



# GreenDividend

Cities facilitate less driving, saving money and stimulating the local economy

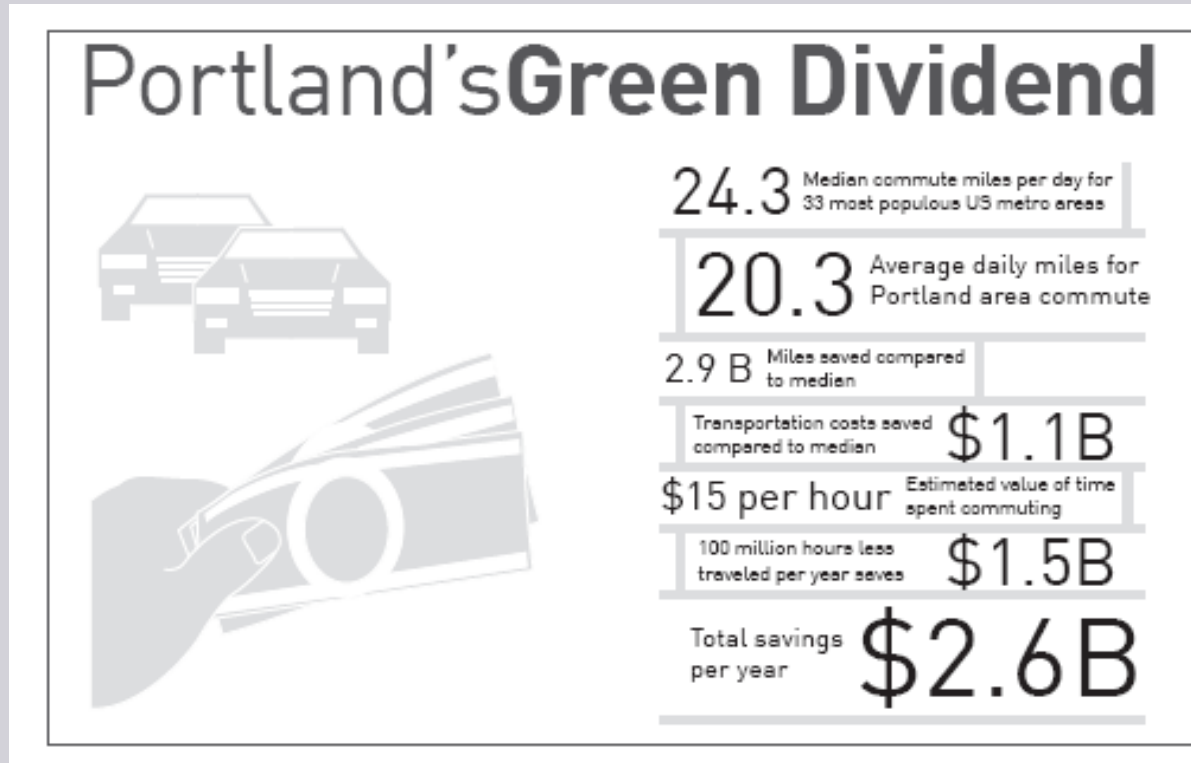
Joseph Cortright, Impresa  
September 2007

# Synopsis

- What is the Green Dividend?
- Portland as a Case Study
- Earning a Green Dividend
- Driven to the Brink
- Forward-Looking Statements

# Green Dividend

How urban form and transit enable people to drive less, saving money that gets spent locally, helping foster urban economic growth



# Does being green pay?

- Is conservation just noble self-sacrifice; well-intentioned but un-economic?
- Or does it make a difference to the local economy?

# Portland



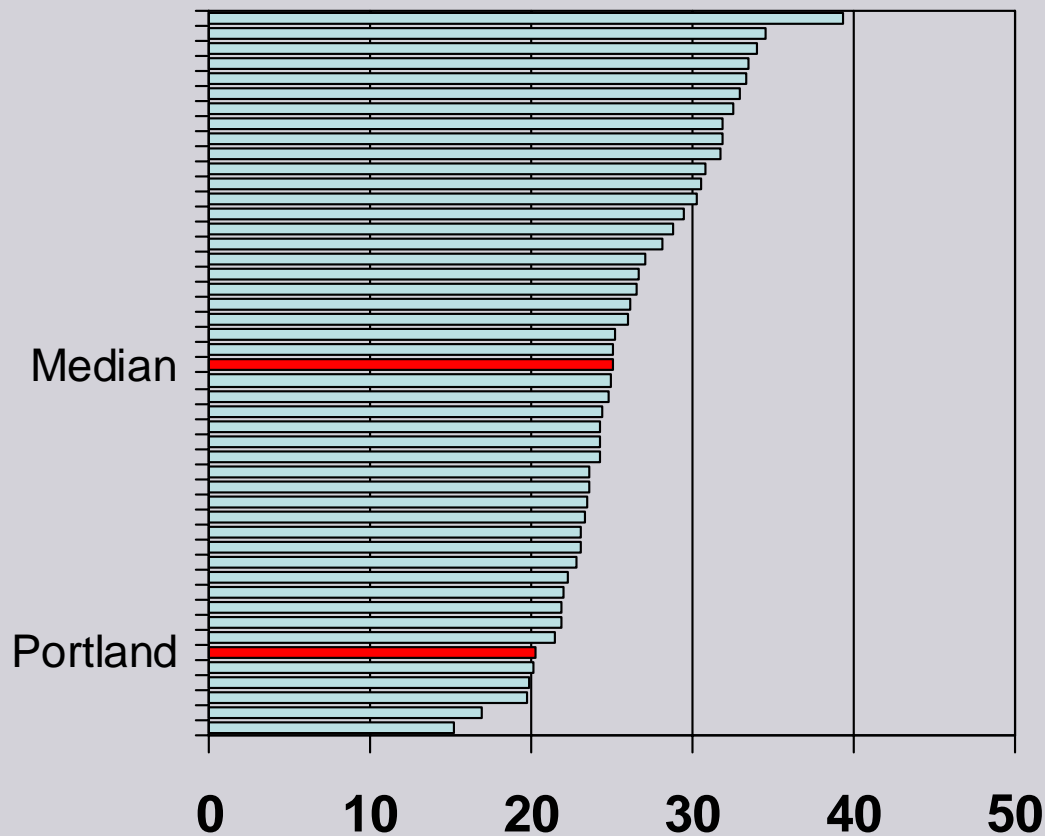
**CEOs** for Cities

# Green Portland

- One of the nation's greenest cities
- City policy to limit greenhouse gases
- Land use and transportation policies
  - Higher density
  - Transportation alternatives
  - Housing choices

# Key Measure: Vehicle Miles Traveled

Metropolitan VMT Per Capita, Per Day



# Monetary Savings

Annual savings to Portland area:

4.0 fewer miles x

365 days x

2.0 million metro population x

\$ 0.40/mile

= \$1.1 billion annual income savings

# Time Savings

- Travel 2.8 billion fewer person miles per year
- (2.2 million people \* 365 days \* 4 miles)
- Value of travel time estimated at \$15/hour
- Savings in travel time
  - 100 million hours (at 27 miles per hour)
  - Value of time saved: \$1.5 billion

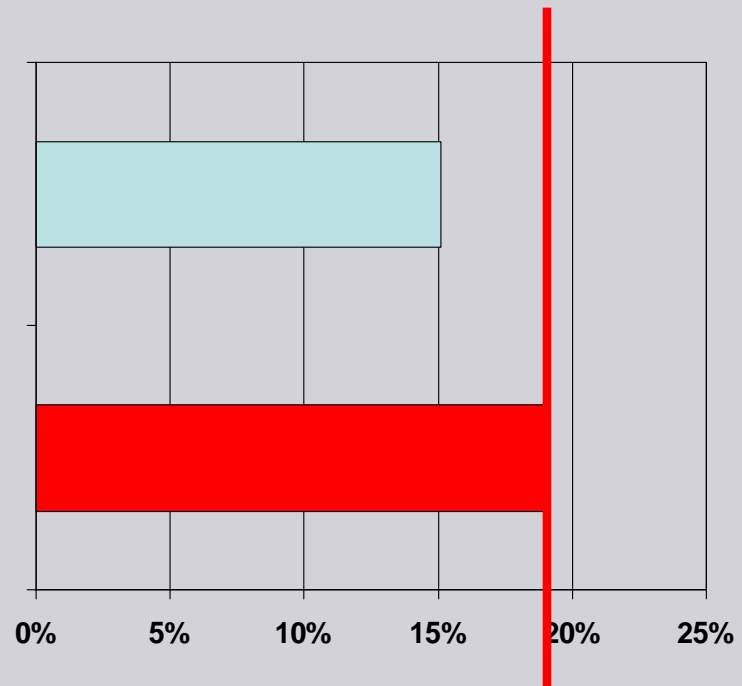
# Corroborating Evidence

- Consumer Spending
- Vehicle Purchases
- Gasoline Sales

# Portland spends less on transportation

Portland  
15.1% of consumer expenditures

Average of 26 Largest Metro Areas  
19.1% of consumer expenditures

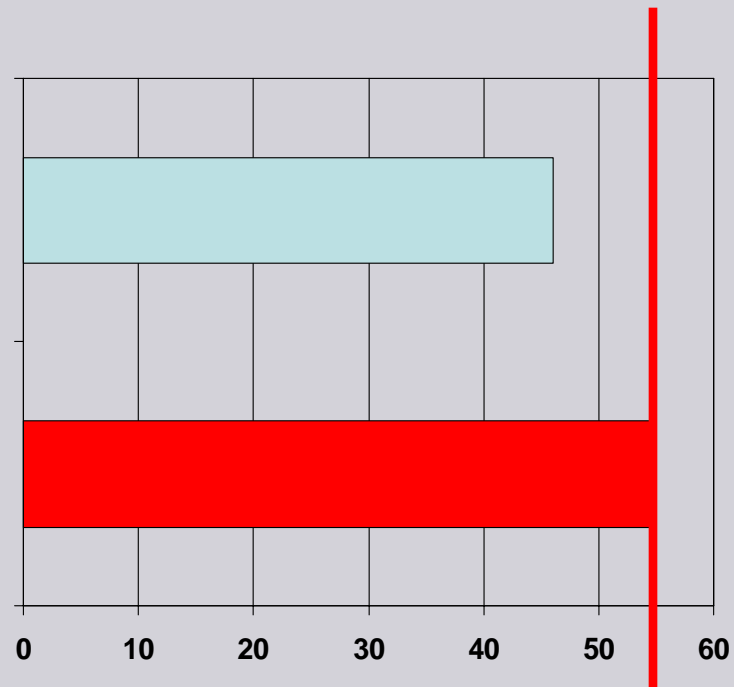


(Source: Impresa analysis of Department of Labor data)

