

# TRANSIT AND TRANSIT ORIENTED DEVELOPMENT: GETTING THERE FROM HERE



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July 15, 2015

# Presentation Overview



1. Why Transit, Why Now
2. What Value Can Transit Bring to the Knoxville Region
3. Linking Transit and Development
4. Emerging Lessons Learned from Transit and TOD
5. Concluding Thoughts

# Why Transit, Why Now

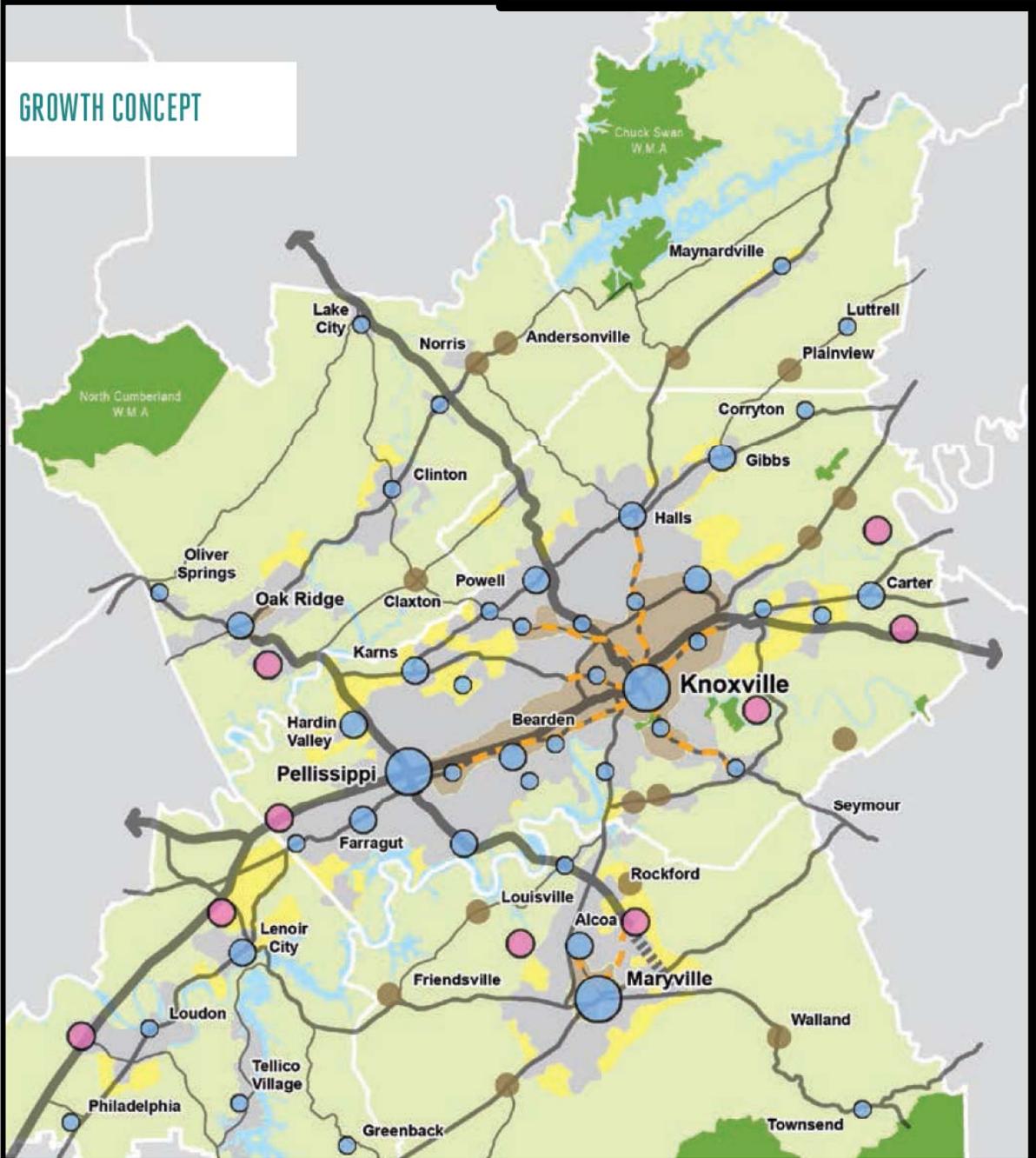


# Why is Transit Important for Knoxville - The City and Region Want to Grow “Smarter”

## Plan ET Community Goals

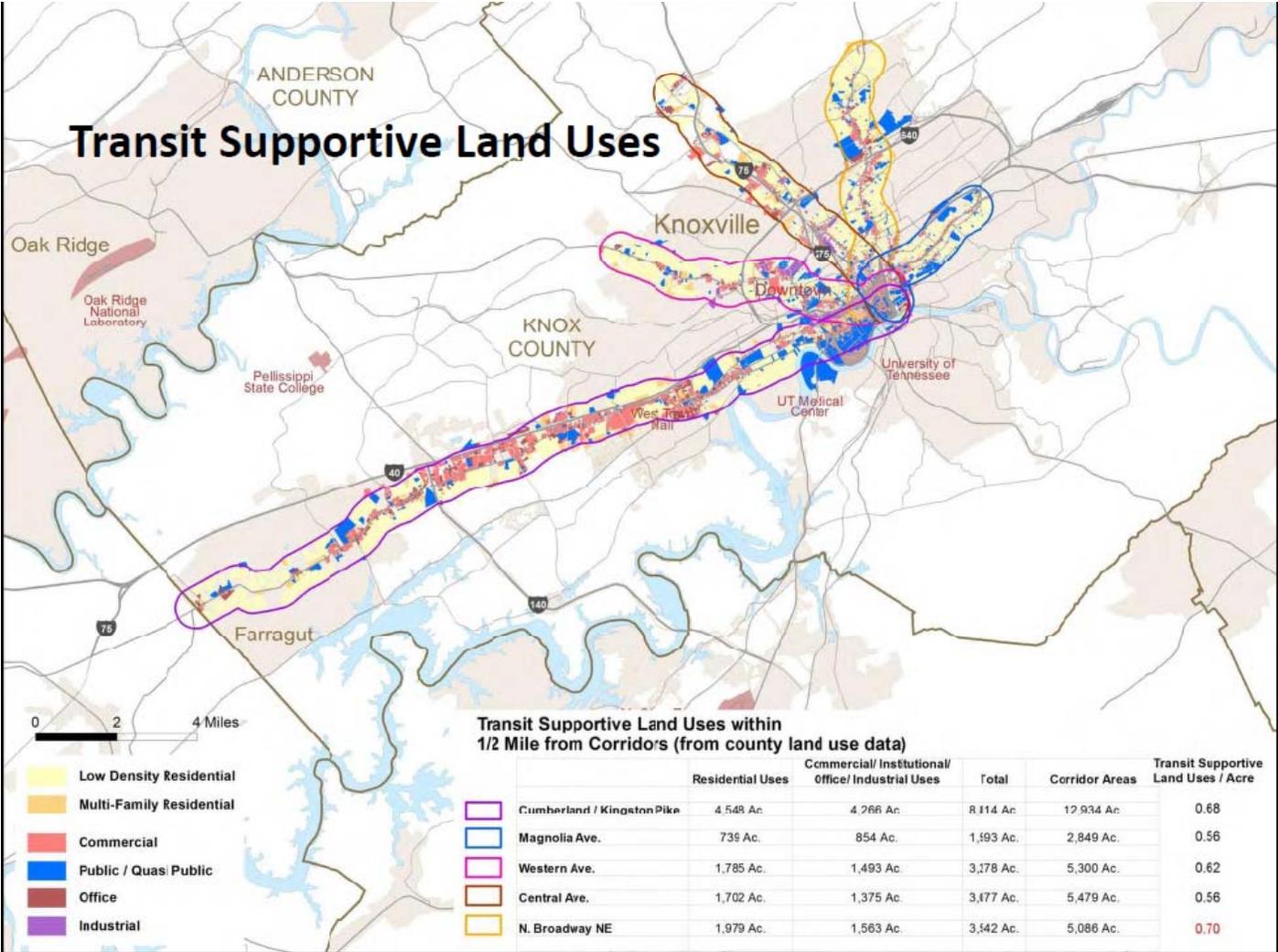
1. Clean Air and Water
2. Healthy People
3. Regional Prosperity
4. Local Food Production
5. Transportation Choices
6. Efficient Infrastructure
7. Great Places
8. Housing Choices

