GHGs to have increased in 2005.
- **Energy self-sufficiency:**
 - Goal of energy self-sufficiency by 2020 when it established Solar Santa Monica.
 - The city reports that 20 solar projects were implemented in 2007.
- **Bike lanes:**
 - 3% of Santa Monica's arterial streets have bike lanes,
 - Short of the city's 2010 target of 35 percent.



An Alternative Path?

- **Houston**
 - 2.1 million
 - Largely free market, at least in land use
- **Dallas**
 - 1.2 million
 - Strong policy commitment to sustainable development
- **Austin**
 - 790,390 people
 - Conscious commitment to sustainable development
 - City owned utility
 - Supportive land use planning
- **Portland (OR)**
 - 583,776
 - Early adopter
 - Aggressive policy approach

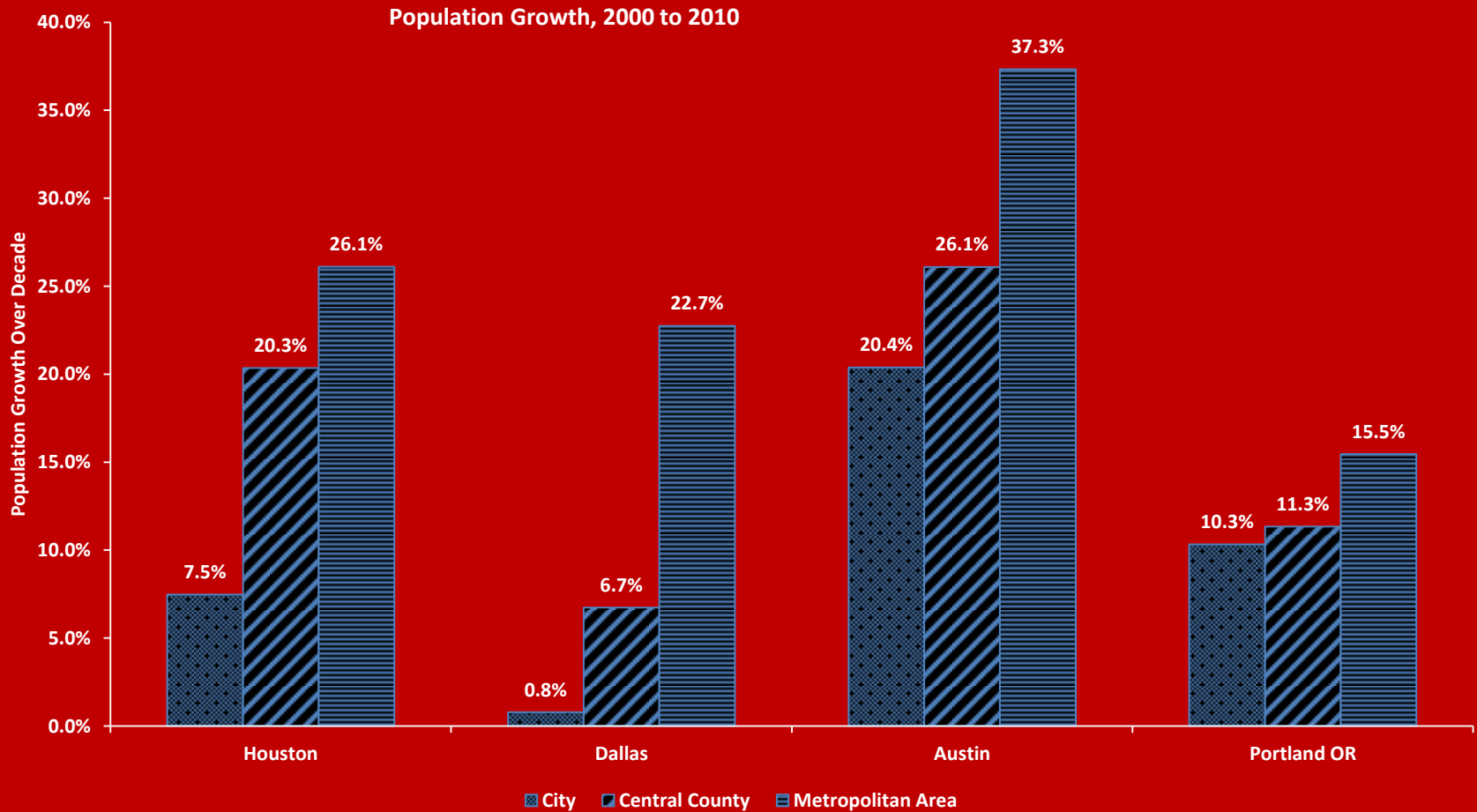


Basic Measures/Indicators

- **Population Growth**
 - Density
 - Central city population growth
- **Housing Growth**
- **Transit use**
- **(Should add VMT)**