# Portland residents buy fewer new cars

Oregon  
46 Vehicles per 1,000 Population

United States  
55 Vehicles per 1,000 population

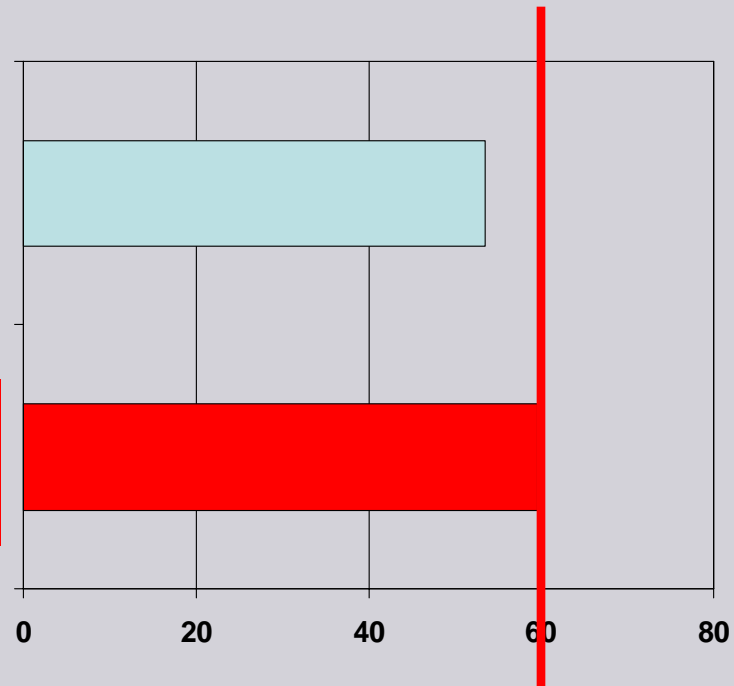


(Source: Impresa analysis of National Automobile Dealers Association data)

# Portland residents buy less gasoline

Oregon  
53.5 million BTU per capita

United States  
59.6 million BTU per capita



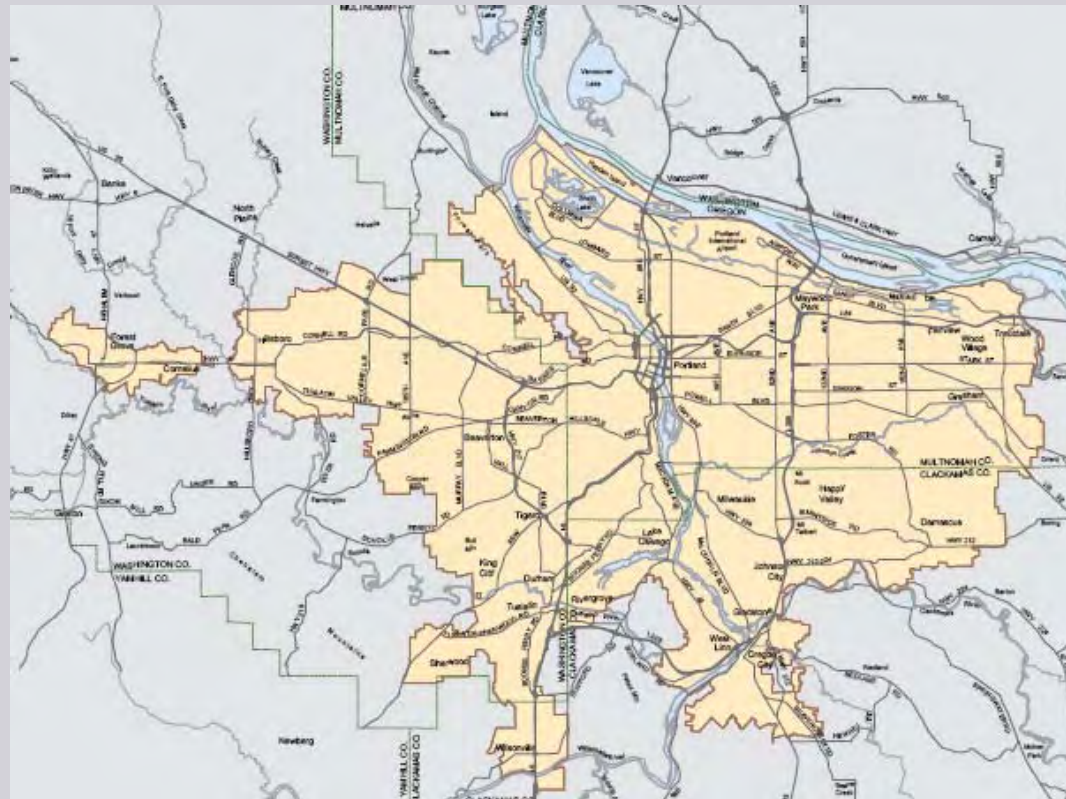
(Source: Impresa analysis of Energy Information Administration data)

# How Portland does it

- More Compact Development
  - Urban Growth Boundary
  - Less Sprawl
- Alternatives to Auto Travel
  - Transit
  - Bicycling
- Personal Choices

# Compact Land Use

- Portland's Urban Growth Boundary
- Limits on exclusionary zoning

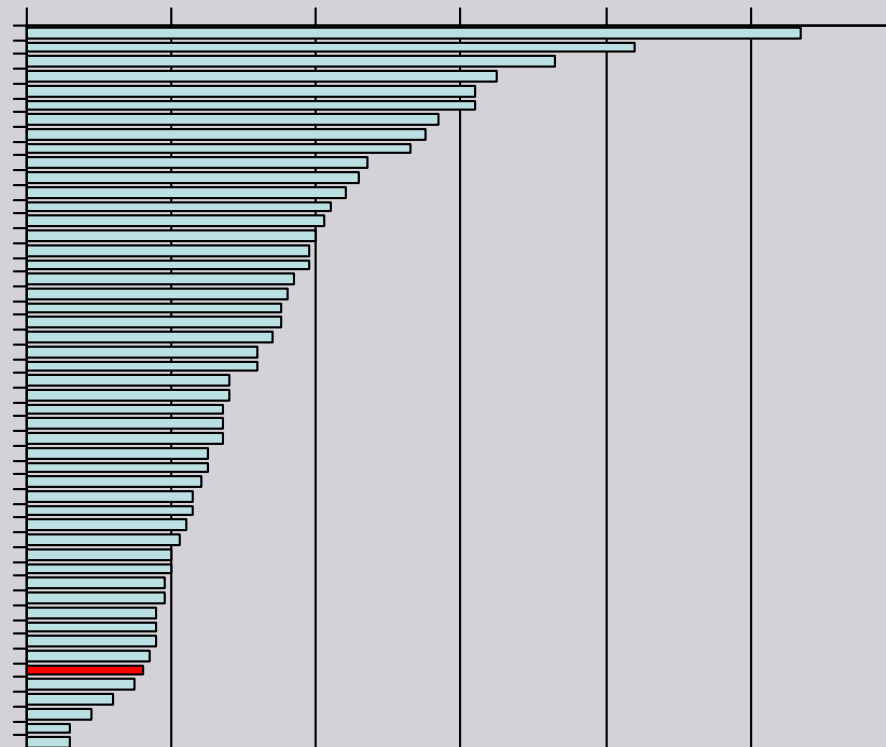


# Portland's jobs sprawl less

Job Sprawl Index, 2004

0 2 4 6 8 10 12

Job Sprawl Index:  
Ratio of Jobs 10 to 25 miles  
From CBD to  
Jobs less than 3 miles from CBD



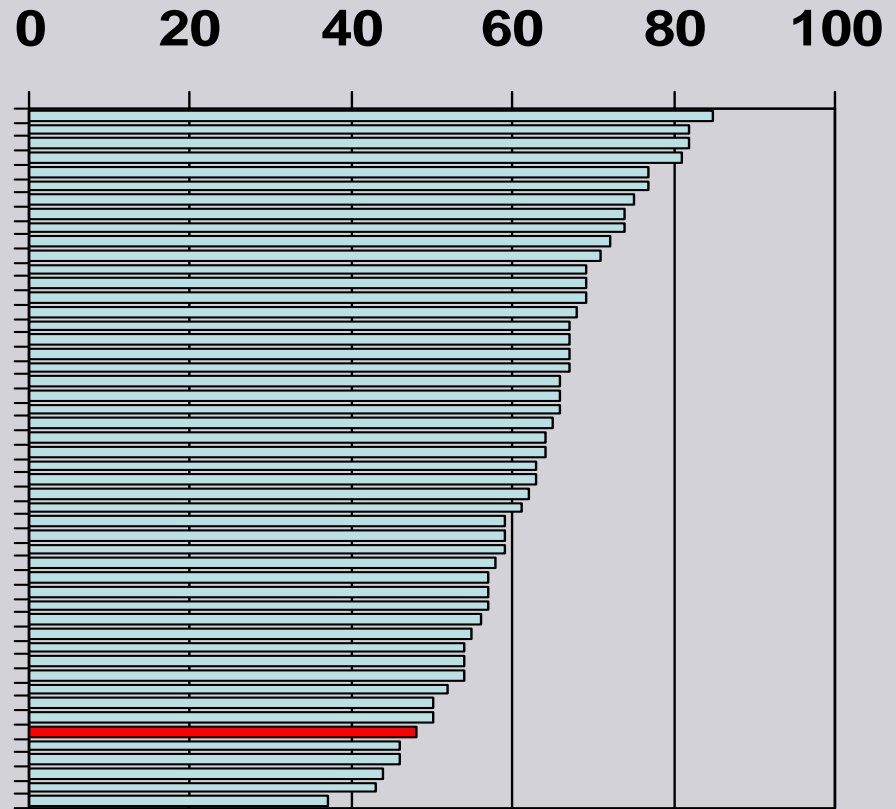
Portland--Salem, OR--WA CM

Source: **GreenDividend** (Impresa calculations from County Business Pattern data)

# Less Economic Segregation

## Economic Segregation Index:

Percent of High income households that would have to move to balance high and low income households to regional average in each neighborhood)



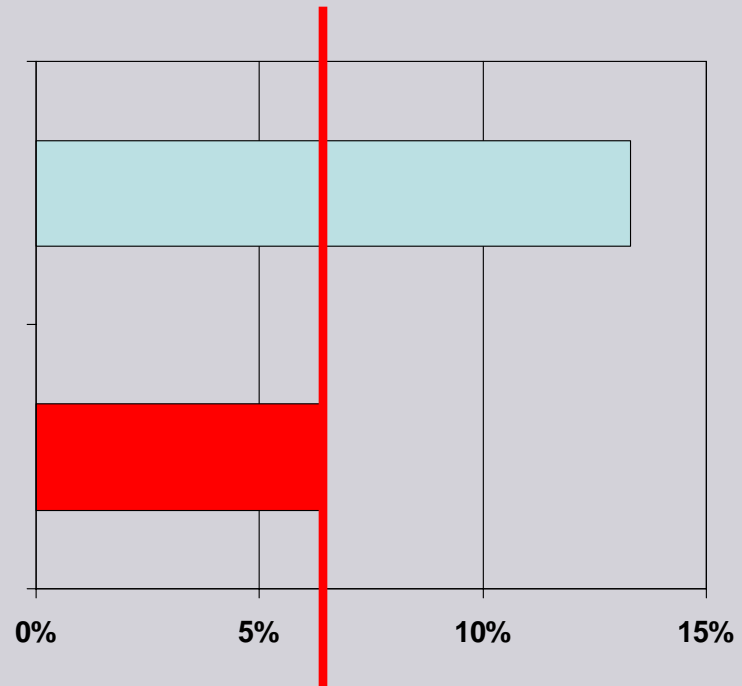
Portland-Vancouver, OR-WA PMSA

Source: Lewis Mumford Institute)