# Plan ET Growth Concept



- LARGE CENTERS
- MEDIUM CENTERS
- SMALL CENTERS
- RURAL CROSSROADS
- EMPLOYMENT NODES
- URBAN INFILL
- SUBURBAN &
- RURAL DEVELOPMENT
- BUILT-UP AREA
- TRANSIT CORRIDORS

# Transportation Choice Will Help Knoxville Grow Smarter



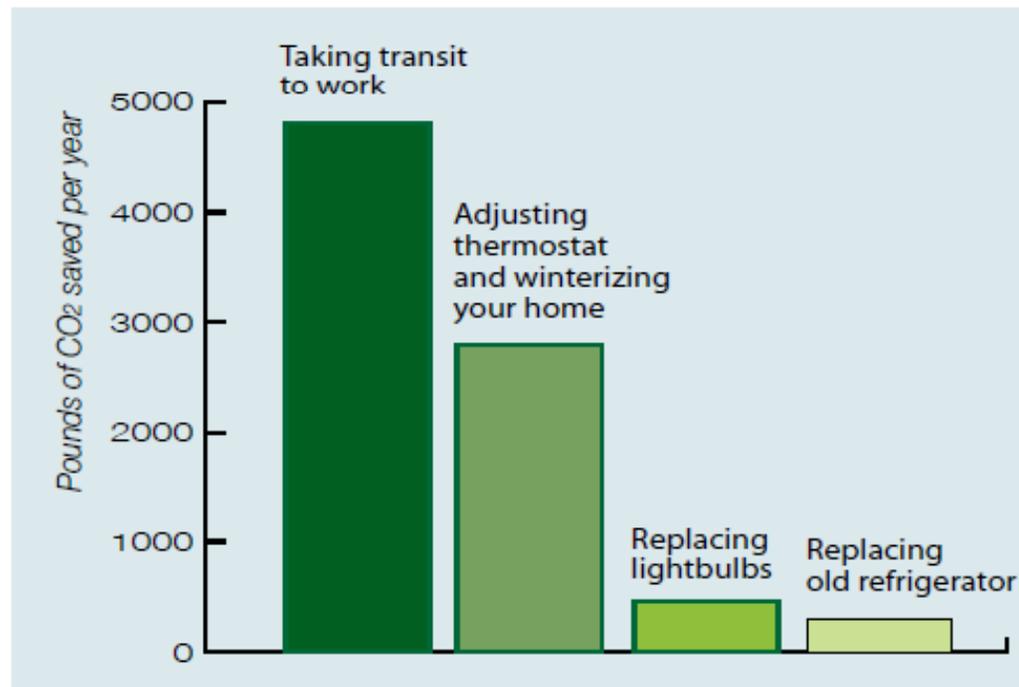
Source: KATS Corridor Study Appendix D, TOD Toolkit. 2013

# What Value Can Transit Bring to the Knoxville Region



# Transit Supports Clean Air and Water

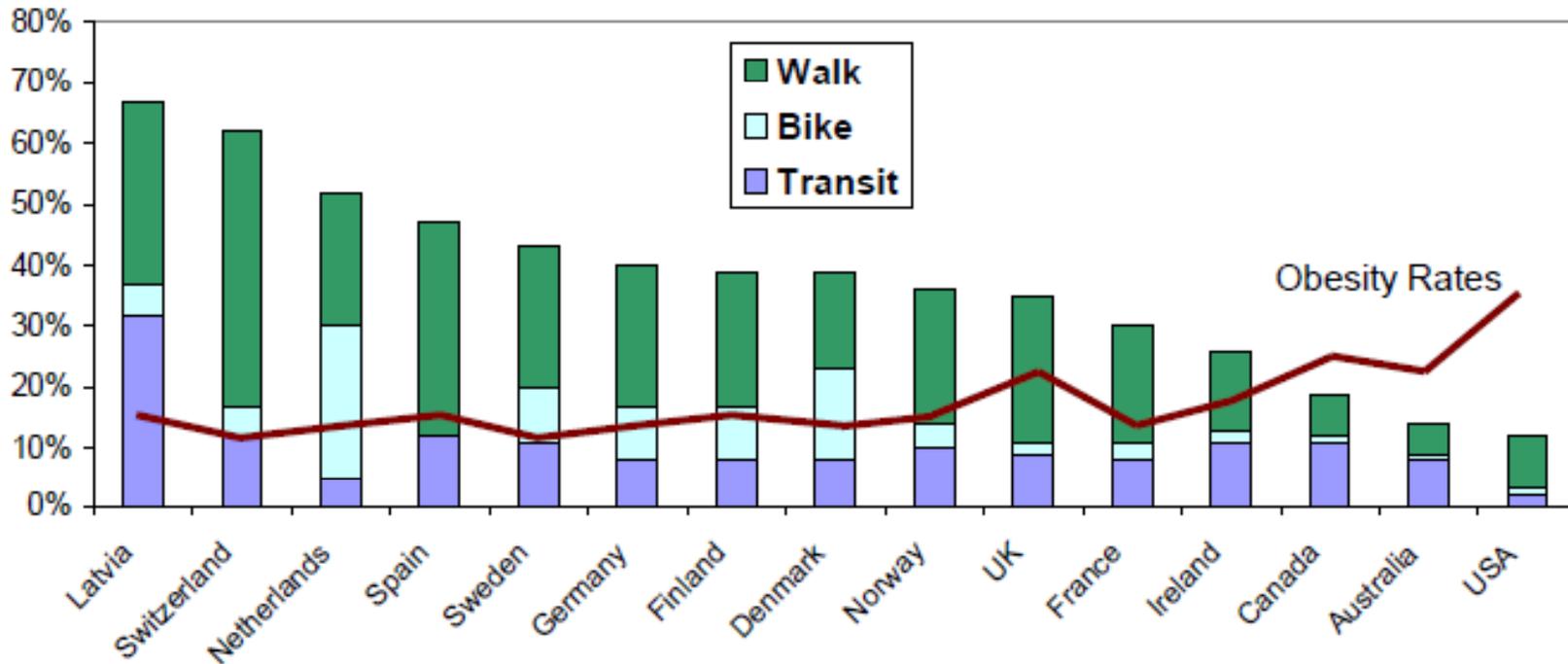
## ***Commuting by Public Transportation – One of the Most Significant Actions to Reduce Household Carbon Emissions***



*By taking existing public transportation instead of driving a car, a single person saves 4,800 pounds of CO<sub>2</sub> per year. Source: Public Transportation's Contribution to U.S. Greenhouse Gas Reduction <sup>4</sup>*

# Transit Supports Healthy People

**Figure 12** Mode Split Versus National Obesity Rates (Bassett, et al 2008)



Source: Victoria Transport Policy Institute. Evaluating Public Transport Health Benefits. 2010

# Transit Supports Regional Prosperity

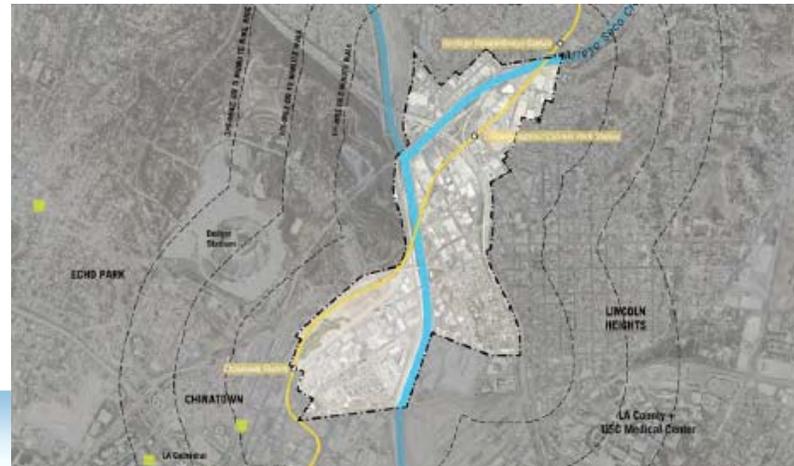


“Every time a metro area added about 4 seats to rails and buses per 1,000 residents, the central city ended up with 320 more employees per square mile — an increase of 19 percent.”

