

**TEXAS AND THE  
MOBILITY IMPERATIVE**  
context, trends and issues

**TEXAS TRANSPORTATION FORUM**

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# TRANSPORTATION

Responding to

"The Tyranny of Distance"

**It is a very big country!**

- Few nations have been challenged as greatly as we have by "The Tyranny of Distance."
- No other nation has succeeded as we have in reducing the influence of distance on its economic future

**Transportation has always been  
about Distance – and Time**

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**TODAY THE PRESSURES OF TIME  
DOMINATE**

**WE HAVE DESTROYED DISTANCE –  
ALMOST**

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# Why will time be dominant now and in the future?

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- ❑ A HIGH INCOME POPULATION
  - ❑ A HIGH VALUE OF GOODS SOCIETY
  - ❑ A MULTI-TASKING SOCIETY
  - ❑ PRESSURES ON FAMILY
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# The Starting Point

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What is the Goal?

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# **The Starting Point**

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What is the Goal?

**Making things get worse  
slower!**

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# The Starting Point

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## What is the Goal?

My goal for transportation is to reduce the effects of distance as an inhibiting force in our society's ability to realize its economic and social aspirations.

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**“WHAT % OF TRAVEL IS FRIVOLOUS?”**

**A congressional question to me; 1979**

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## **People travel for rational reasons**

- All trips have an economic or social transaction at their end of value to the traveler
  - Trips may be obligatory or discretionary
  - If your transportation goals can be met by everyone staying home – rethink**
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# A New Phase in American Commuting

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1. The Commuting in America series has been the history of the working years of the baby boom generation
  2. The Boomers are now moving off stage creating a new phase in American commuting.
  3. The key will be where will the workers come from?
  4. Advent of the immigrant workforce will be just one of the challenging concerns
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# 3 Trends will define the future

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1. Replacing the Baby-boomers – where will our workforce come from?
  2. Expanding metro areas – the doughnut metro – focus on the suburbs
  3. An affluent time-focused society -- \$50/hour and tripling of goods value
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# 3 Trends will define the future

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1. Replacing the Baby-boomers – where will work force come from
2. Expanding metro areas – the doughnut metro
3. An affluent time-focused society

1. ACCESS TO WORKERS
  2. INTER-METRO TRAVEL
  3. PRODUCTIVITY AND A HIGH VALUE SOCIETY
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# **In this new world the great issue will be skilled workers.**

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- ❑ Finding Skilled workers will be the key concern of business
  - ❑ They will go where those people are, or where they want to be.
  - ❑ States and metros that can provide the worker resources will be the big winners!
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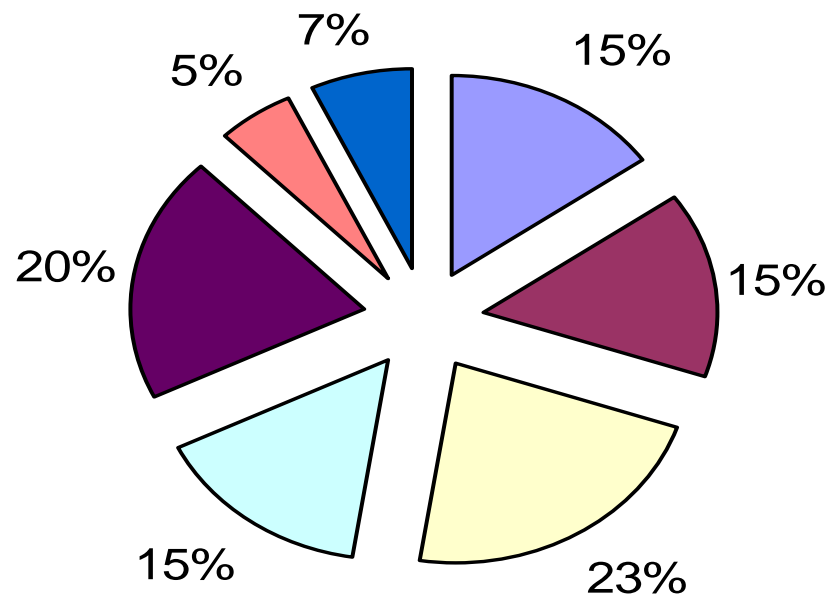
# The Focus will be on Big Metros