# Portland residents ride transit more

Portland  
13.3% Commute by Transit

United States  
6.5% Commute by Transit



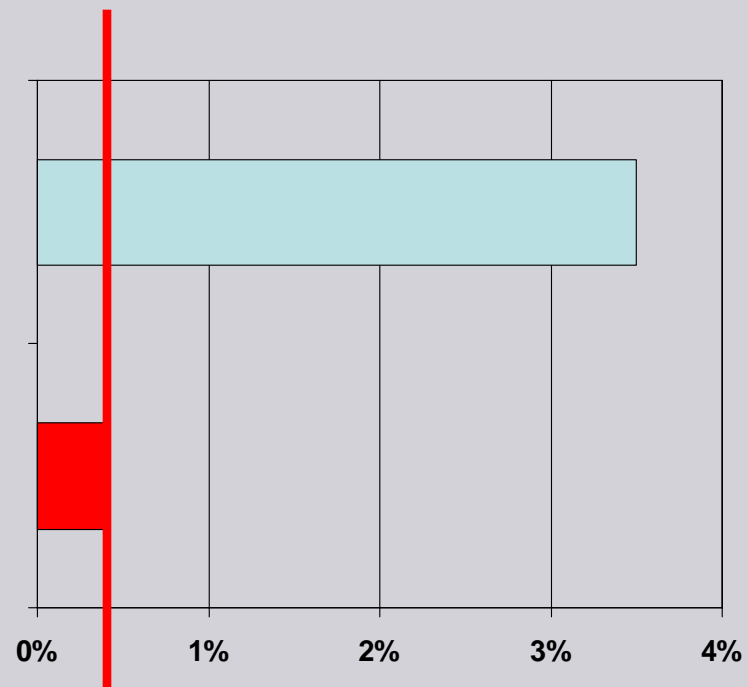
(Source: American Community Survey, 2005)

# Portland residents seven times as likely to bicycle to work

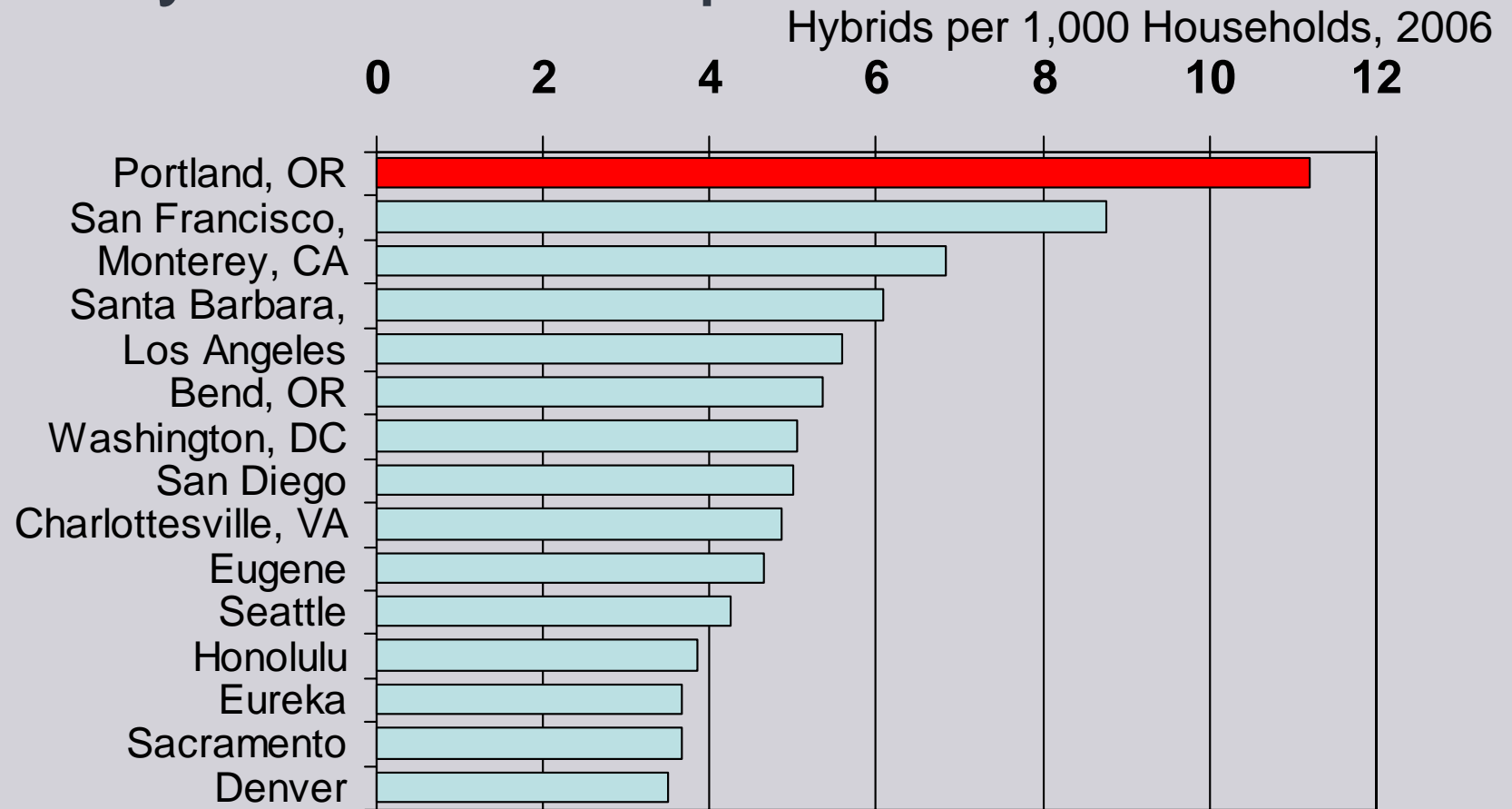
Portland

3.5% of commuters bicycle to work

Average for Cities of 85,000 plus  
0.4% of commuters bicycle to work



# Most Hybrids Per Capita



Source: <http://www.hybridcars.com/market-dashboard/feb07-regional.html>

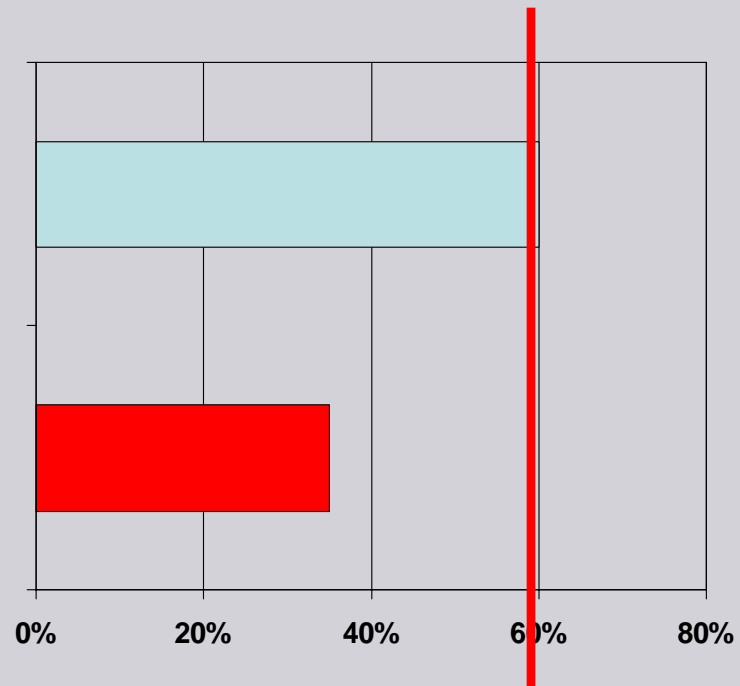
# Happier Citizen Commuters

Portland

60% rate transportation system “good or excellent”

Average of Metro Areas

35% rate transportation system “good or excellent”



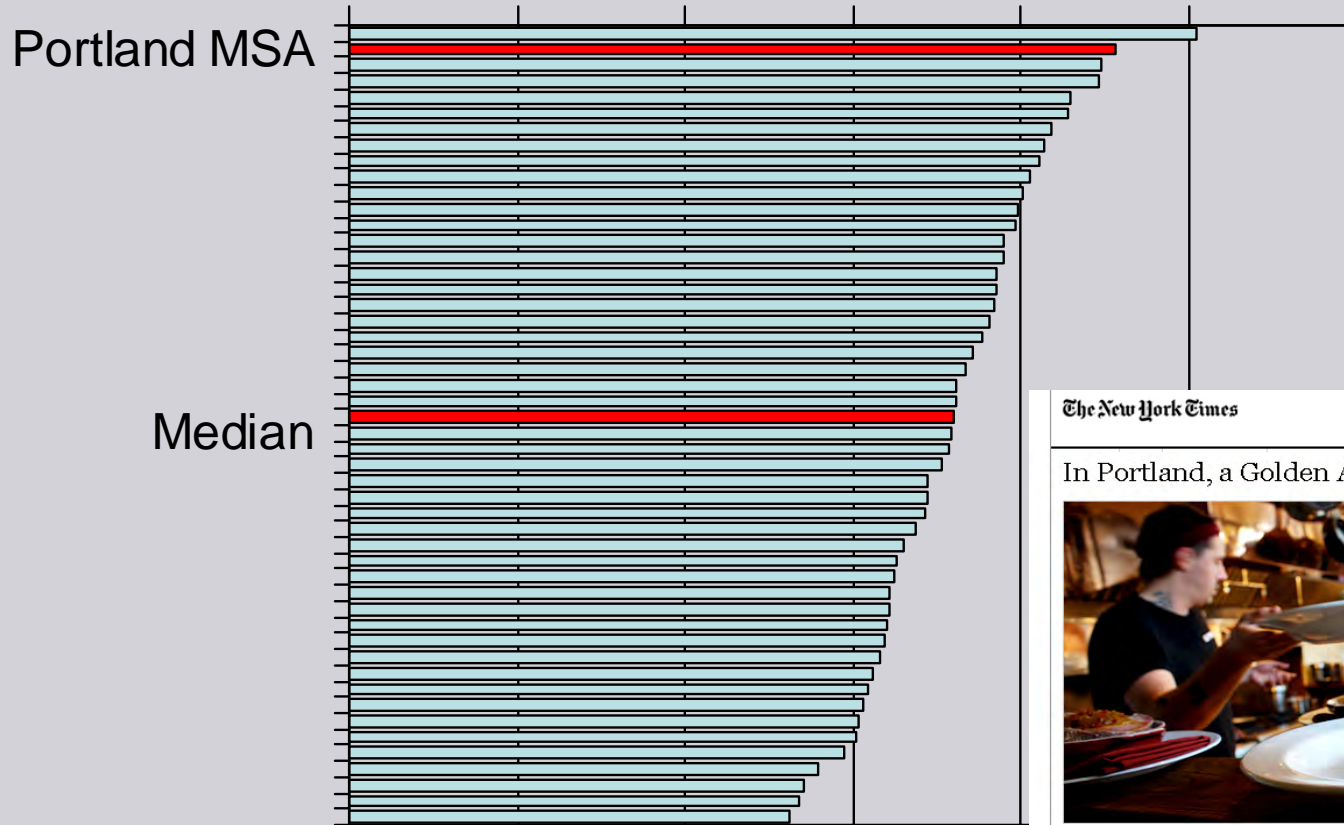
# More Local Spending

- Spending on cars and fuel leaves the regional economy
- Other spending has less leakage
- \$1 billion in additional local purchasing power for all other industries