# Cities Are Starting to Plan for Transit and Urban Agriculture in Proximity to Each Other

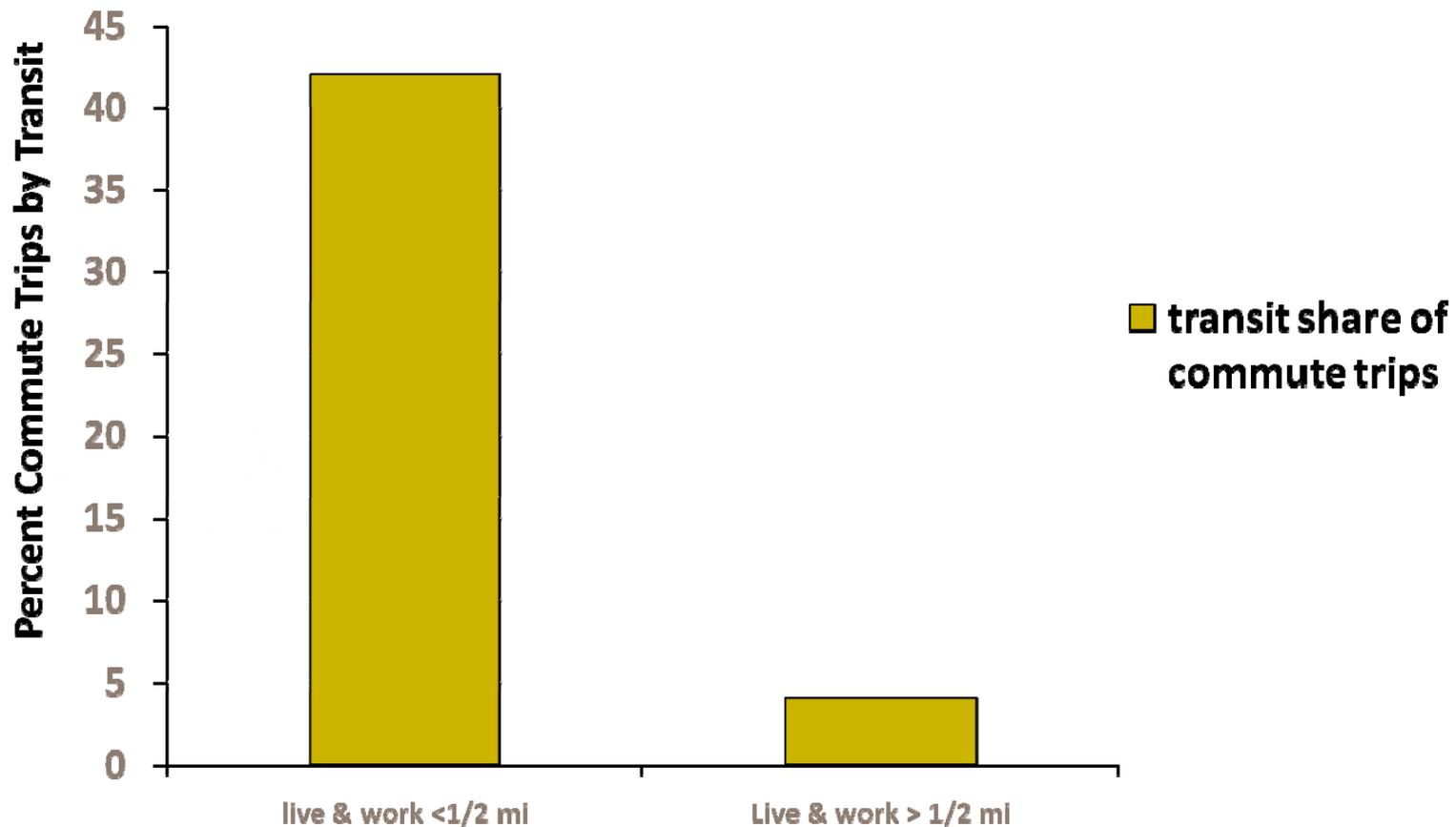
## URBAN AGRICULTURE PLAN

JANUARY 30, 2015



# Transportation Choice

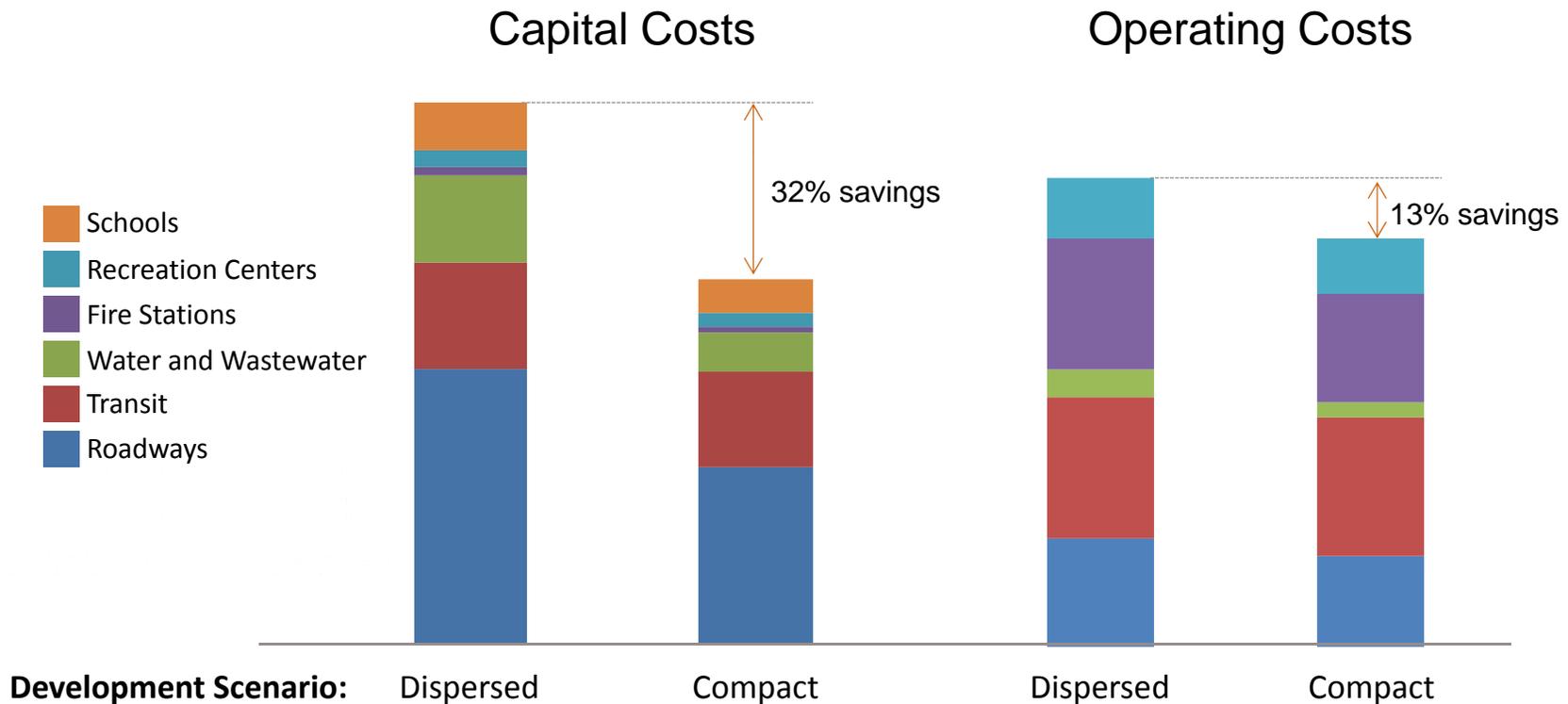
People who live within **a half-mile radius** are 5 times as likely to walk to a major transit stop than others.