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- ❑ **Metros of a million**
    - ❑ 1960 34 areas
    - ❑ 1990 39 areas
    - ❑ 2000 50 areas
    - ❑ 2005 53 areas
  - ❑ 60 areas by 2020
  - ❑ 60% of population
  - ❑ How many in Texas?
  - ◆ 12 areas with more than 5 meg.
  - ◆ 1/3 of national pop.; 100 million
  - ◆ Growth is in exurb areas
  - ◆ Dallas Ft. W & Hou
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# Share of Nation's Population Growth 2000-2030

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■ Texas	■ Florida	■ Rest of South	■ California
■ Rest of West	■ Northeast	■ Midwest	

# *Dominant Commuting Patterns Of The Last Half Of The Century*

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- ❑ AN EXPLOSION IN COMMUTERS
  - ❑ THE AUTO AS THE TIME TOOL
  - ❑ THE CIRCUMFERENTIAL  
COMMUTE
-

# THE CIA III TOP TEN

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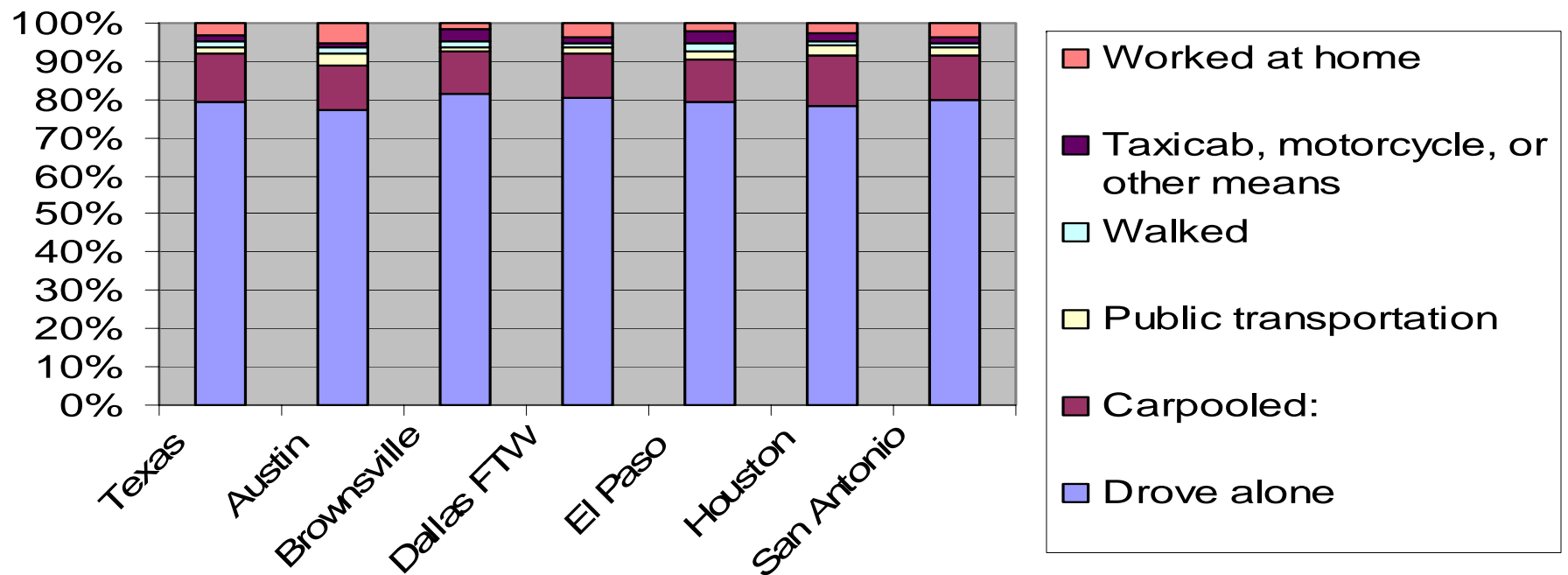
- 10 SOV Growth slows
  - 9 Variable Carpool & Transit trends
  - 8 Af-Am Auto growth
  - 7 Immigrant role
  - 6 Older Workers
  - 5 Extreme commutes
  - 4 "Donut" Metro
  - 3 Working at home
  - 2 TLH before 6am
  - 1 workers leaving home county
-



