

Economic Factors Influencing the Magnitude of Change in the Land Use and Transportation Sectors

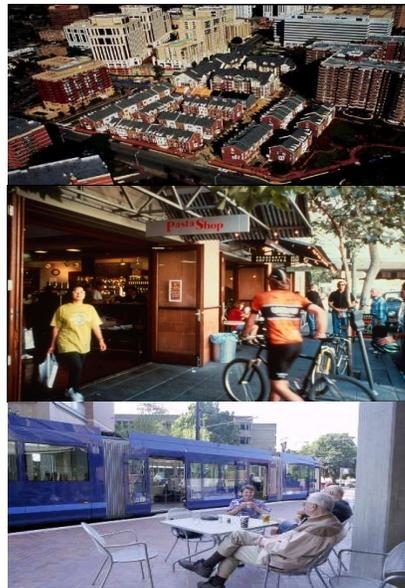
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Questions

- How large is the forecasted market for communities with transit, pedestrian, and bike-oriented infrastructure and amenities (called TOD for short here)?
- What are the opportunities for providing these products?
- What constraints could limit success?



Population Growth and Housing Demand, 2000-2040

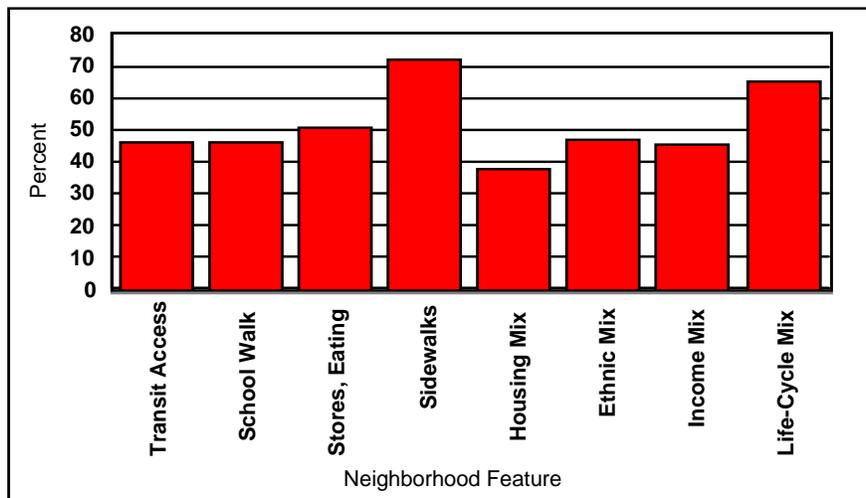
US Population Growth: 100 M (likely low /undercount)

Housing units needed:

- Due to growth: 45 million
 - Replacement: 35 million (6%/yr)
- TOTAL: 80 million units needed

CA share =12% +/-

Neighborhood Preferences (2004)



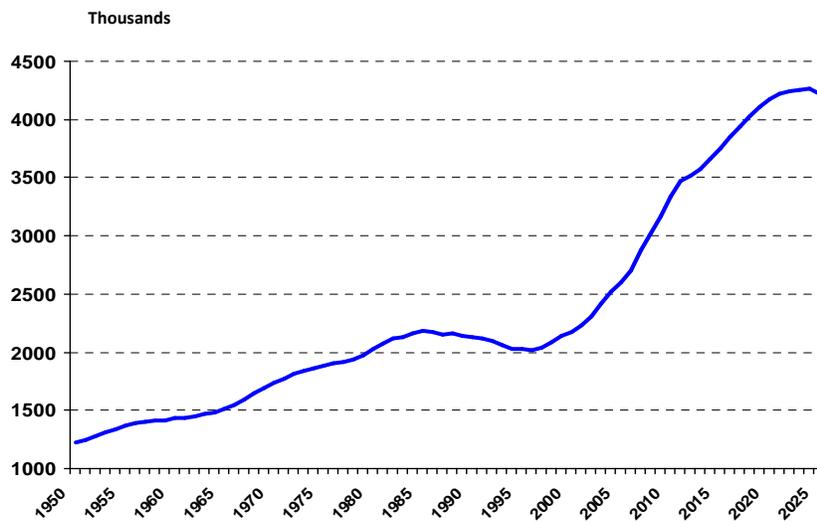
Source: National Association of Realtors & Smart Growth America, American Preference Survey 2004.