Source: San Francisco Bay Area Metropolitan Transportation Commission

# Compact Development, Like TOD, Supports Efficient Infrastructure

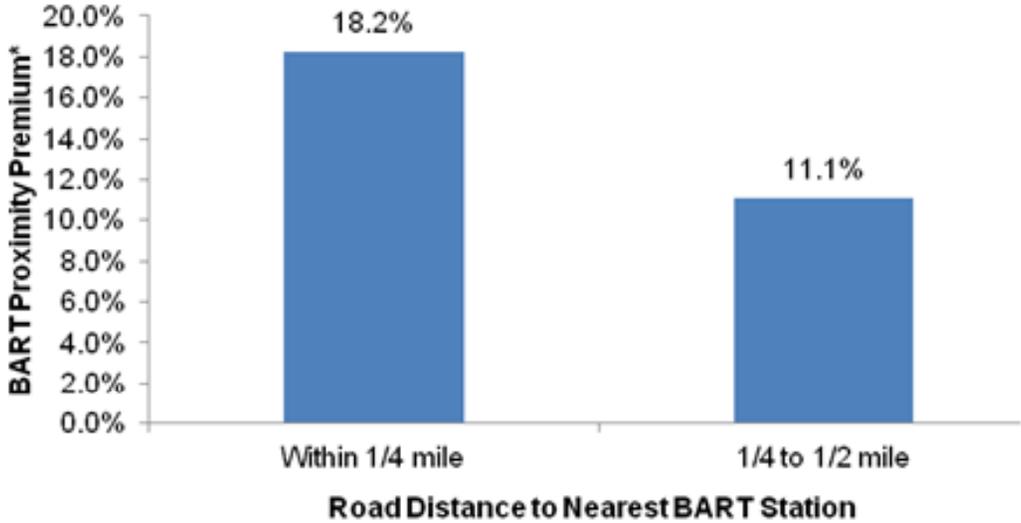
Calgary, Alberta



Source: IBI – Implications Of Alternative Growth Patterns On Infrastructure Costs, Plan-It Calgary, City of Calgary, 2008

# Great Places Create Great Value, and Transit Adds More Value

**Figure 1. Office Rent Premiums Associated with Proximity to BART Compared to Areas More than a Half Mile from a Station: East Bay**



\*Percentage difference in annual average rental rate compared to being located more than 1/2 mile from a BART station, after controlling for other factors with regression analysis.  
Source: Strategic Economics, 2015.

# Different Development Types Compliment Multi-Modal Transportation



# “Infilling” Neighborhoods Can Also Take Different Forms



# Linking Transit and Development



# Transit Ridership is Highly Dependent on Land Use Patterns

**DENSITY** *How many people, jobs, and activities are near each potential transit stop?*

+ Many people and jobs are within walking distance of transit.

- Fewer people and jobs are within walking distance of transit.

**WALKABILITY** *Is it possible to walk between the stop and the activities around it?*

+ The dot at the center of these circles is a transit stop, while the circle is a 1/4 mile radius. The whole area is within 1/4 mile, but only the black-shaded streets are within a 1/4 mile walk.

+ It must also be safe to cross the street at a stop. You usually need the stops on both sides for two-way travel!

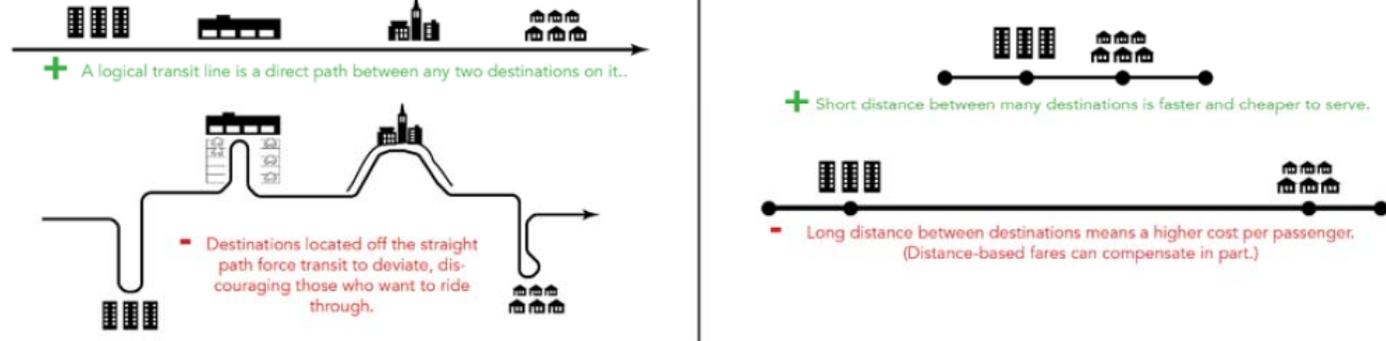


Figure 39: Geographic Indicators of High Ridership Potential

# Development Near Transit – Transit Oriented Development (TOD)

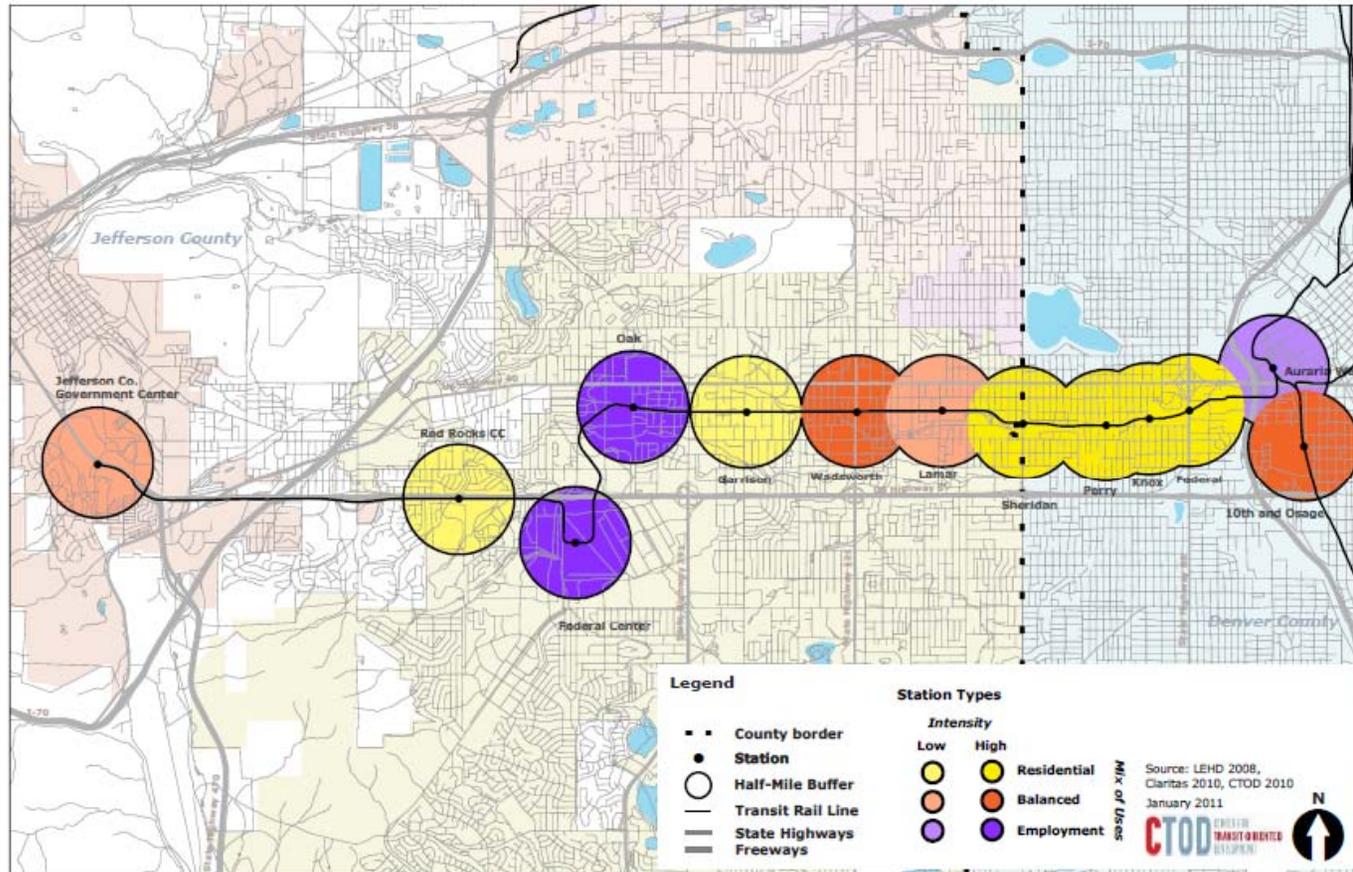
- Development located within  $\frac{1}{4}$  to  $\frac{1}{2}$  mile of a frequent transit station/stop (really a district)
- Located in an area where it is also easy to bike/walk
- Serves as an “origin”, a “destination,” or both for the transit system