# Texas – Almost identical to America

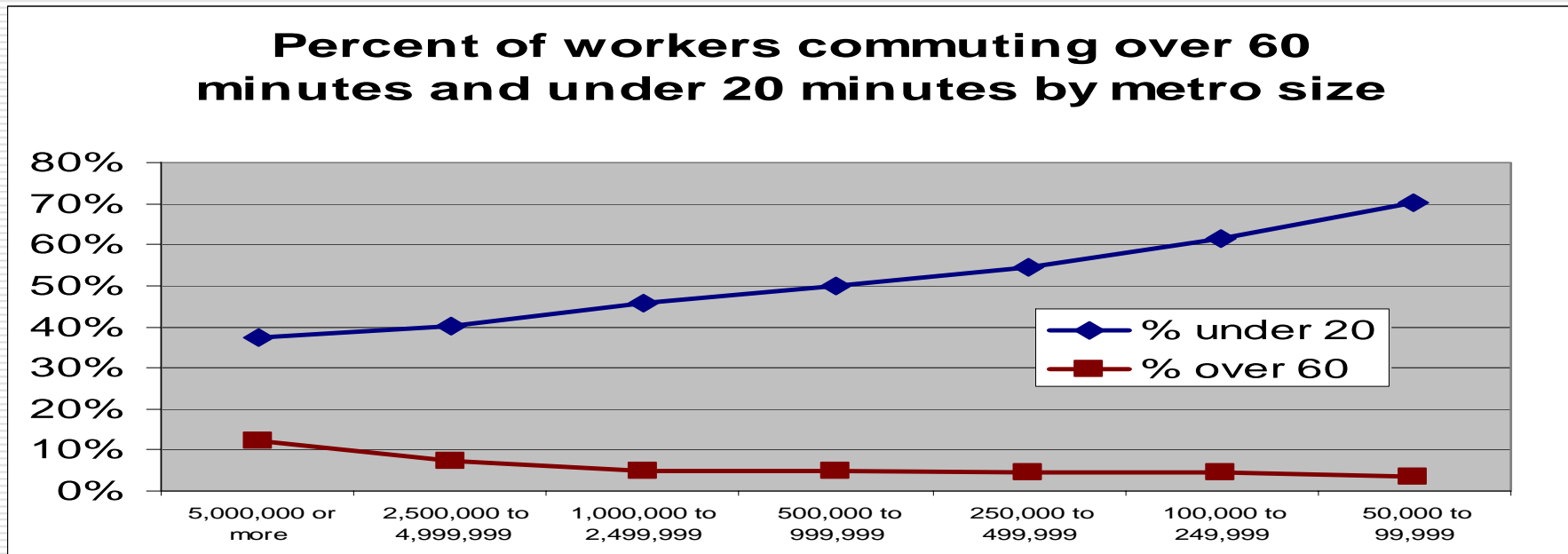
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**Work Mode Shares 2005**