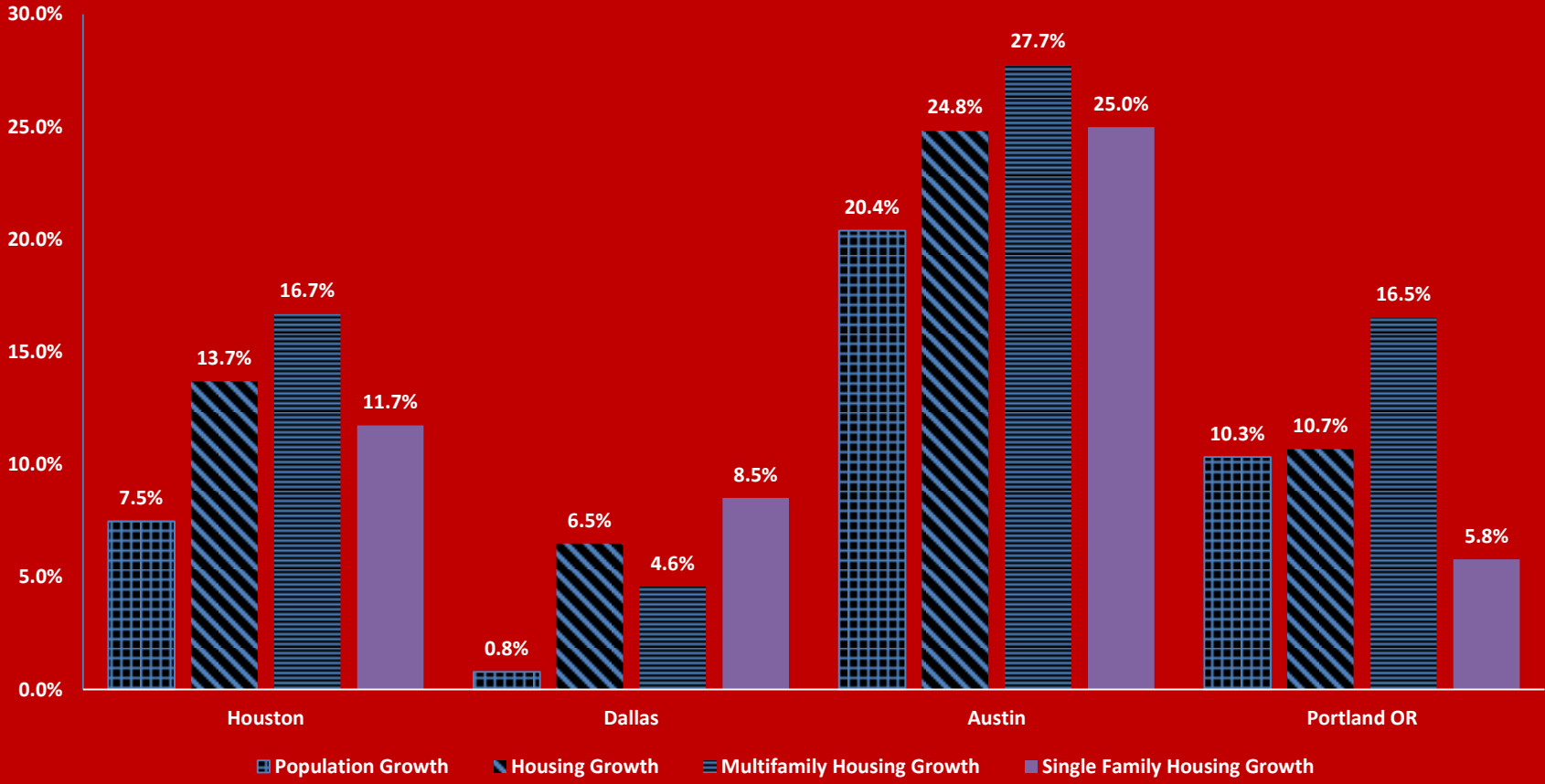
Population Growth





Growth of Single Family & Multifamily Housing

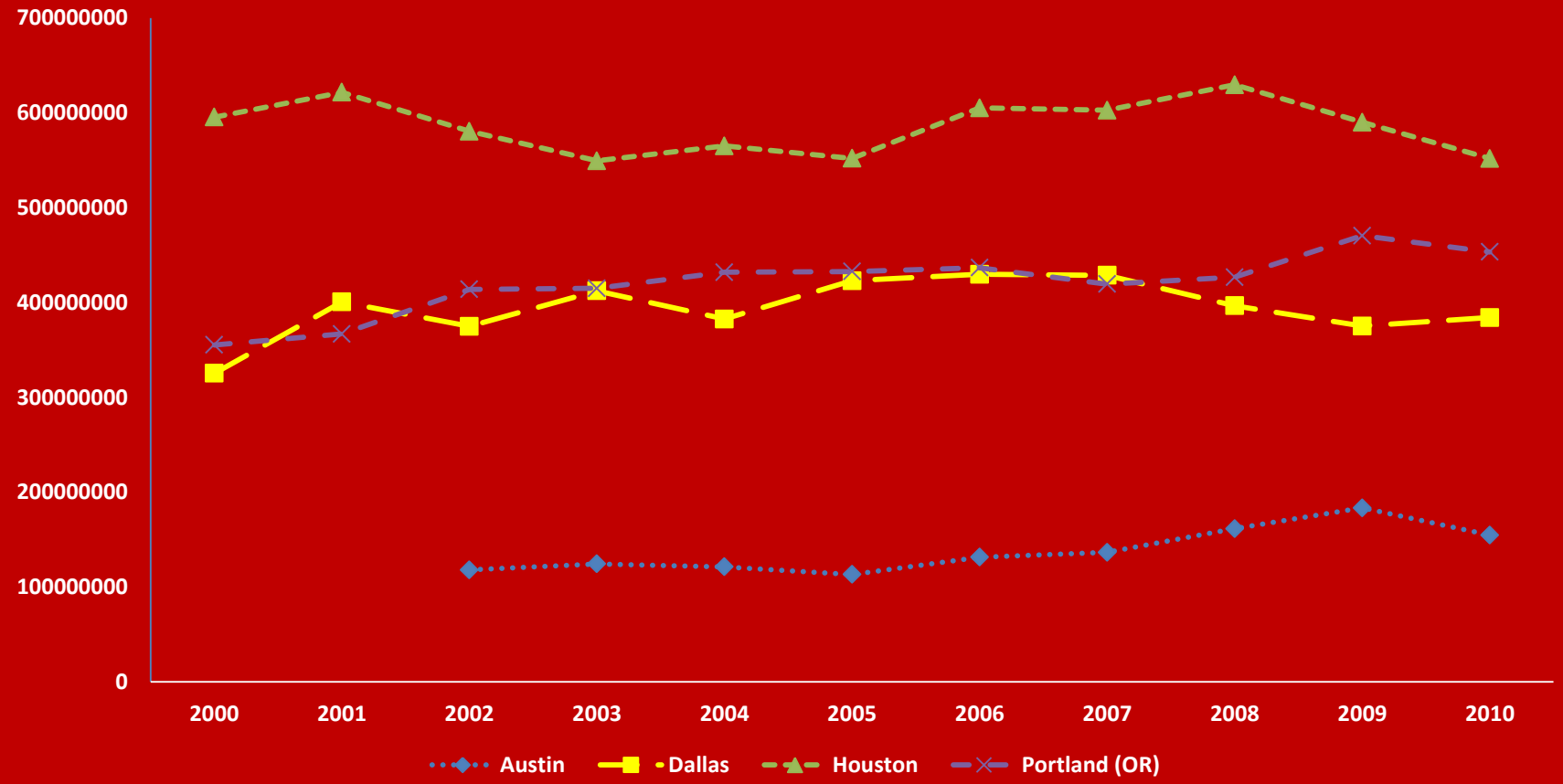
Growth from 2000 to 2010





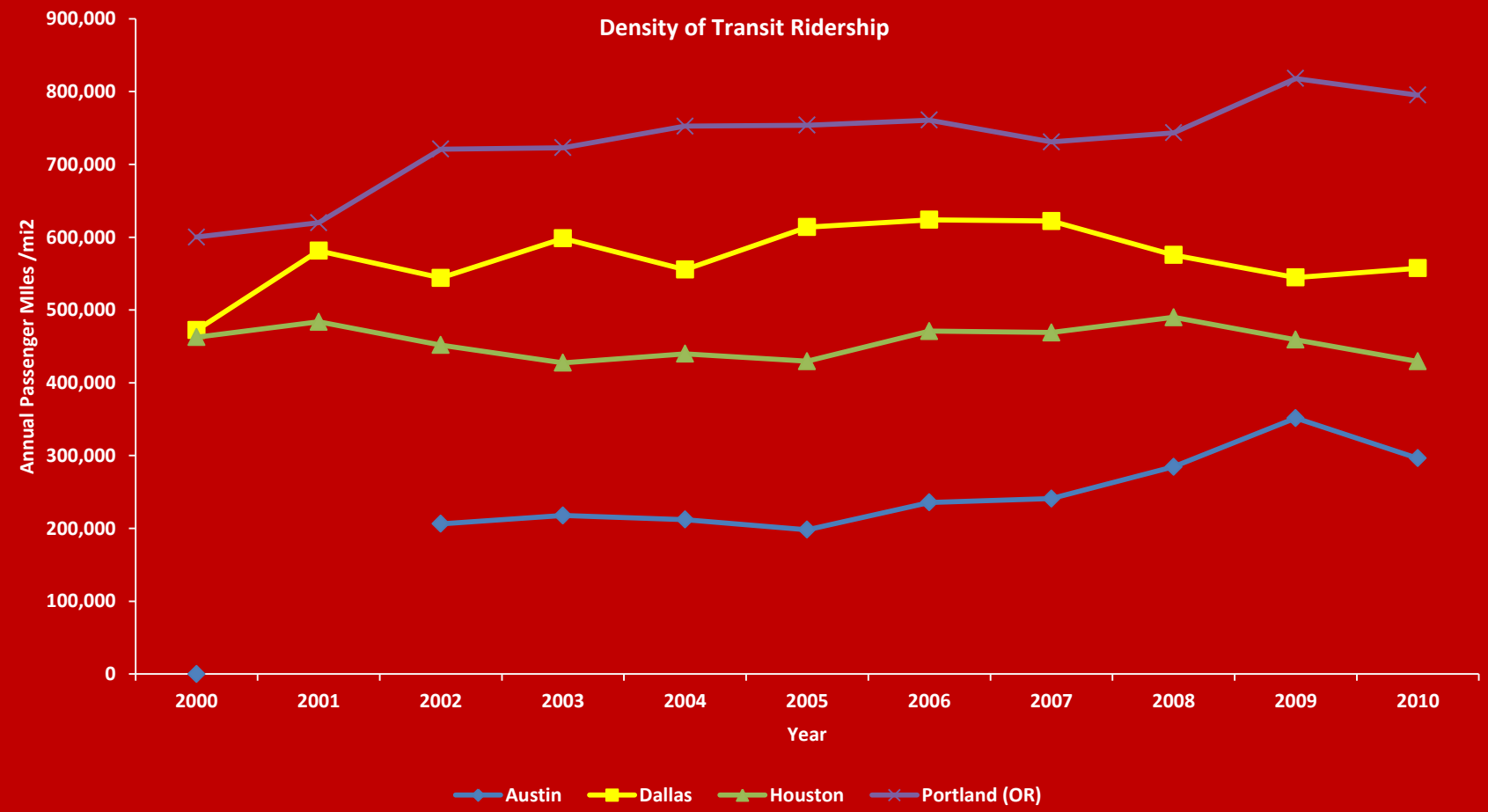
Transit Passenger Miles

Annual Transit Passenger Miles: 2000 to 2010