# There Is No Single Transit or Building Type in TOD



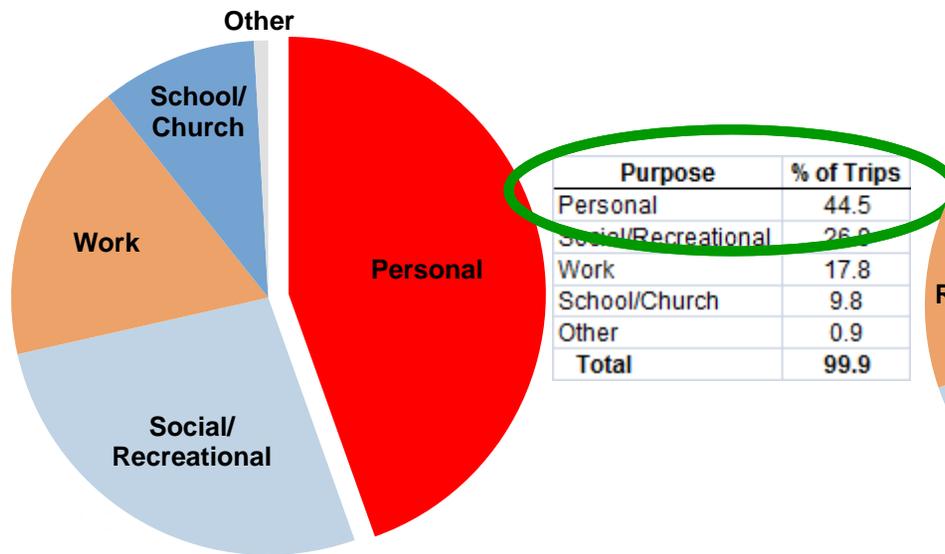
# Transit Corridors Reflect the Range of Land uses and Densities – It's the Connections that Count!



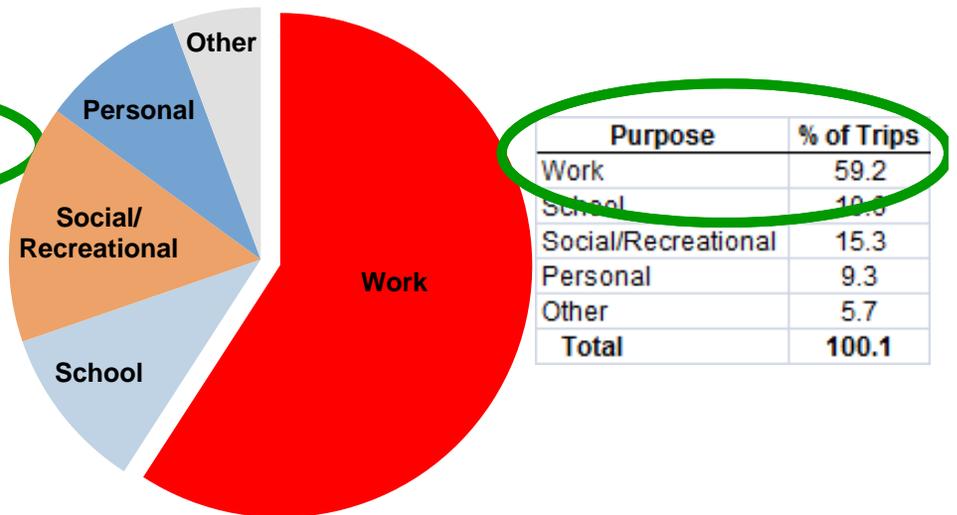
SOURCE: Center for Transit-Oriented Development, 2010

# Employment Destinations Are Essential to Transit Because Commuters Ride Transit

## Total Trips



## Transit Trips



- By a wide margin, the largest group of transit trips are commute trips
- Commuters are key to transit's productivity

Source: Pisarski, *Commuting in America*

# Any Transit That Supports Successful TOD is:

1. High quality
  - Frequent
  - Clean and Comfortable
  - Fast
2. Stops/stations that are easily accessible by biking or walking
3. Connected to employment centers/activity centers and major institutions



# Emerging Lessons Learned from Transit and TOD



# Lesson 1: Changing Demographics is Driving Demand For Transit Oriented Locations



76 Million Baby Boomers many of whom are downsizing



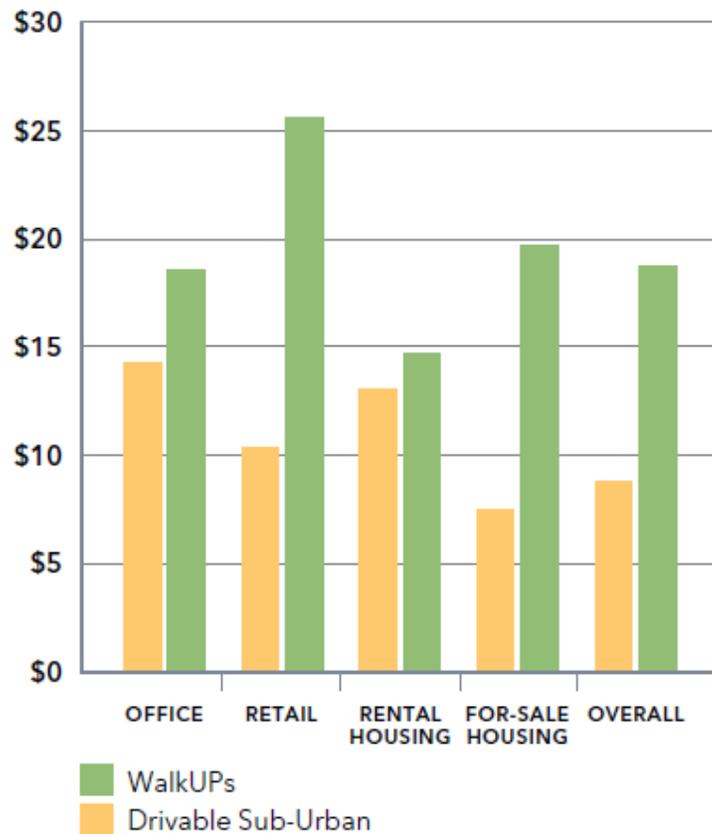
75-80 Million Millennials – The newest members of the work force