# Extreme Commutes

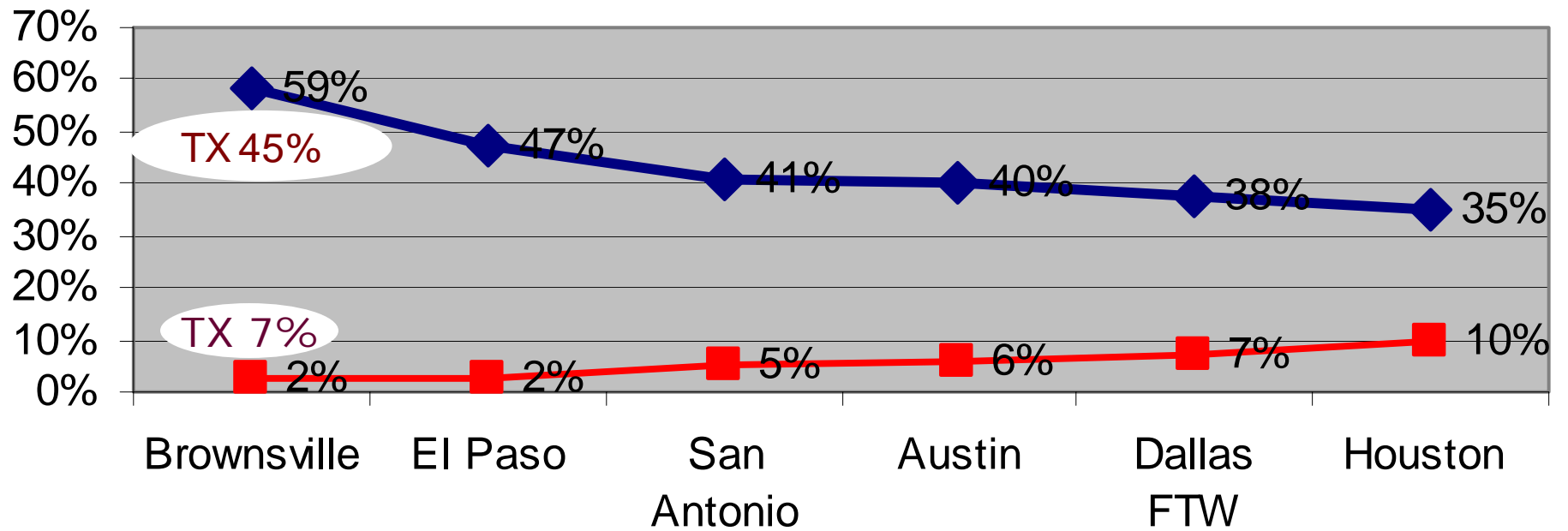
- ❑ 2005 10 million over 60 min; 1/3 90+; **av 80 min**
- ❑ 60-90 minute commute grew 2x average
- ❑ 90+ minute commute grew 5x average



# 7% of Texans commute more than 60 minutes

## Doing well and not so well

◆ % under 20 minutes ■ % over 60 minutes



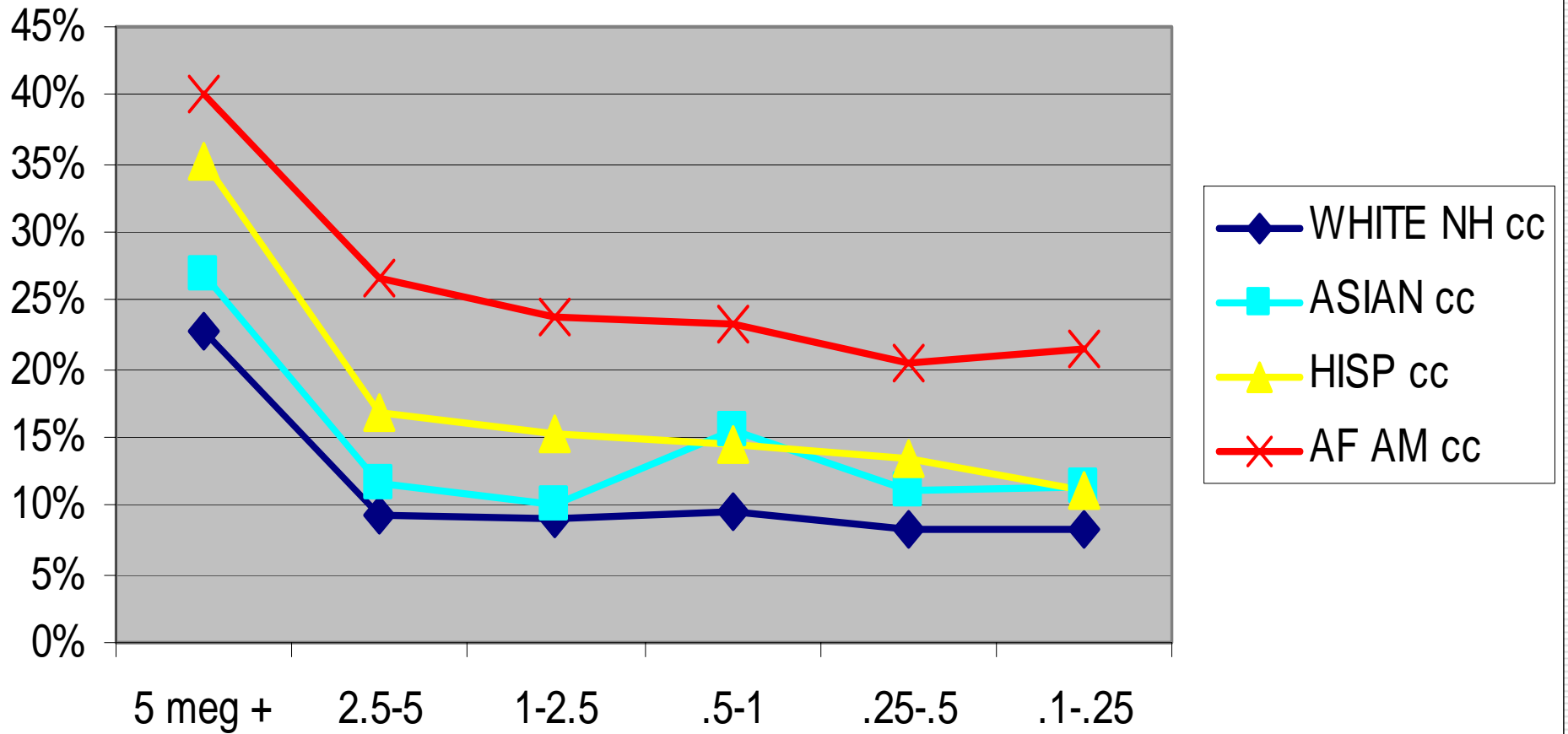
# The Texas Travel Time Score Card looks good compared to most others