Types of Households, 2000 & 2040 (in millions)

HH Type	2000	2040	Change
W/ children	35	41	6
W/o children	71	111	40
Single-person	26	44	17

Source: Chris Nelson, adapted and extrapolated from Martha Farnsworth Riche, *How Changes in the Nation's Age and Household Structure Will Reshape Housing Demand in the 21st Century*, HUD (2003).

People Turning 65, 1950-2025



Source: Rosen Consulting

Housing Type Preferences

<u>Housing Type</u>	<u>2003</u>	<u>2040 est.</u>
Apartment	24%	30%
Owner Attached	11%	20%
Small Lot	15%	30%
Large Lot	51%	20%

*Source: 2003 data from American Housing Survey 2003. 2040 figures from Nelson, as adapted from Myers & Gearin, "Future Demand for Denser Residential Neighborhoods", Housing Policy Debate (2001).
preference surveys. Apartment includes shift in elderly households from detached to apartment projected by AARP.*

Markets for TOD

(transit , bike, and pedestrian infrastructure, mixed use development, urban amenities)

Types of households who seek out TOD:

- Singles
- couples without children
- the elderly
- low-income households

--the types of households that are projected to grow the most over the next 25 years

Benefits

- Lower cost of living: households have the option of spending less on transportation than they do currently (APTA: hh w/ transit access drive 4400 fewer mi./yr; save \$10K/yr if give up one car)
- Transit, walk, bike use higher: lower greenhouse gas emissions, lower traffic impacts, fewer deaths and injuries
- More walking and biking: healthier population
- Lower cost of provision of public services (sewer, water, power)
- Convenient access to amenities and services

Cities Pursuing TOD

- Cities with plentiful transit: Boston, NY, Philadelphia, DC, Chicago, San Francisco, Toronto
 - Cities that are developing transit: Dallas, Denver, Charlotte, Portland, Salt Lake City, Vancouver
- => Justifications: transit ridership, traffic management, equity, quality of life, lower infrastructure costs, good business opportunities

Opportunities: Infill Development

- New development on parking lots and skipped over land
- Redevelopment / reuse of old industrial and warehouse districts, rail yards and rail station areas
- Additional stories added to existing buildings



Opportunities: New Development Areas

- Around rail (incl. HSR) or BRT
 - Around major jobs centers (e.g., new campuses, office parks)
 - Around Town Center in Master Planned Communities
- =>Advantages: can be less expensive because of lower land costs, ability to assemble large parcels, build e.g. 10K units over 10 -15 years
- => Disadvantages: if separate “towns” can be too small for local services, jobs/housing balance

Benefits Realized

- Connecticut: Govt. incentives for mixed income housing near rail stations: Profit from the market-rate units is so high that builders can afford to produce 20%affordable units with \$2000/unit subsidy.
- Market- rate residential districts that provide high quality public spaces command an average premium of \$20,000/residential unit (1999 \$)
- Higher value holds for market rate units in TOD even when housing in area is designed for a mix of incomes and ages
- Commercial land values 10-20% higher in TOD areas
- Auto trip reduction of 15-40% compared to auto-oriented uses.

Sources: Testimony to Congress, 2009 (CT); ULI , 2004

HOWEVER:

- **Location choice is affected by transportation services, but also by many other factors:** housing (or commercial property) size, price, and lot size, neighborhood amenities, environmental factors, school quality, race, ethnicity, class, income
- **Density is necessary but not sufficient for transit to flourish**– you need density to generate enough riders, but you also need walkable / bikeable urban design and good transit service!
- Some of the demand for TOD is from people with NOT a lot of money
- **Unintended consequences can include gentrification**