# More Restaurants

Restaurants per 10,000 population

0 2 4 6 8 10 12



The New York Times

Dining & Wine

In Portland, a Golden Age of Dining and Drinking



Michael Rubenstein for The New York Times

## And, yes, Lower Carbon Emissions

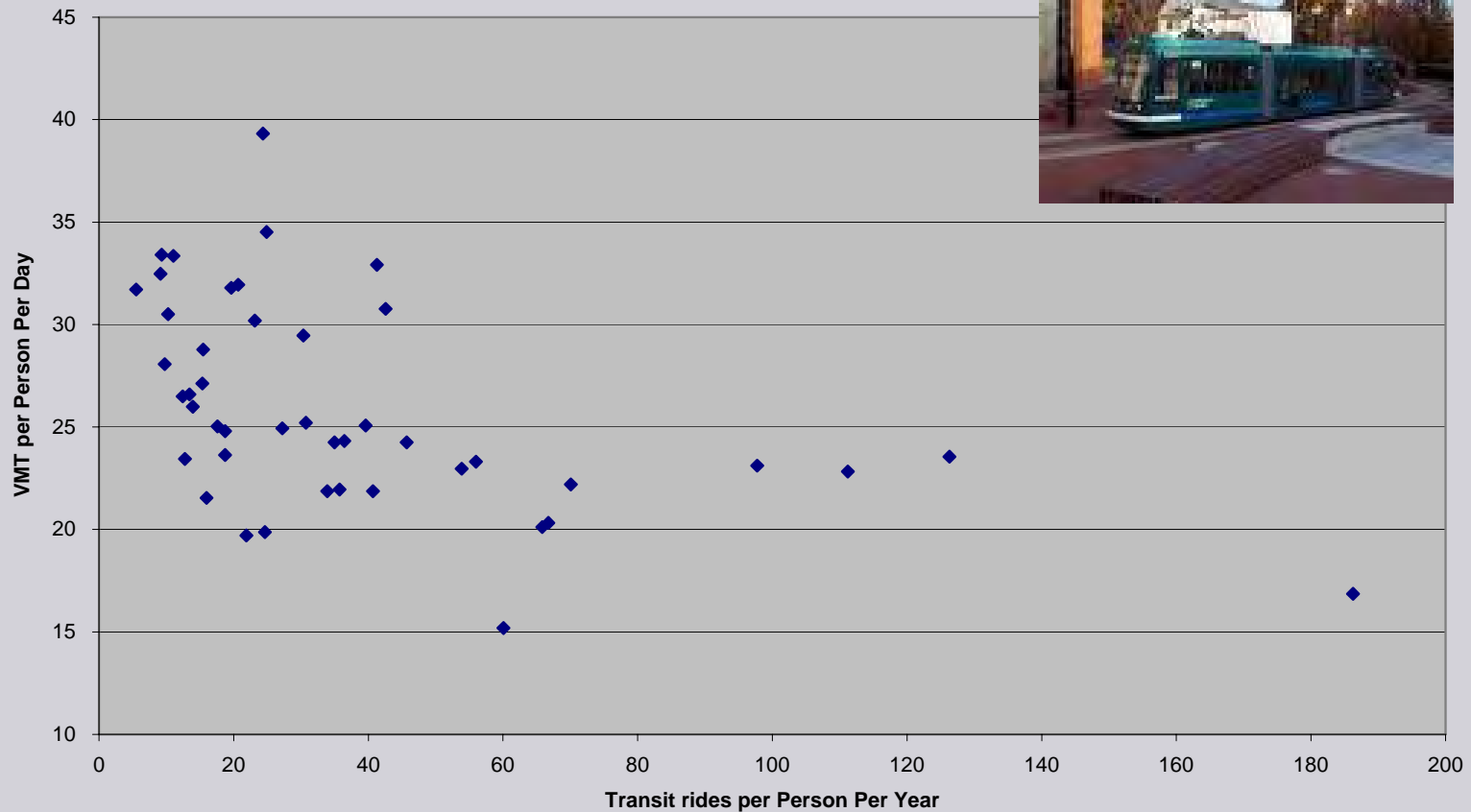
- 2 million people drive 4 miles less per day, yielding 8 million fewer miles per day
- At 20 miles per gallon, that saves 400,000 gallons of gas
- At 19.4 pounds of CO<sup>2</sup> emitted per gallon, 365 days a year
- that saves 1.4 million tons per year

# How to earn the Green Dividend

- Transit
- Urban Retrofitting
  - Commercial Redevelopment
  - Mixed Use In-Fill
- Personal Choice

# Transit is a key

**Transit Reduces Vehicle Miles Travelled**  
Cities with well-used transit systems drive less



Source: Calculations from Census Bureau and Department of Transportation data

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# Commercial Redevelopment

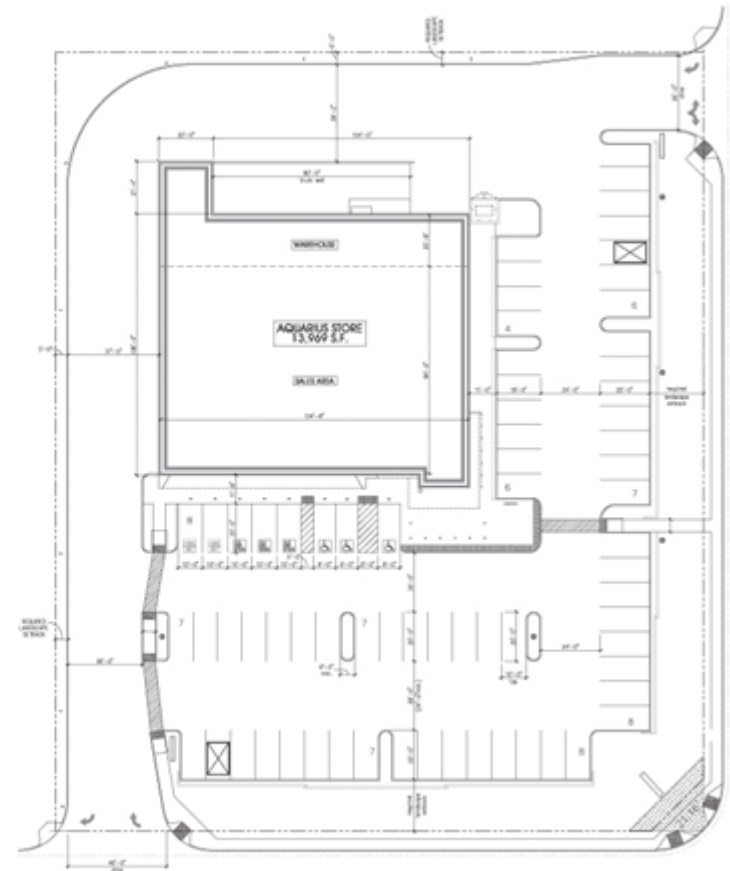
TESCO's  
"Fresh & Easy:  
Developing 14,000  
square foot stores.  
Targeted for urban  
neighborhoods.

"Since we'll be right in  
the neighborhood, we'll  
help reduce our  
customer's travel time  
and boost local trade."



**SITE DATA:**

EXISTING ZONING	PAD
LAND AREA	83,108 S.F. = 1.94 AC.
BUILDING AREA	13,969 S.F.
BUILDING / LAND COVERAGE	16.8.0%
PARKING REQUIRED TOTAL	69 SPACES
ACCESSIBLE PARKING	4 SPACES
PARENT & CHILD PARKING	2 SPACES



# Mixed Used Infill

- Concord, California



# Personal Choice

- 38 Million Americans Move Every Year
- Lots of Opportunity to Shorten Commutes
  - 4,068,000 moved in connection with a change in job
  - 1,342,000 moved to shorten their commute

(Source: Census Bureau, 2005)