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<b>Commutes over 60 mins</b>	<b>%</b>
<b>New York</b>	<b>18.4%</b>
<b>Chicago</b>	<b>13.2%</b>
<b>Wash-Balt</b>	<b>12.8%</b>
<b>SF, LA, Atl</b>	<b>11-12%</b>
<b>Houston</b>	<b>9.7%</b>
<b>Dallas Ft. Worth</b>	<b>7.2%</b>
<b>Austin</b>	<b>6.1%</b>

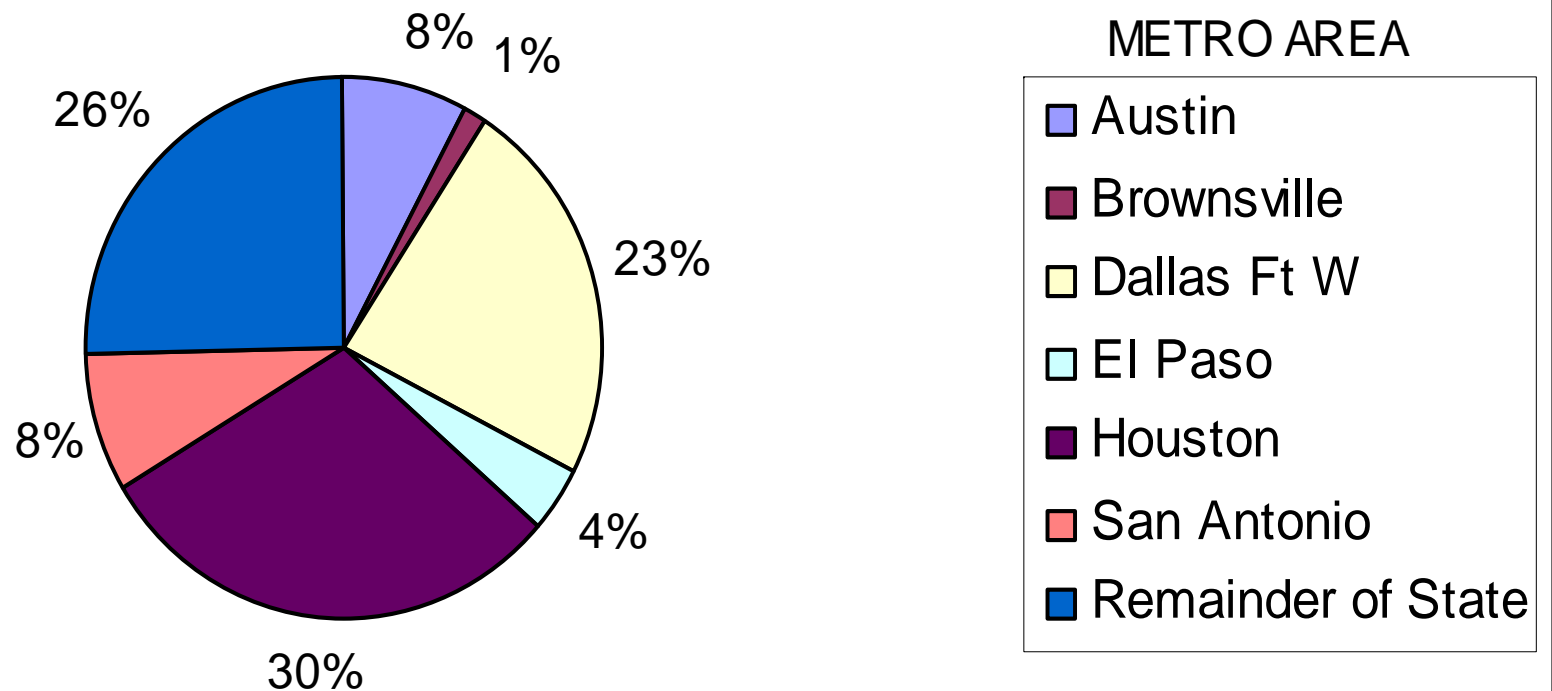
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# % HH without vehicles in central cities by metro area size 2000