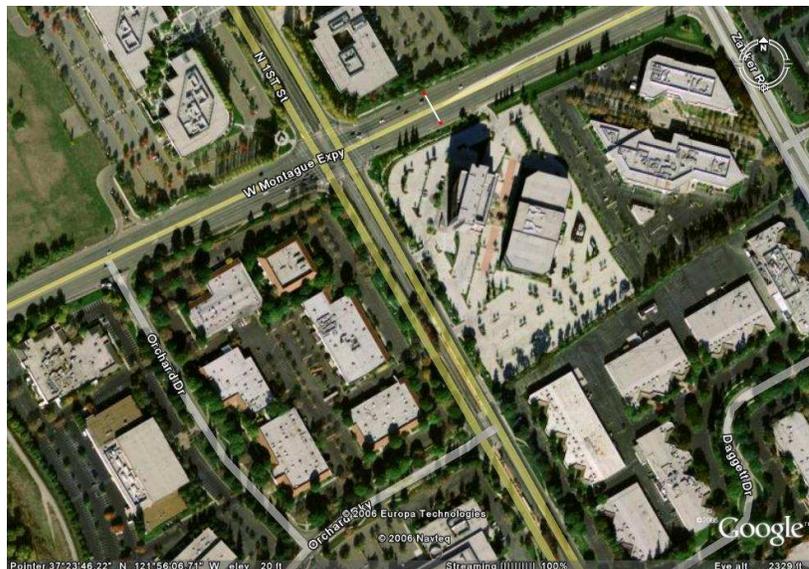
Not All Development Near Transit is TOD (Transit ORIENTED)

- LA Times study: few residents near transit used it
- WHY? limited transit service frequency and connectivity, poor urban design, crime concerns
- Lesson: Need a network of TODs with good transit connections, pedestrian-friendly infrastructure, places to walk to (grocery stores, pharmacies, hair salons, schools, urban parks, cafes,...), public safety,...

Auto-dependent transit?? (Los Angeles)



Transit in Office Sprawl (San Jose)



Barriers to Good TOD

- Zoning that prevents high density
- Zoning that limits flexibility – e.g. mandated first floor retail vs. first floor designed for multiple use options
- Extensive conditional approvals – time is money
- High exactions, impact fees, other charges
- Failure to build community support – can lead to “death of a thousand cuts”
- Costs of infill development – land, labor, construction costs for “one-of-a-kind” projects
- Land speculation & excessive landowner expectations
- Lender issues - Acquisition, Development and Construction (AD&C) lender specialization vs. multi-use projects

Managing Expectations and Measuring All Benefits

- TOD benefits: travel choices, housing choices, smaller development footprint
- Even in TODs with high transit LOS, transit only accounts for between 30 to 35 percent of residents’ commuting (& commutes are 50%+ of transit trips)
- Need very high density if only metric for TOD is transit ridership! (As point of comparison: a park and ride lot generates ~130 commuters per acre) Cost per ride is however a very limited and misleading metric for TOD.
- Walking captures 15 to 30 percent of ALL travel in TODs, including shopping, etc., around heavy rail stations in higher density U.S. urban environments

Best Practices

- **Develop a shared vision** –public opinion changes as issues become better understood – e.g., health, environment, urban design linkages, costs of transport choices
- **Provide “complete streets”** – for transit, bikes, and peds as well as cars = both in new development and through retrofit
- **Bring schools into the planning process**– both to share recreational facilities, meeting rooms, etc. and to assure quality
- **Deal with traffic impacts ahead of time** – so that this doesn’t become the “third rail” of TOD.
- **Provide predictable and market-realistic zoning and development requirements**
- **Create and preserve affordable housing** in walk/bike/transit friendly neighborhoods – using available public funds to help support this or create partnerships with NGOs
- **Give priority to “shovel-ready” sites** – with zoning and other requirements in place or quick approval; direct incentive funding here

Needed: New Institutional Arrangements

- Transportation modal “silos” for funding, planning are increasingly problematic
- Best practices require joint planning and combined funding: housing, commercial development, transit, streets and highways, schools, water and sewer, ...

Learn and Improve

Research on how decision-makers and stakeholders learn, adopt innovations has consistently found:

=>**New ideas spread through loose networks of contacts who share experiences on best practices (and problems)**

Journal articles, research reports, and modeling results are NOT directly used in most cases – translated by a few people who cross group boundaries (e.g., academic-practitioners)

Lesson: document best practices based on research findings, create networking opportunities for exchange of information and ideas