# GreenDividend

A Great Opportunity

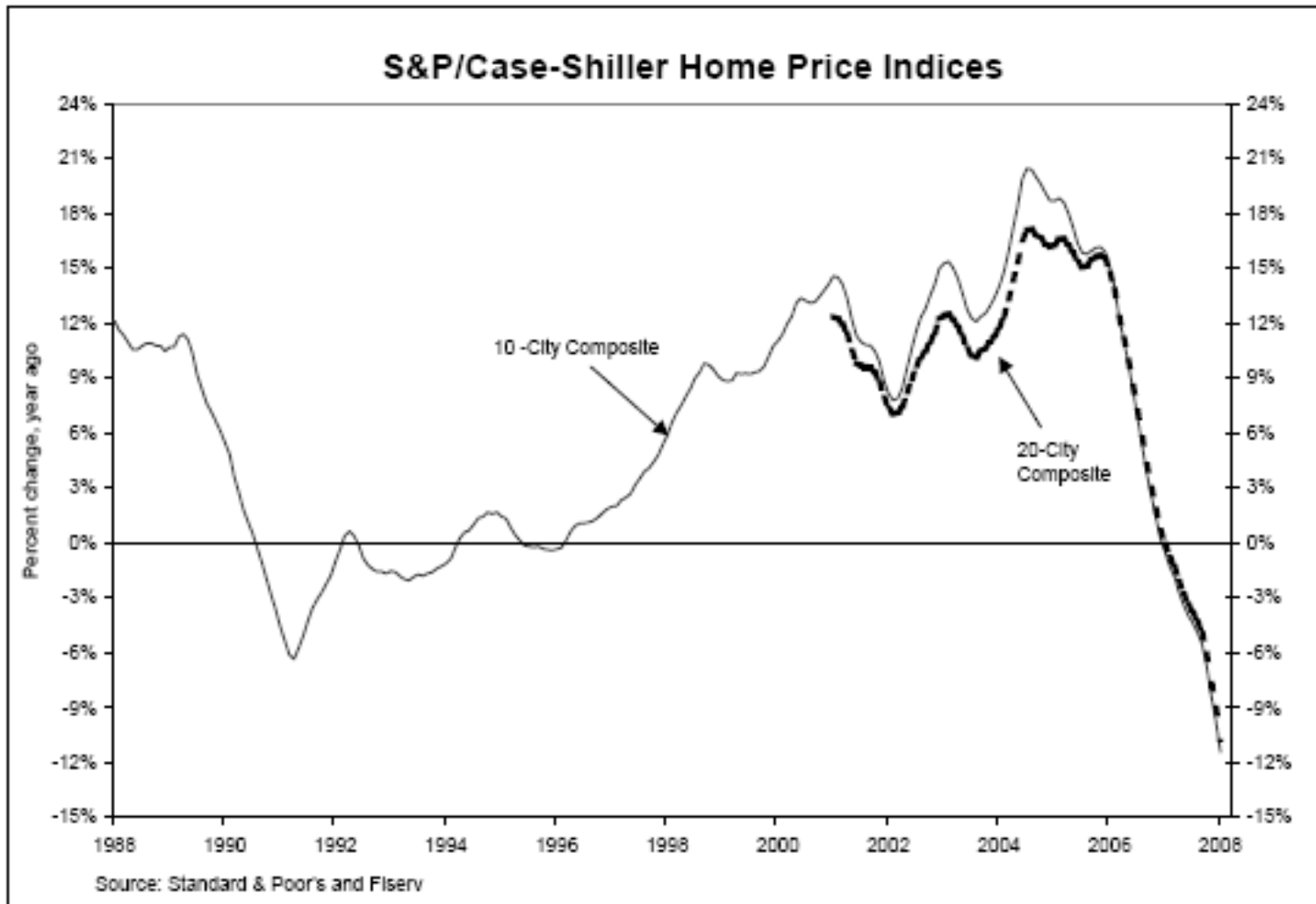
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# Driven to the Brink

How the gas price spike  
popped the housing bubble  
and devalued the suburbs

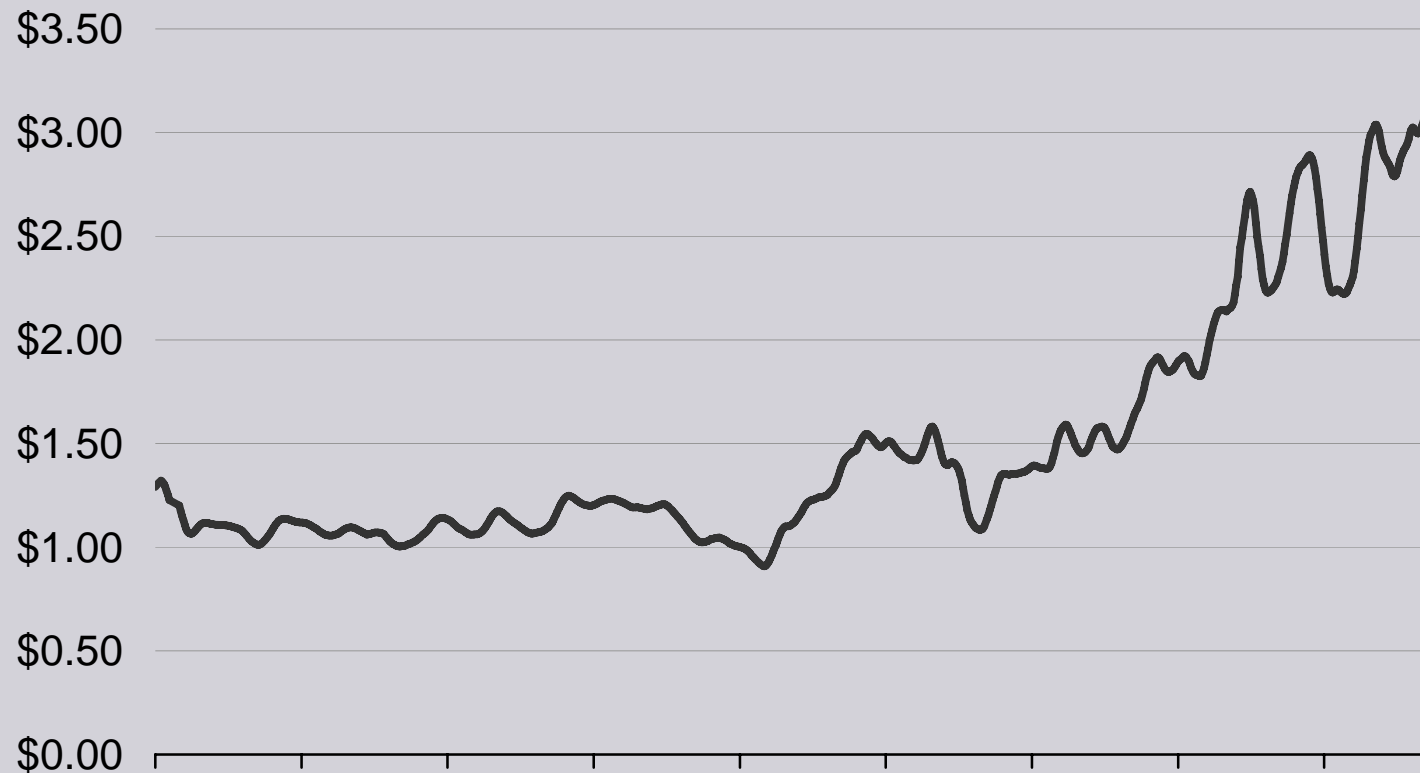
# The Housing Bubble Has Burst



# A Sea Change in Energy Prices

## Gas Prices Break \$3.00 Gallon

Average Price of Gasoline (Gallon) (12 week moving average)



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Source: Bureau of Economic Analysis

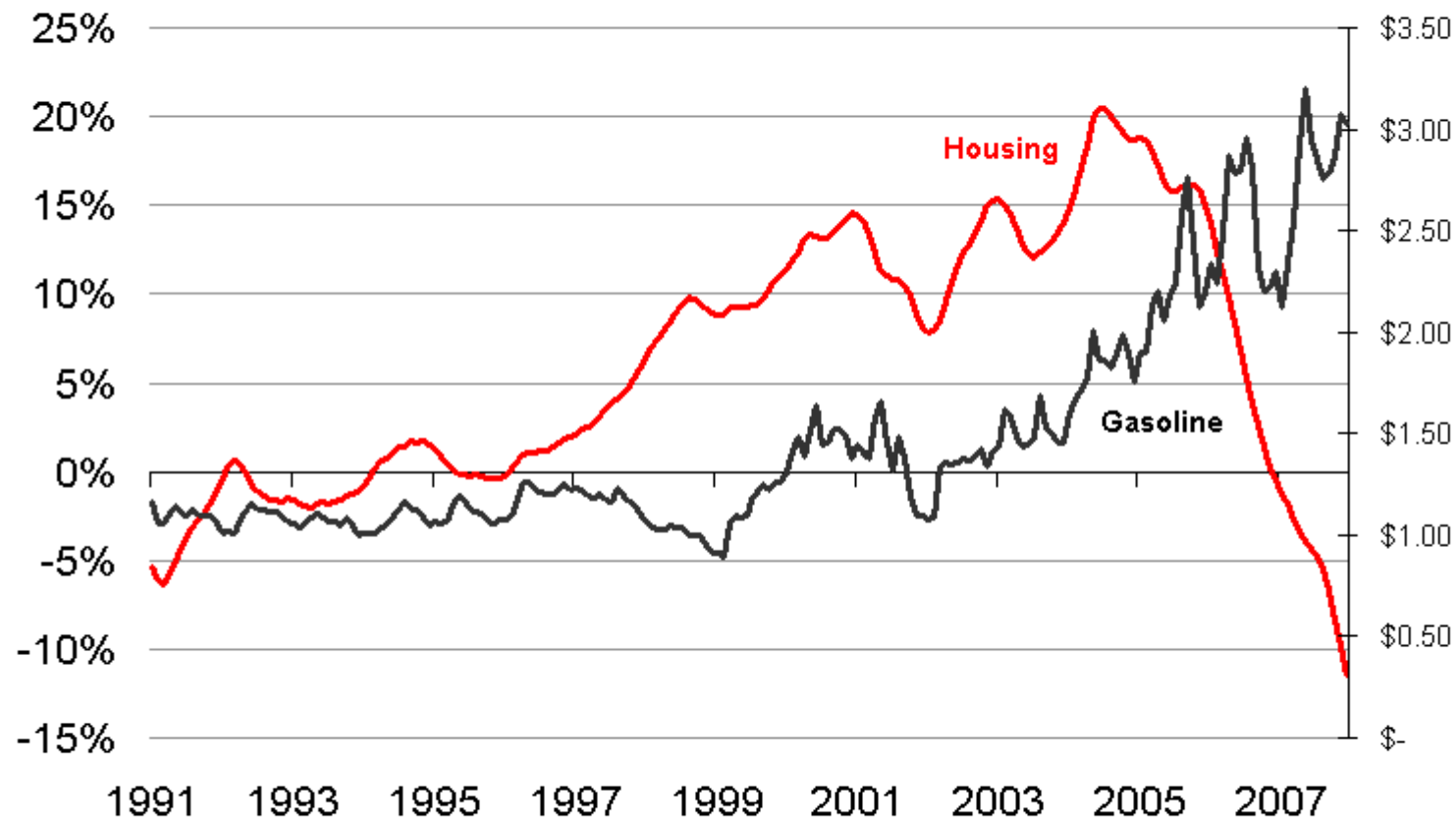
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# Housing Bubble Meets the Gas Price Spike