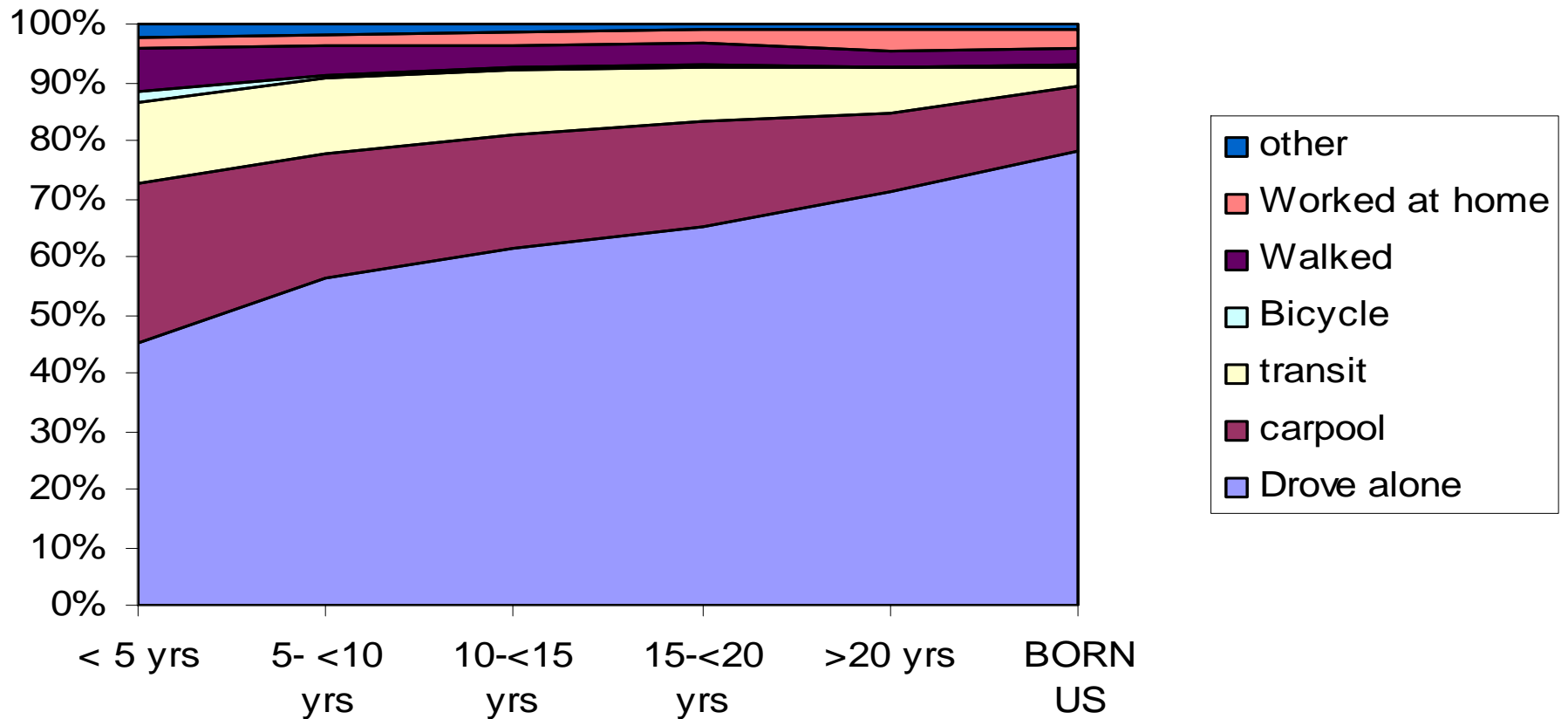
# Where are the 250,000 Texas Households without Vehicles?