Almost 1/2 of All Households are Single People

# This Demand is Generating Price Premiums for Both Residential and Commercial Properties

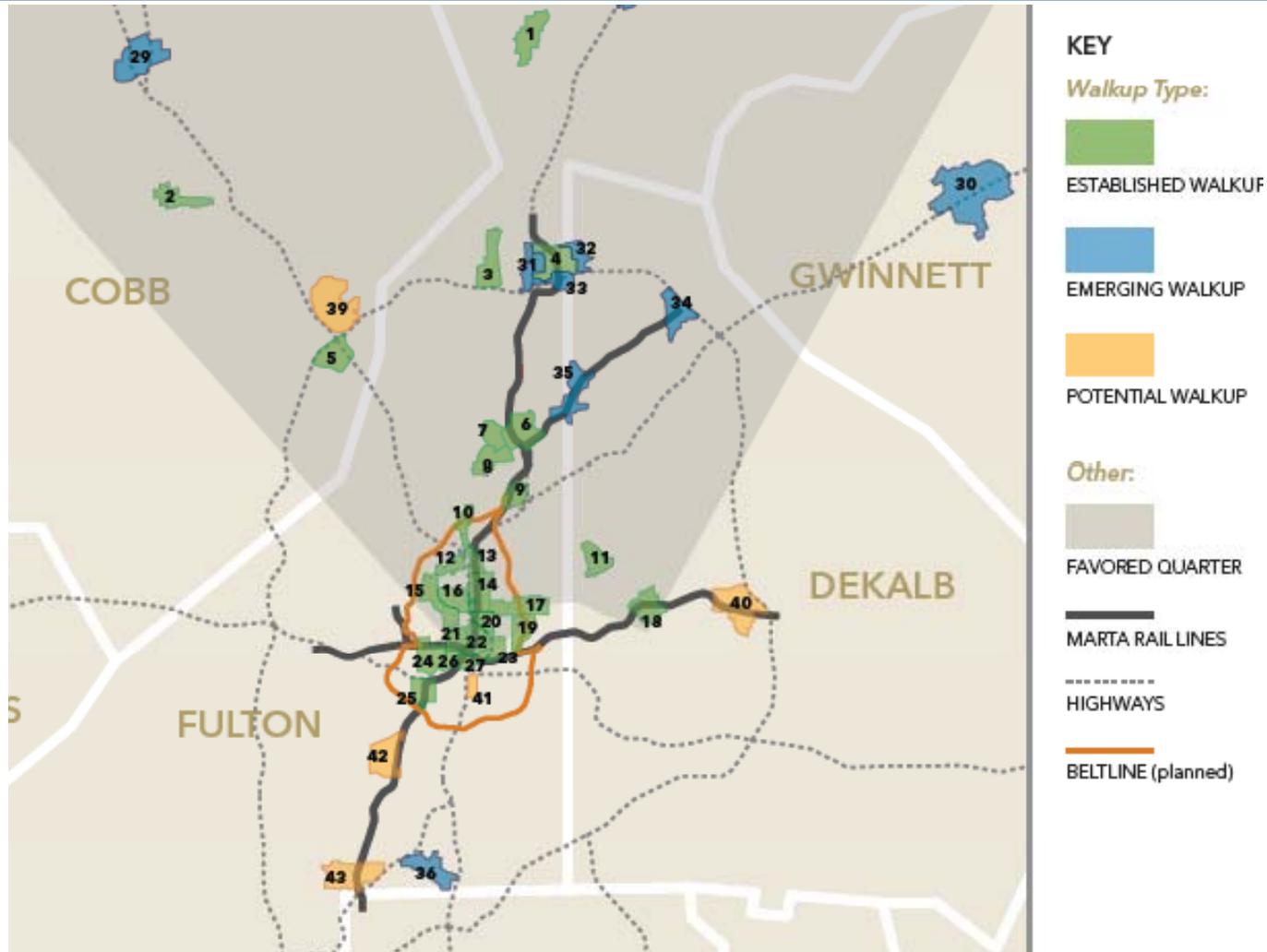
Average Rents per Square Foot  
Walkable vs Suburban Neighborhoods in Atlanta



	Suburban	“WalkUp”	% Difference
<b>Office</b>	\$14.23	\$18.55	<b>30%</b>
<b>Retail</b>	\$10.42	\$25.71	<b>144%</b>
<b>Rental Housing</b>	\$13.07	\$14.67	<b>12%</b>
<b>For-Sale Housing</b>	\$60.06	\$156.46	<b>161%</b>

Source: Leinberger, GWU School of Business – The WalkUP Wake-Up Call: Atlanta 2013

# And, This is Not Just about “Downtown” Locations



Source: Leinberger, GWU School of Business – The WalkUP Wake-Up Call: Atlanta 2013

# The Greenwood Park neighborhood in Atlanta is a transit-oriented redevelopment in anticipation of a streetcar



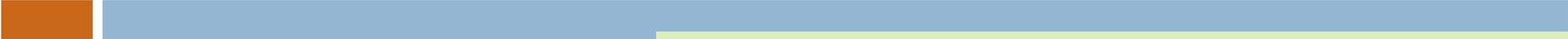
Before



After



# This Investment Trend is Happening in Cities Big and Small

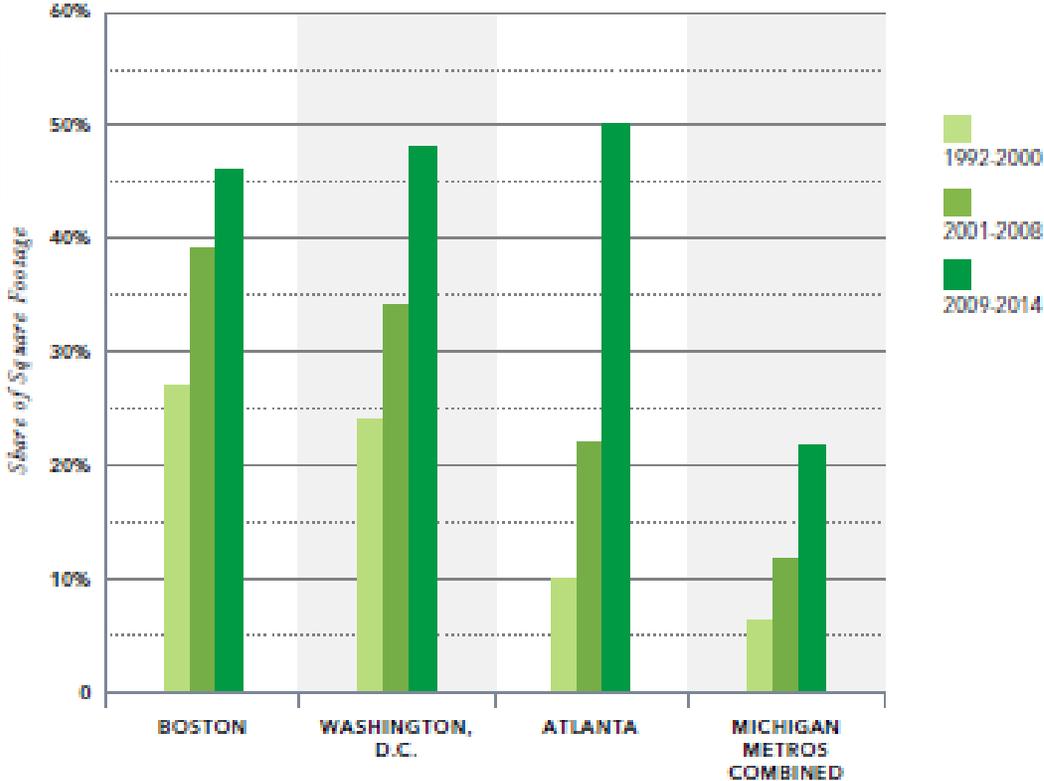


Metropolitan Land Use Options in the United States

	REGIONALLY SIGNIFICANT	LOCAL SERVING
 <b>WALKABLE URBAN</b>	<b>WALKUP</b> (Walkable Urban Place)	<b>WALKABLE NEIGHBORHOOD</b>
 <b>DRIVABLE SUB-URBAN</b>	<b>EDGE CITY</b>	<b>DRIVABLE SUB-DIVISION</b>