Annual Housing Price Change

Price of Gasoline

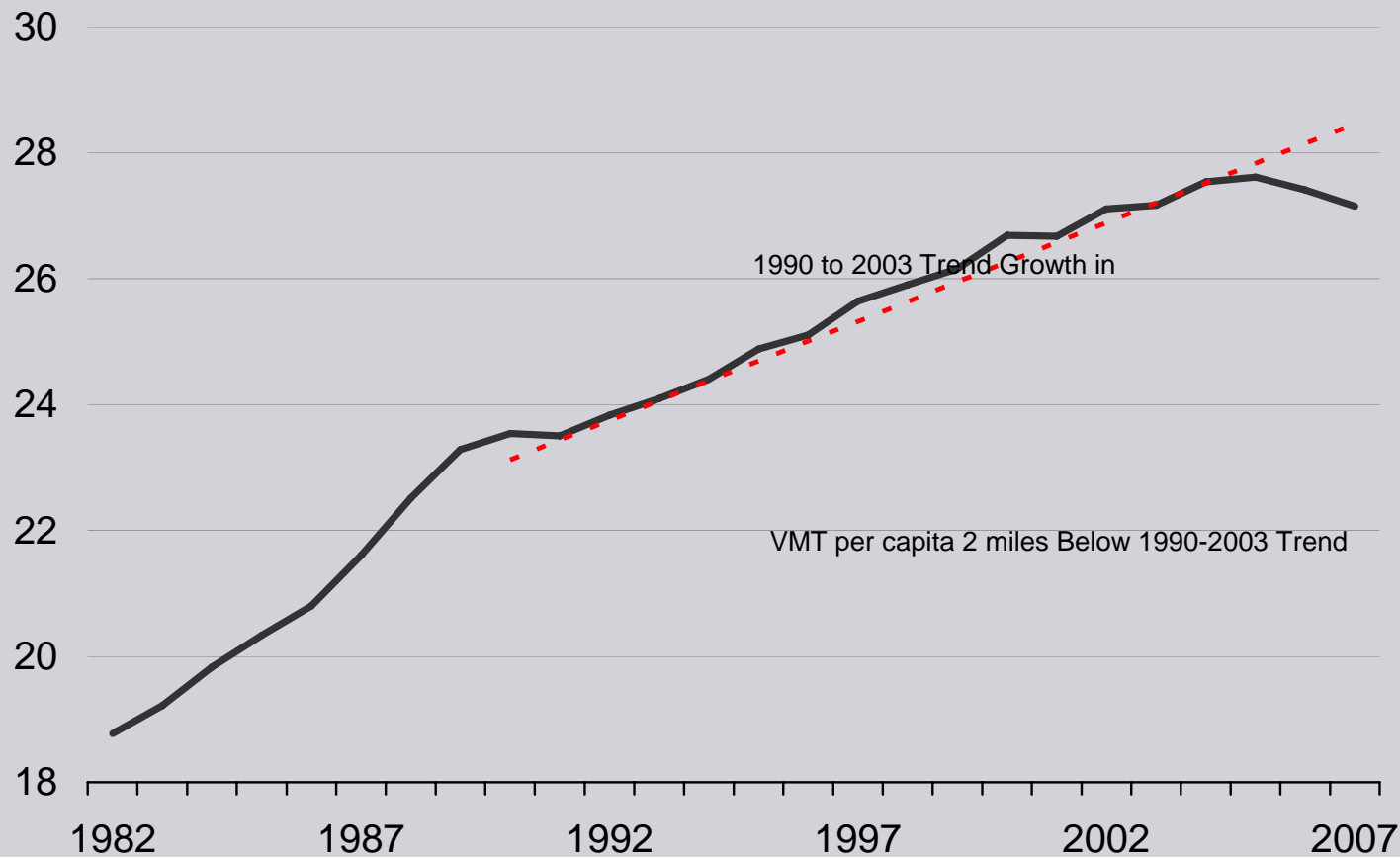


Source: Case-Shiller housing data, Energy Information Administration gas price data

# An Historic Reversal

## Car Travel Now Declining Per Capita

Vehicle Miles Travelled Per Capita Per Day, United States



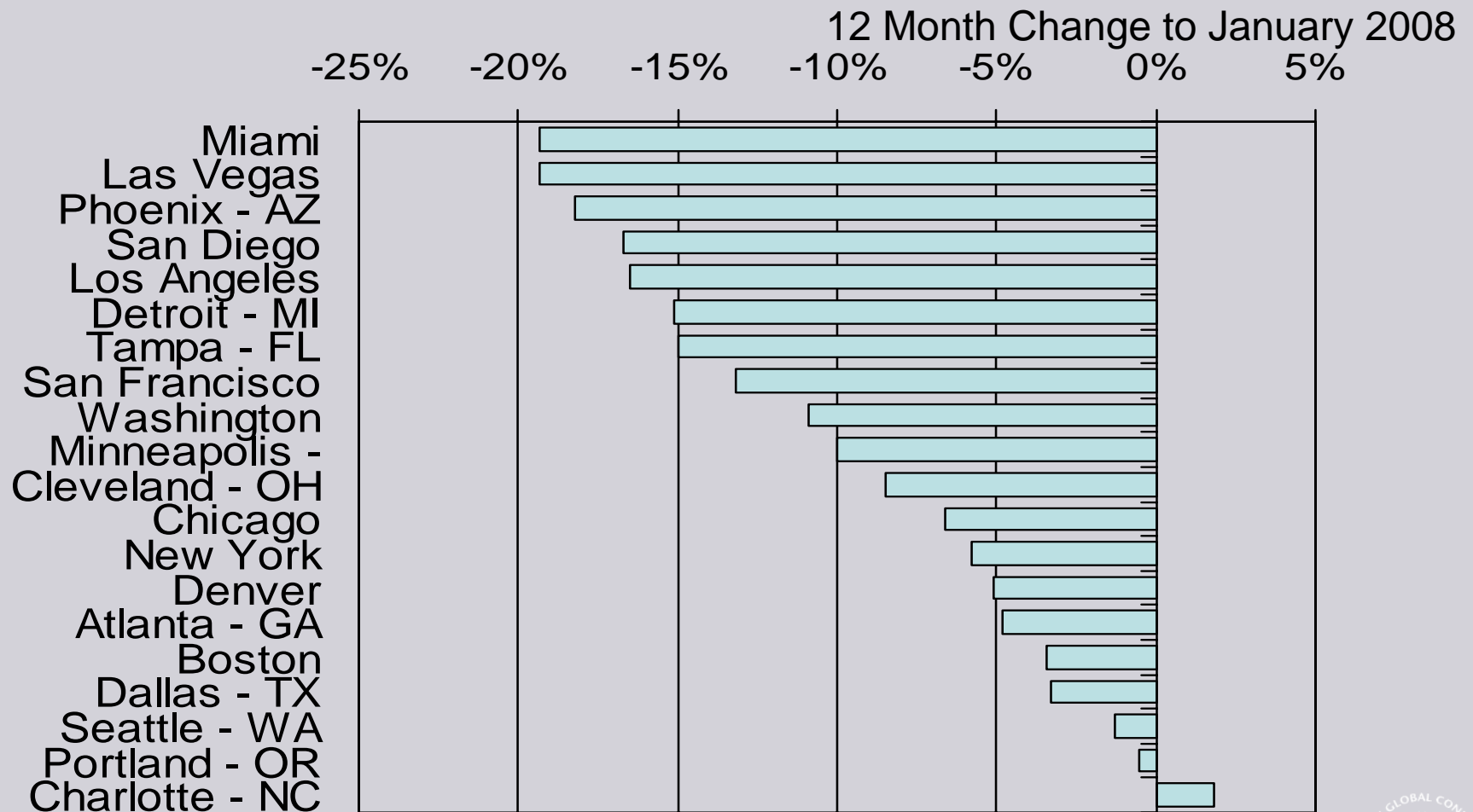
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Source: Impresa calculations, US DOT data

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# Some Markets Have Experienced Much Larger Declines



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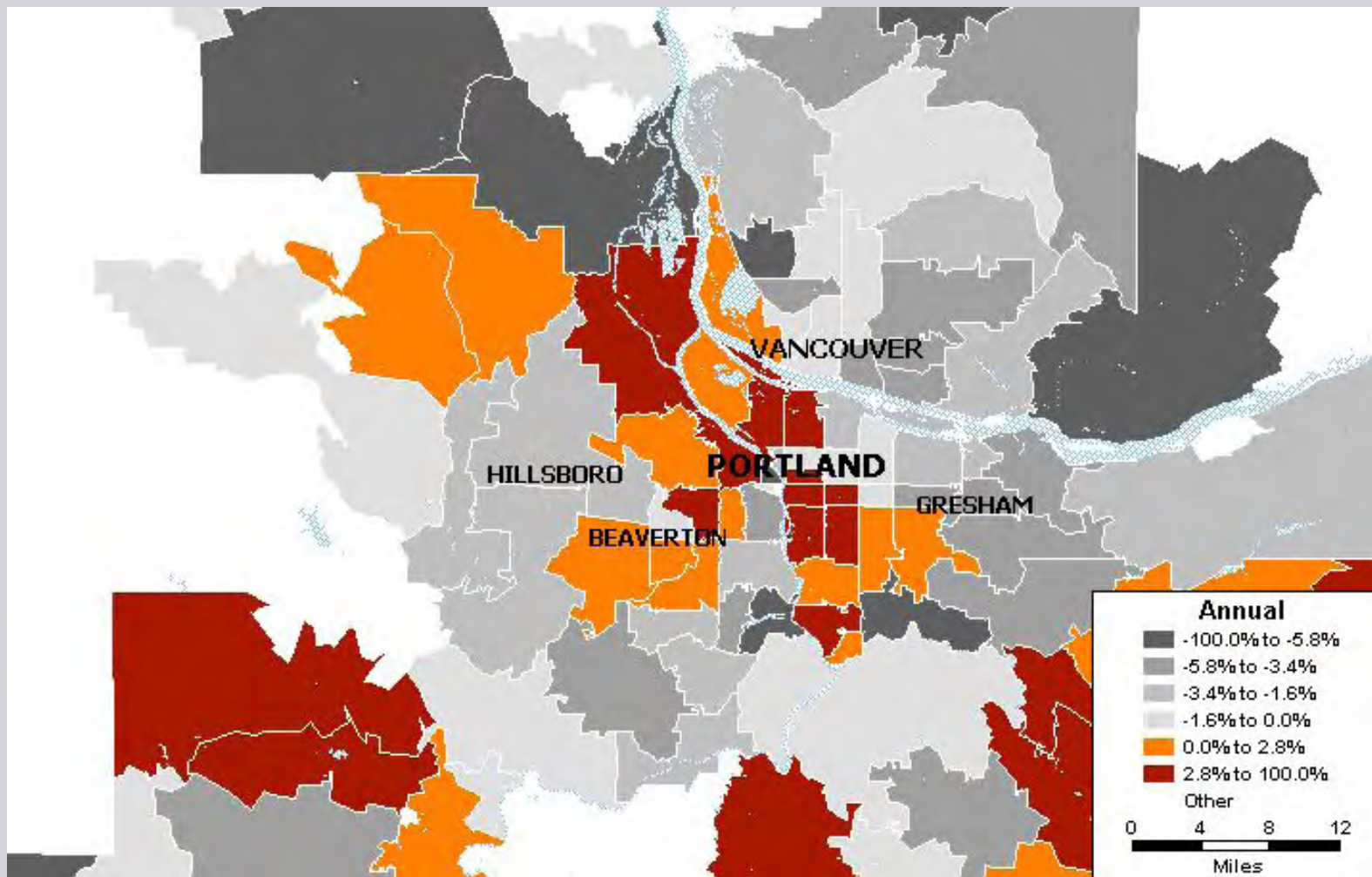
STANDARD  
& POOR'S