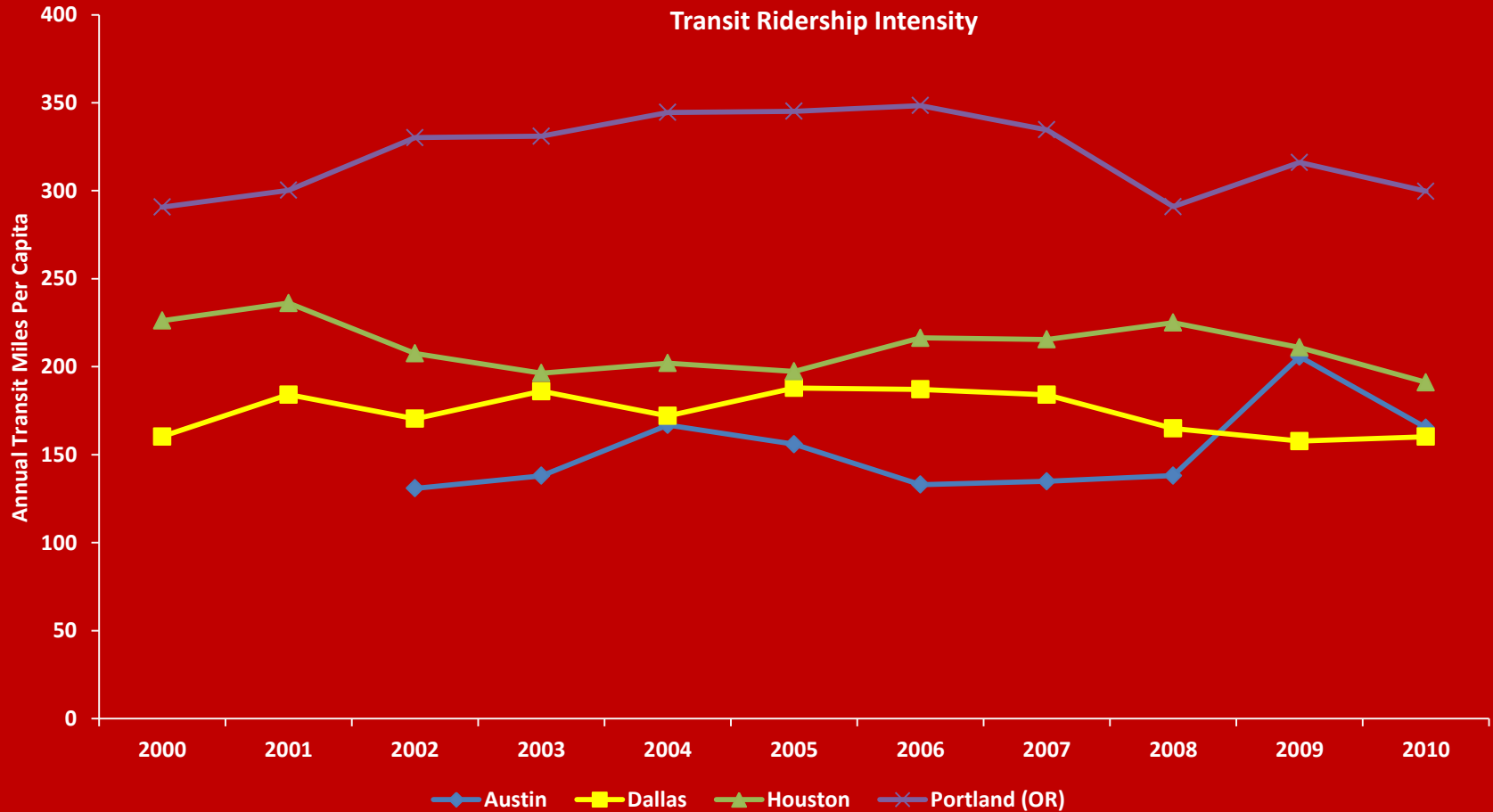


Density of Transit





Intensity of Transit Use





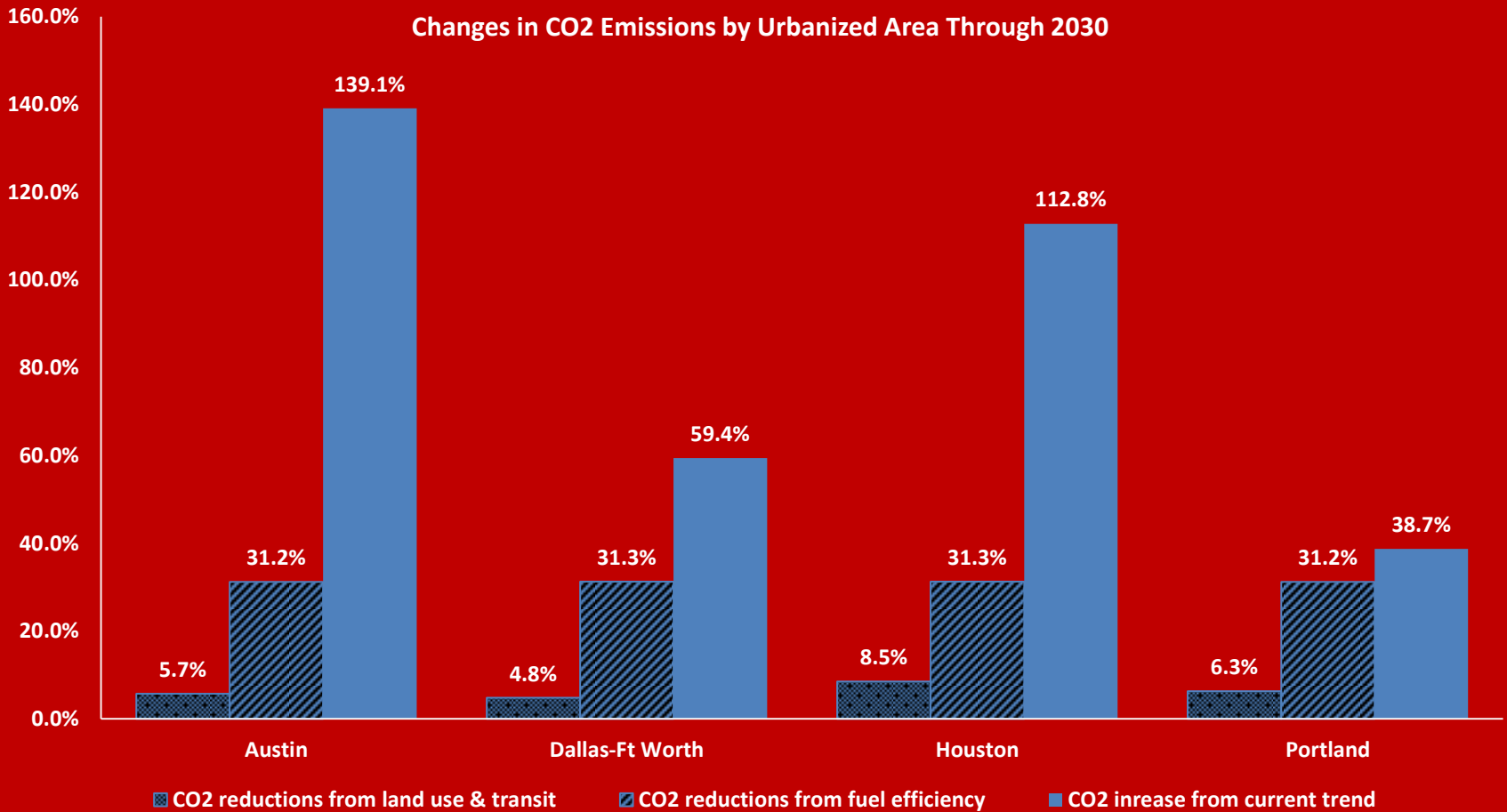
Institutional Implications

- Sustainable development programs in many cities may be “dressed up” environmental policy programs;
- Highly localized approach underestimates role technology & trade play in improving productivity & efficiency;
- Solutions will likely be varied and dependent on particular needs of communities;
- Market-oriented approaches may be more effective
 - Broad application
 - Direct impacts on natural individual incentives



Projected Changes in CO₂ Emissions

(Source: Hartgen Group & Reason Fdn)





Conclusions

- **Sustainability is still not well defined;**
- **Santa Monica experience suggests direct government action has limits;**
- **Large cities have embedded patterns that are difficult to change and may behave differently than conventional wisdom suggests;**
- **Market-oriented approaches, particularly in terms of pricing for resources, may have more potential for certain types of environmental outcomes.**