*The Last Three Real Estate Cycles:*  
 Share of Metro Regions' New Income Property Delivered in WalkUPs & Walkable Neighborhoods

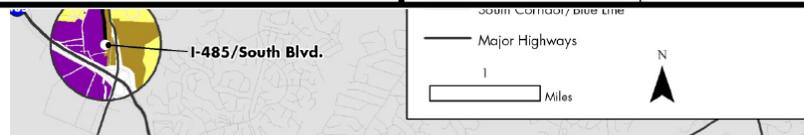
Income Property = Office, Retail, Hotel, Rental Apartment, For-Sale Residential



Source: The WakeUp Walk-Up Call: Michigan Metros, Leinberger and Lynch 2015

# Lesson 2: Transit is Not a Silver Bullet, Market Conditions have to be Right

Development Context	Share of Total Land Area (2005)	Share of Opportunity Sites* (2005)	Share of New Development (2005-2009)
Existing Downtowns/Urban Business Districts	10%	13%	68%
Major Suburban Employment Areas	0%	0%	0%
Legacy Industrial Areas	3%	4%	3%
Mixed-Use Neighborhoods/Main Streets	2%	1%	5%
Auto-Oriented Commercial Corridors	23%	35%	9%
Industrial/Distribution Areas	28%	30%	7%
Low Density Residential Neighborhoods	34%	18%	8%
Major Greenfield/Infill Sites	0%	0%	0%
Other	0%	0%	0%
Total Corridor	100%	100%	100%



# Lesson 3: More Businesses are Relocating to Be Near Transit

**“I think it’s essential we be accessible to Metro and that limits the options. I think as with many other things our younger folks are more inclined to be Metro-accessible and more urban.”** - Arne M.

Sorenson, Chief Executive, Marriott International. Washington Post, March 2015

**“While Microsoft and Nintendo have stayed in the suburbs, Amazon is building a futuristic new inner-city home.”** – The Guardian, May

22, 2014

**“State Farm exec: Transit helped Tempe get \$600M hub”** – Parker Leavitt, The Republic,

February 20, 2015



Citrix, Raleigh



Rolls Royce, Indianapolis

# Lesson 4: These Other Transportation Systems Also have Economic Benefits



Bike Share =  
Additional \$150,000 in rider  
expenditures (Minneapolis)



Urban Bike "Trails" =  
As much as \$846 million in  
economic impact  
(Indianapolis Cultural Arts Trail)

# Lesson 5: Planning for TOD Includes Planning for All Household Income Levels

## Transportation Costs Have a Significant Impact on total Household Income

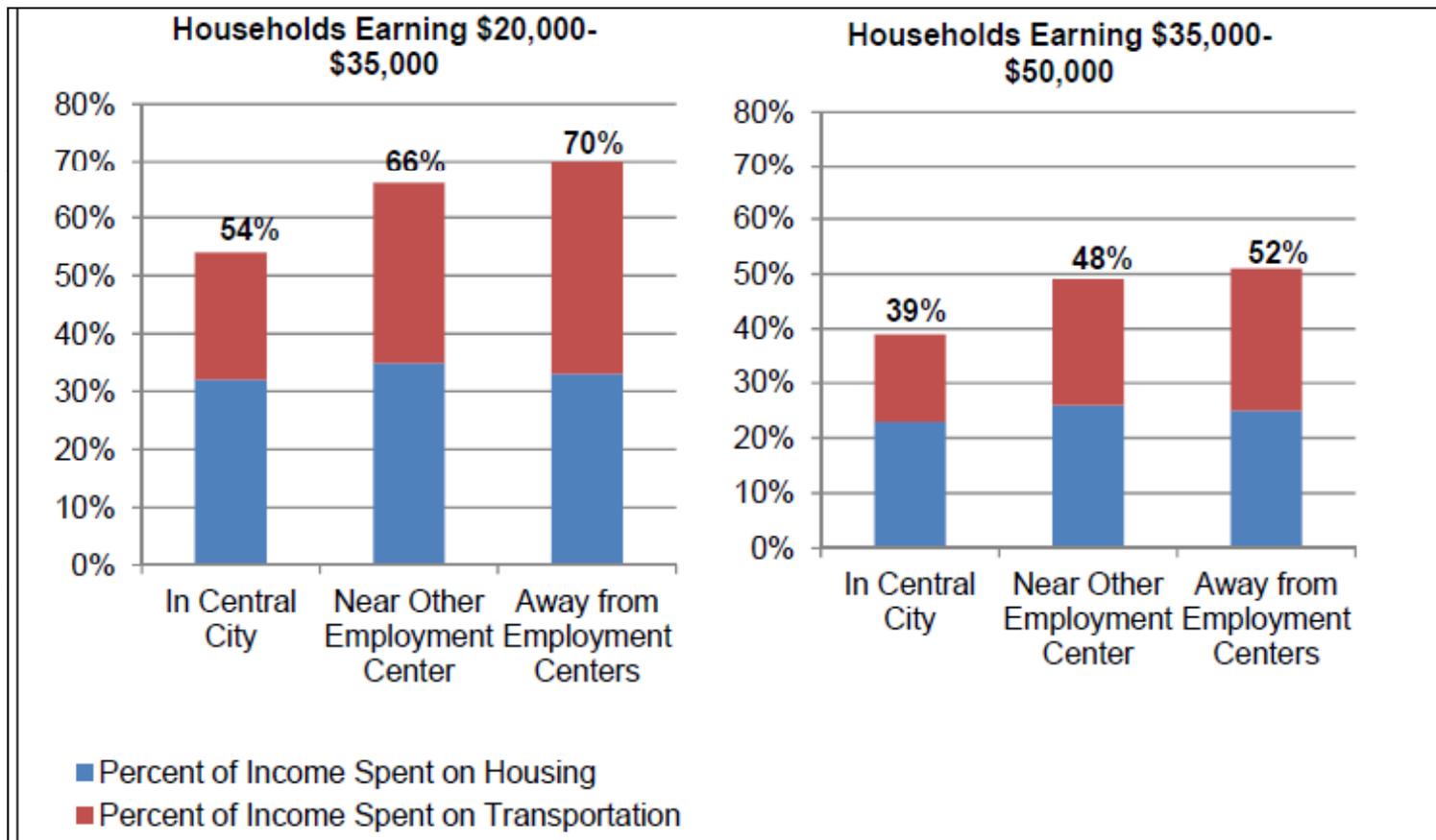
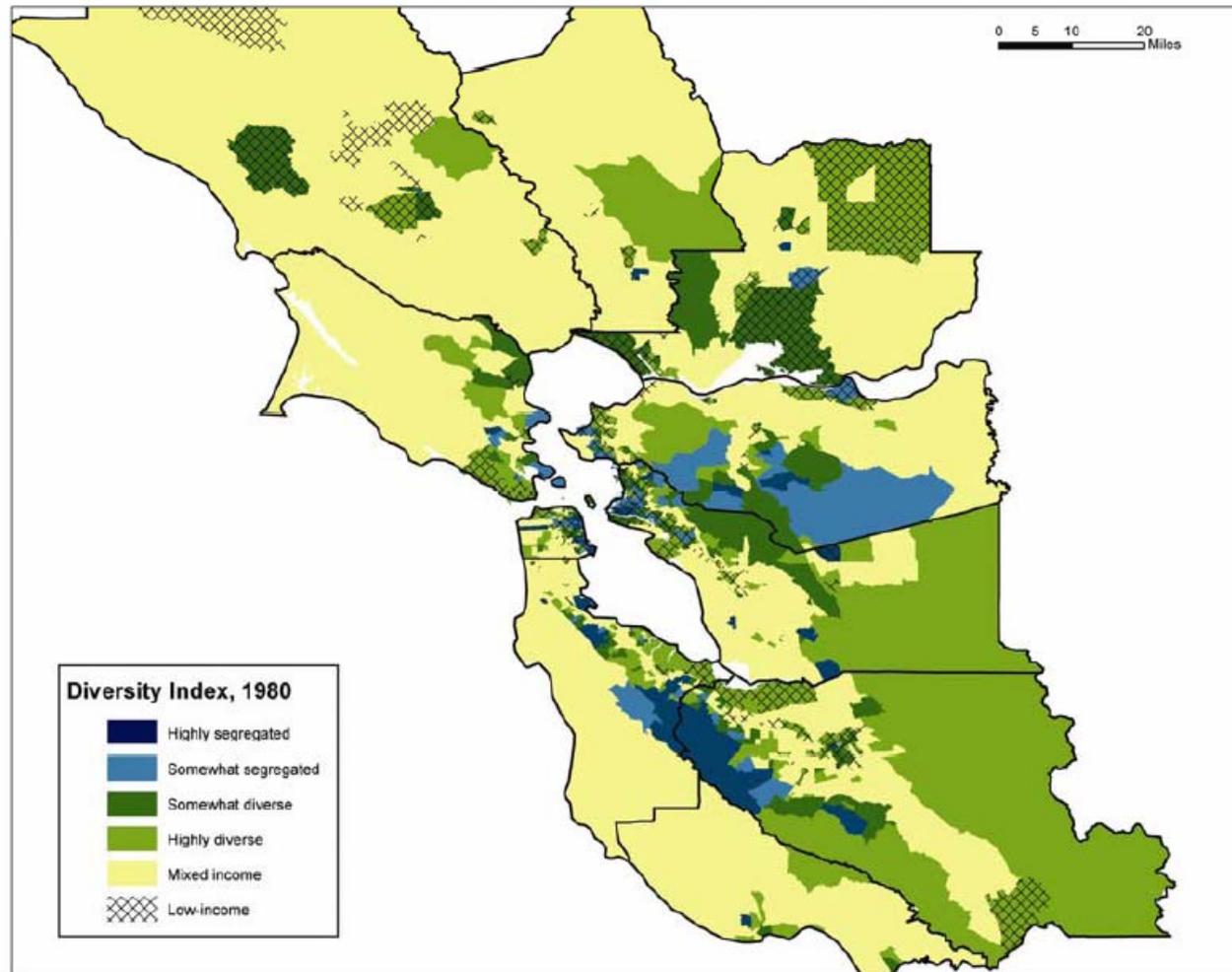