S&P/Case-Shiller® Home Price Indices

CEOs for Cities

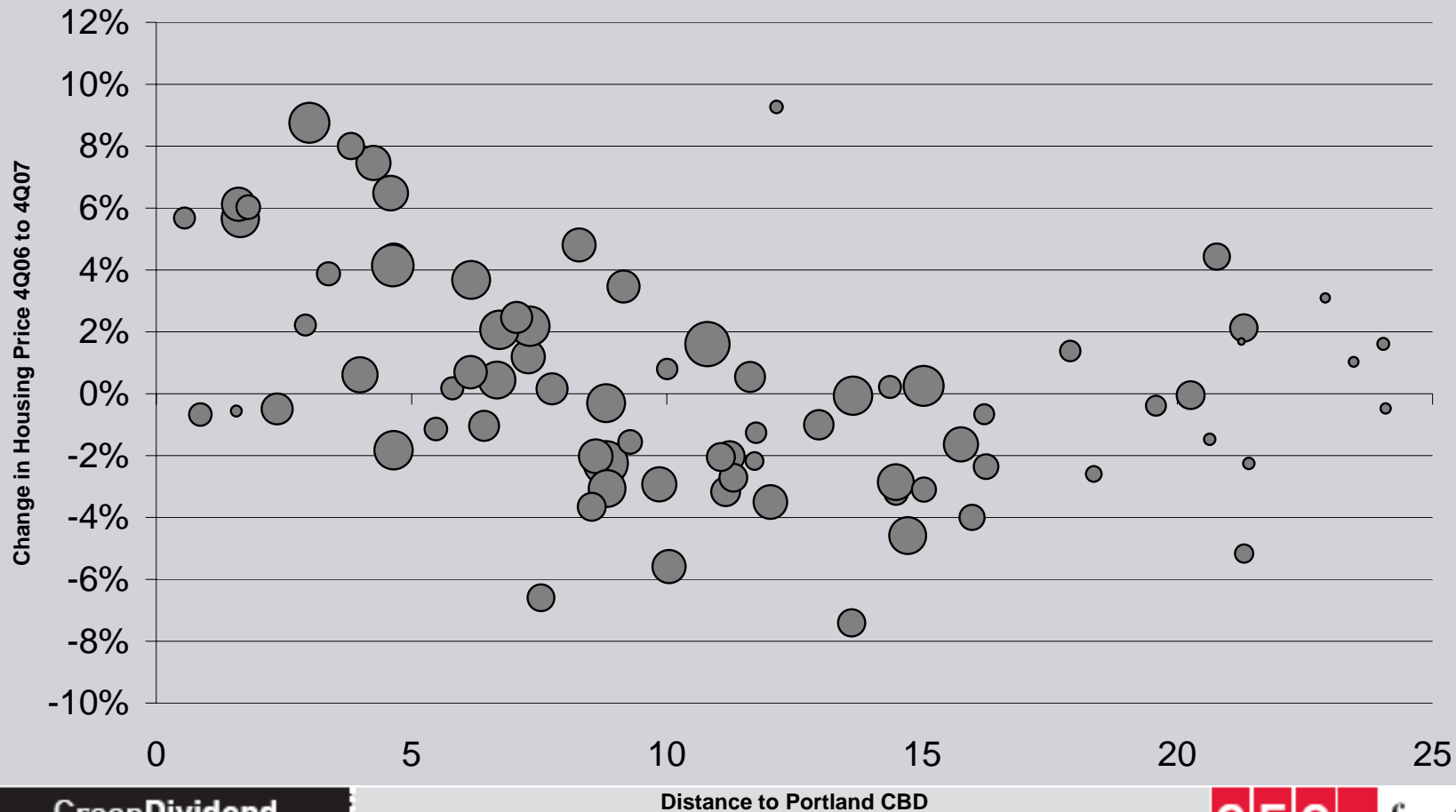


# Portland



# Declines in the Suburbs

Housing Prices Declines Greatest at the Suburban Fringe  
Portland-Vancouver MSA



GreenDividend  
Change in Median Single-Family Home Price, Relative to MSA Median (Source: Zillow)

# Metros with weak cores had biggest prices declines

## Core Vitality Strongly Related to Housing Price Change

Relative Core Vitality



GreenDividend

Housing Price Change  
Sources: Foreclos, City Vitals Relative Core Vitality

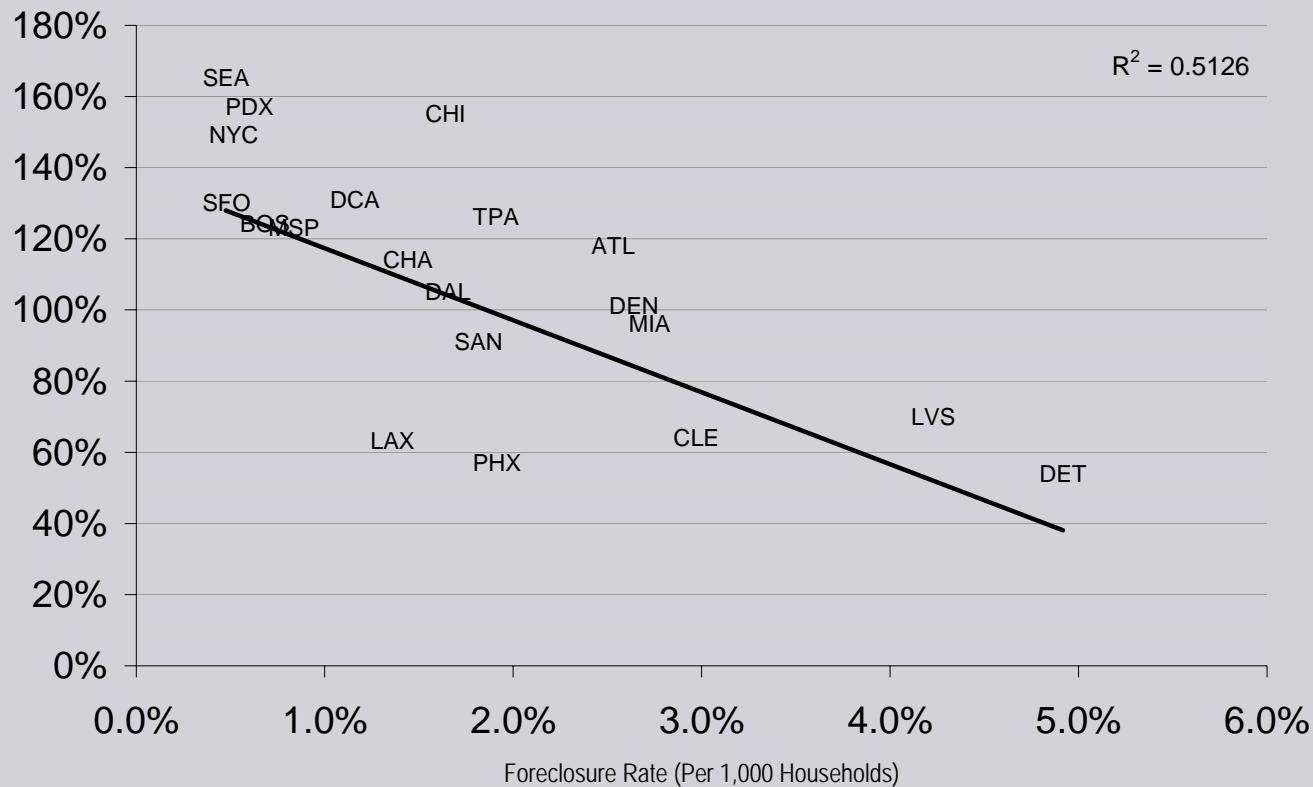
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# Metros with strong cores have lower foreclosure rates

## Core Vitality Strongly Related to Foreclosures

Relative Core Vitality



# So the world is changing . . .

- Global warming
- Expensive gas
- Trend toward more compact development

# Global Warming Goals

- Oregon
  - Reduce CO<sub>2</sub> 75% from 1990 levels
- Washington
  - Reduce CO<sub>2</sub> 50% from 1990 levels
- Transportation is 50% of Oregon's greenhouse gas emissions

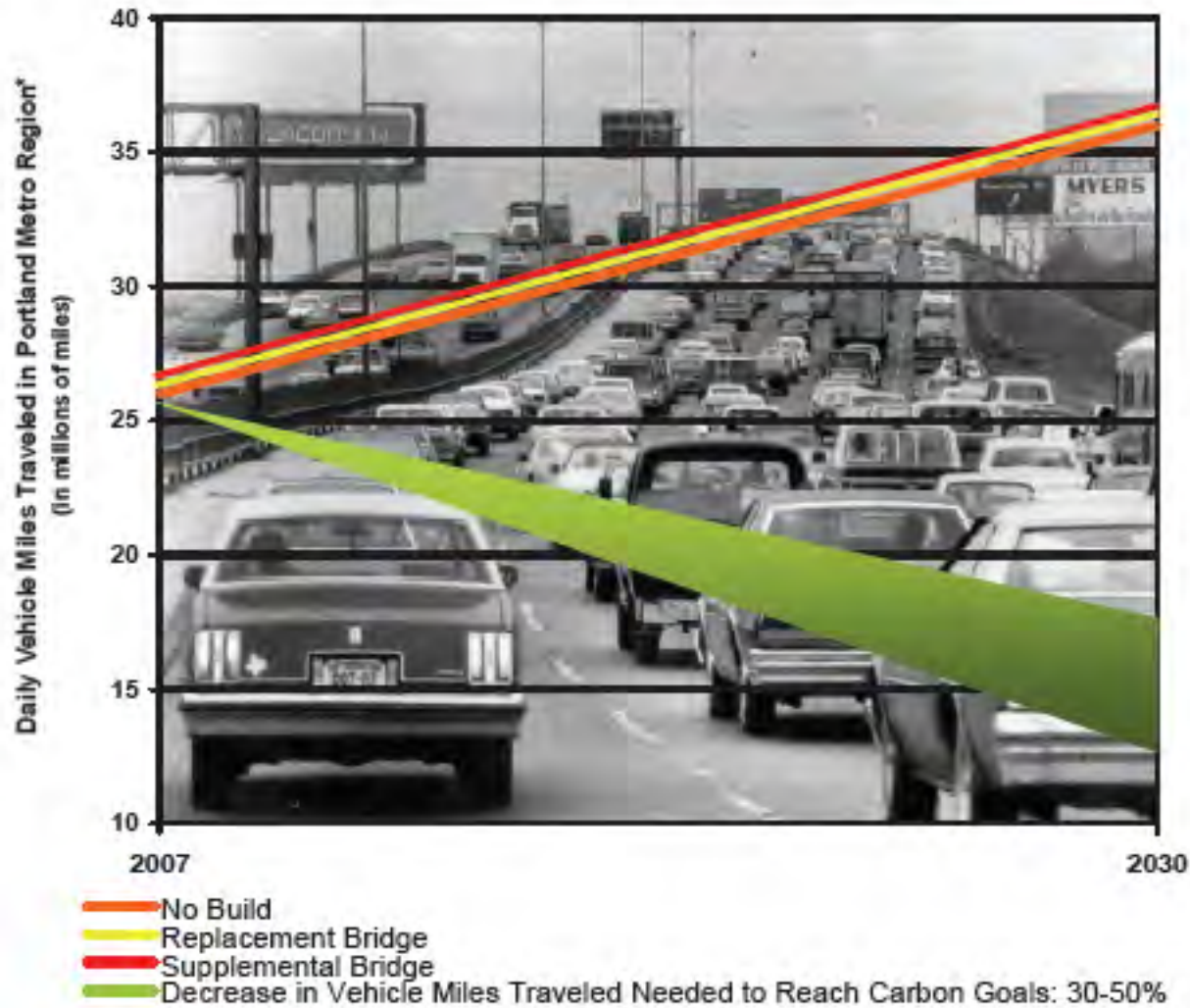
# Question:

- If the region had \$4 billion to spend on infrastructure, what would be the best way to spend it?