Figure 1. Percent of Income Spent on Housing and Transportation by Neighborhood where Households Live

Source: Center for Neighborhood Technology and Virginia Tech, 2006.

# In 1980, Low Income HH Were Concentrated in The Region's Core, Closer To Transit

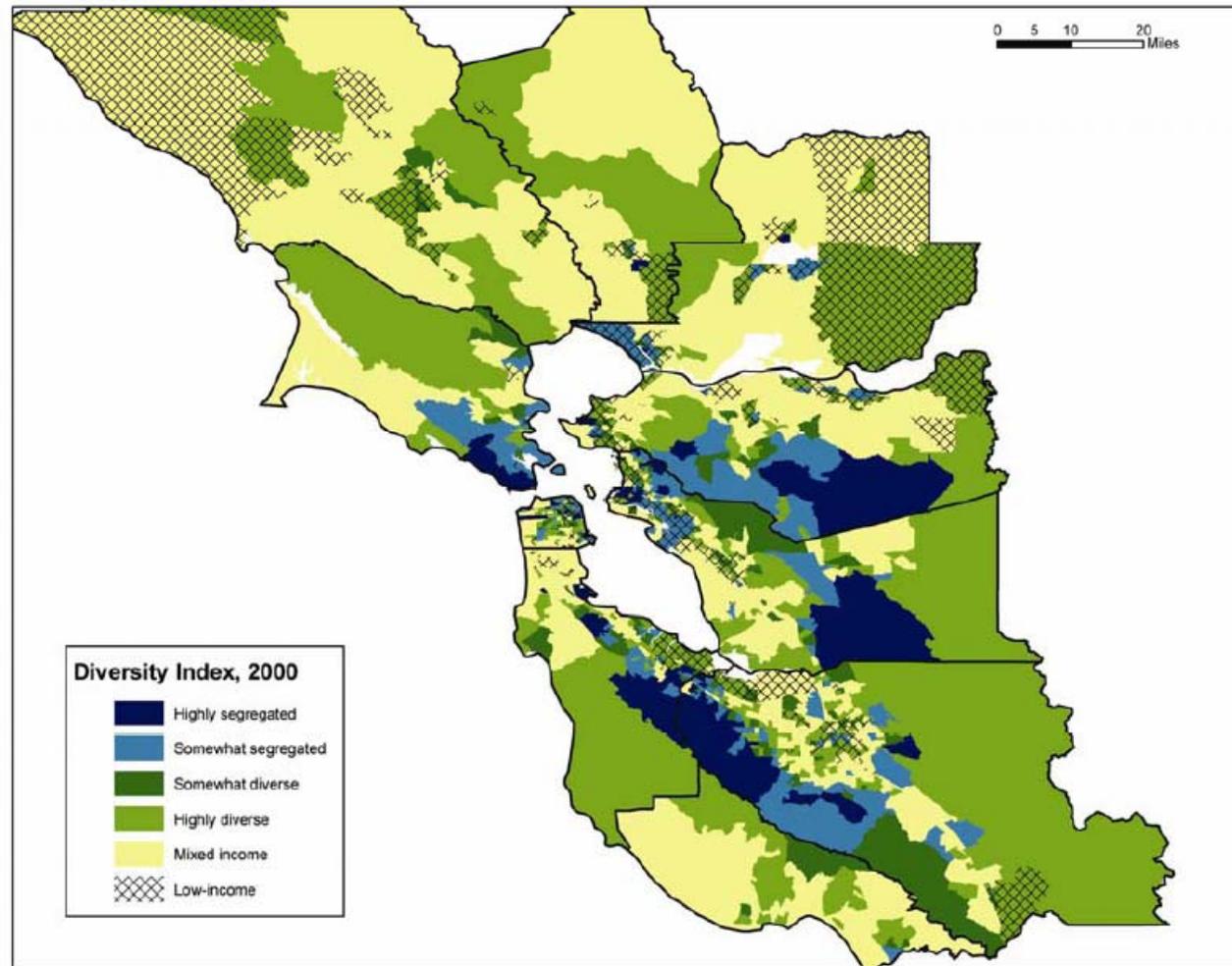
Figure 2: In 1980, income segregation in the Bay Area was limited to core and outer ring neighborhood



Source: Data from the Neighborhood Change Database (Geolytics); Simpson's D calculations by the Center for Community Innovation.

# Over 20 Yrs, Many More Low Income Households Were Pushed Away From Transit

Figure 3: By 2000, income segregation had spread through much more of the core and outer ring.



Source: Data from the Neighborhood Change Database (Geolytics); Simpson's D calculations by the Center for Community Innovation.

# Lesson 6: Invest In Good Pedestrian Design Upfront, or It Will Cost You More in the Long Run: A Lesson From Pittsburgh



# Concluding Thoughts



# Four Important Things To Remember About Transit and TOD as Knoxville Moves Forward

1. Transit Investment Leverages Many Other Benefits
2. These benefits will be greatest if future Development is linked to transit
3. Planning and investment, both public and private will be required
4. Being patient!