# ODOT's Answer: Clark County Commuters



# CRC increases VMT

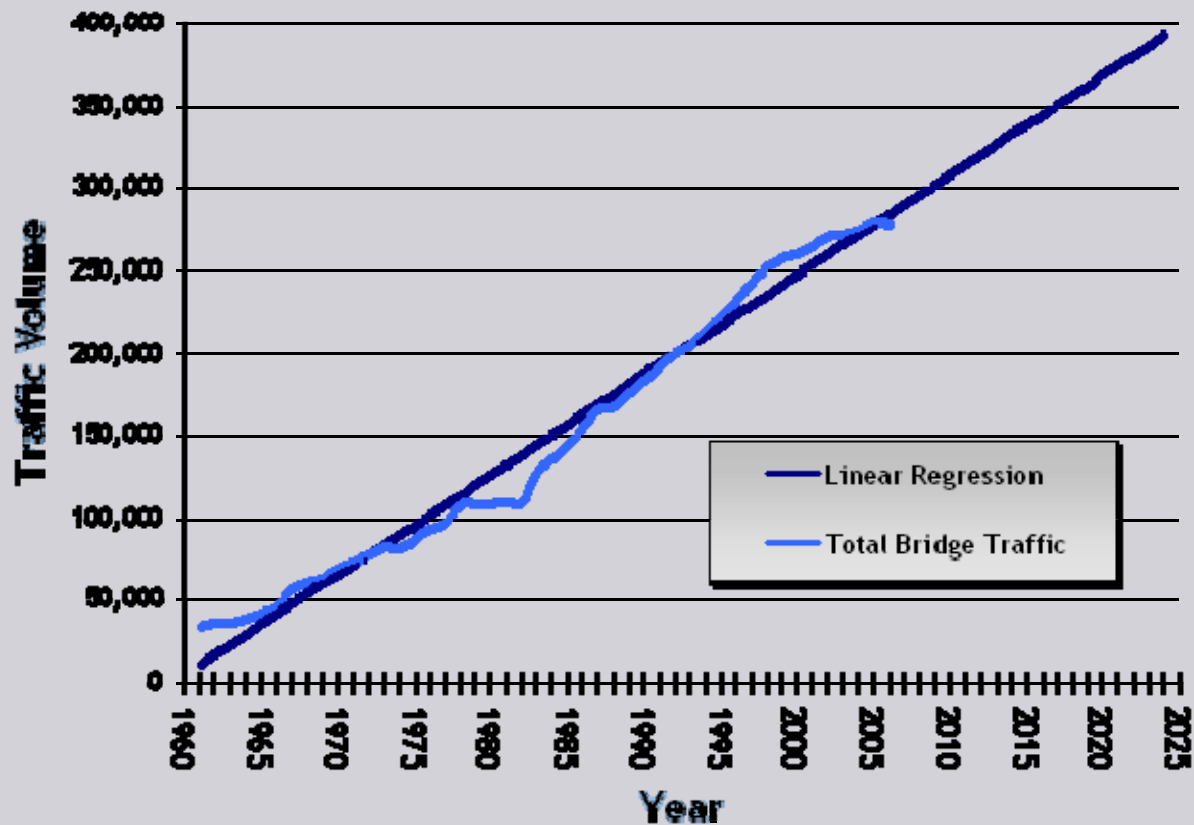


Green

# What does it mean to plan?

## Columbia River Bridge Crossings, 1961 - 2024

Historical *average month* and *average day* traffic data volumes, across the Interstate Bridge (I-5) and the Glenn Jackson Bridge (I-205), collected over the period 1961 through present are used to perform a linear projection forward to volumes anticipated should current trends continue. [Actual data](#) is shown below graph.



# “Draft” Funding Plan

Highway/Bridge Portion = \$3 billion

Approximate Sources:

Toll/Bonds:	\$ 1.0 billion
Federal Earmarks	\$ 500 million
State & Local Match	\$ 1.5 billion

# Deep in Debt

- 80 to 85% of bridge cost would be borrowed.
- Bonding for both tolling and local share
- Huge interest costs—not included in cost estimates
- Debt service moves CRC to first in line for available revenue

# For More Information

- Joseph Cortright, Impresa
- [jcortright@impresaconsulting.com](mailto:jcortright@impresaconsulting.com)
- [ceosforcities.org](http://ceosforcities.org)

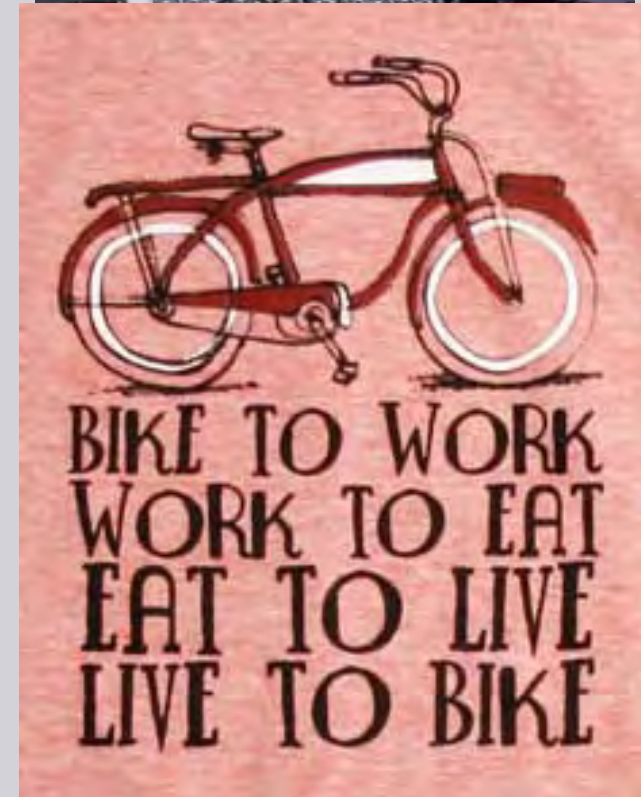
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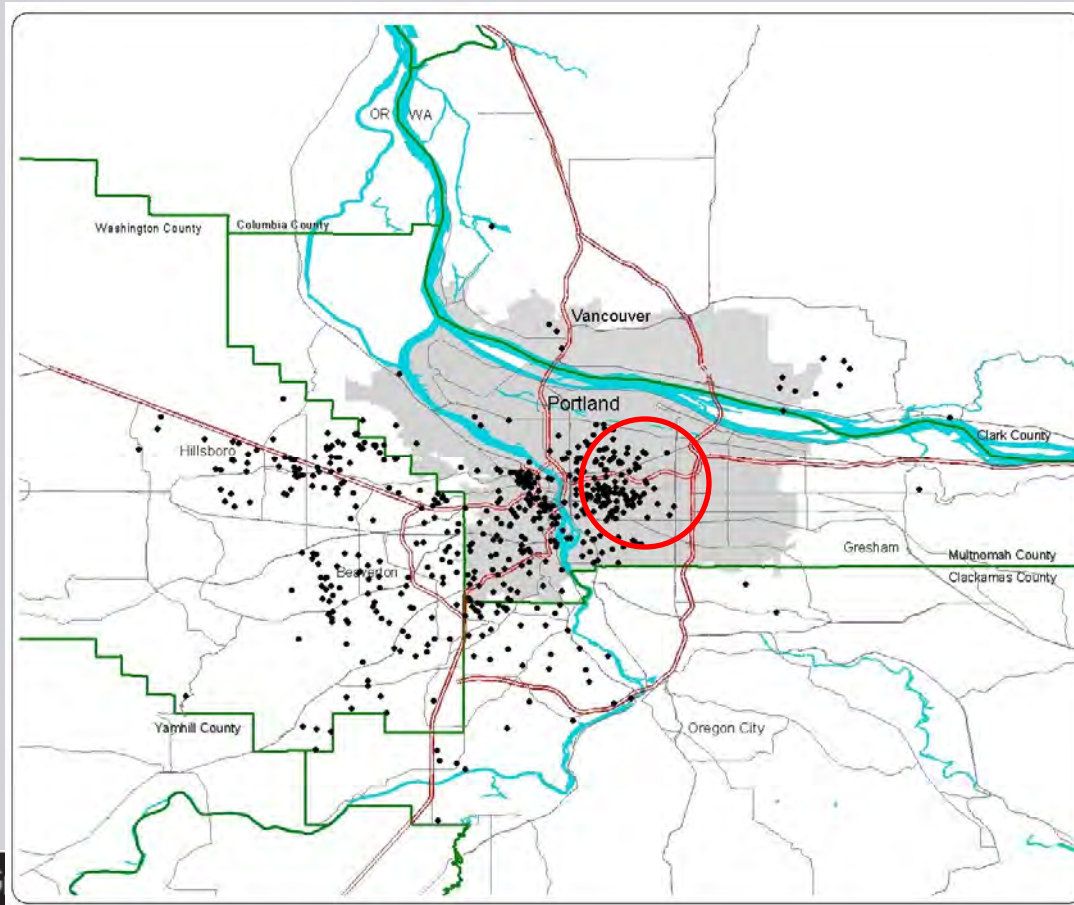
# Bicycles

- Most bike friendly large city in US
- 7 times as likely to commute by bicycle as average US resident
- Attracted manufacturers to Portland



# Close-in Neighborhoods Key

Concentration of College-educated 25-34 year-olds



3 miles from CBD

Growth of  
25 to 34 year-olds  
1990 to 2000  
+30 Percent

Share of  
25 to 34 year-olds  
with a 4-year degree  
54 Percent

G

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# Talent now seeks place

Thinking about how you will look for and choose your next job, which of the following statements best reflects your opinion?

(Asked of 1,000 25-34 year old college graduates)

**Look for the best job I can find. The place where it located is pretty much a secondary consideration.**

**Look for a job in a place that I would like to live**