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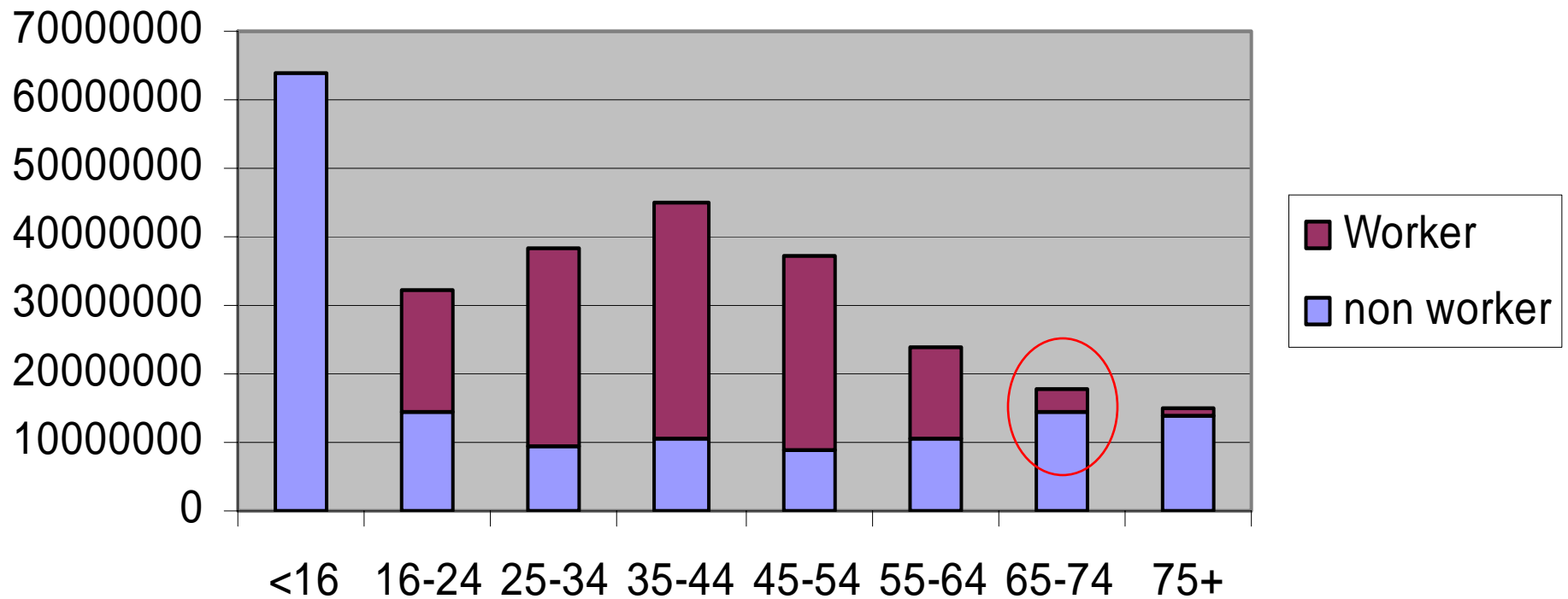
# #7 IMMIGRANT ROLES AND PATTERNS - 2

## Mode Use by Years in US



# #6 OLDER WORKERS ROLE

workers by age group 2000



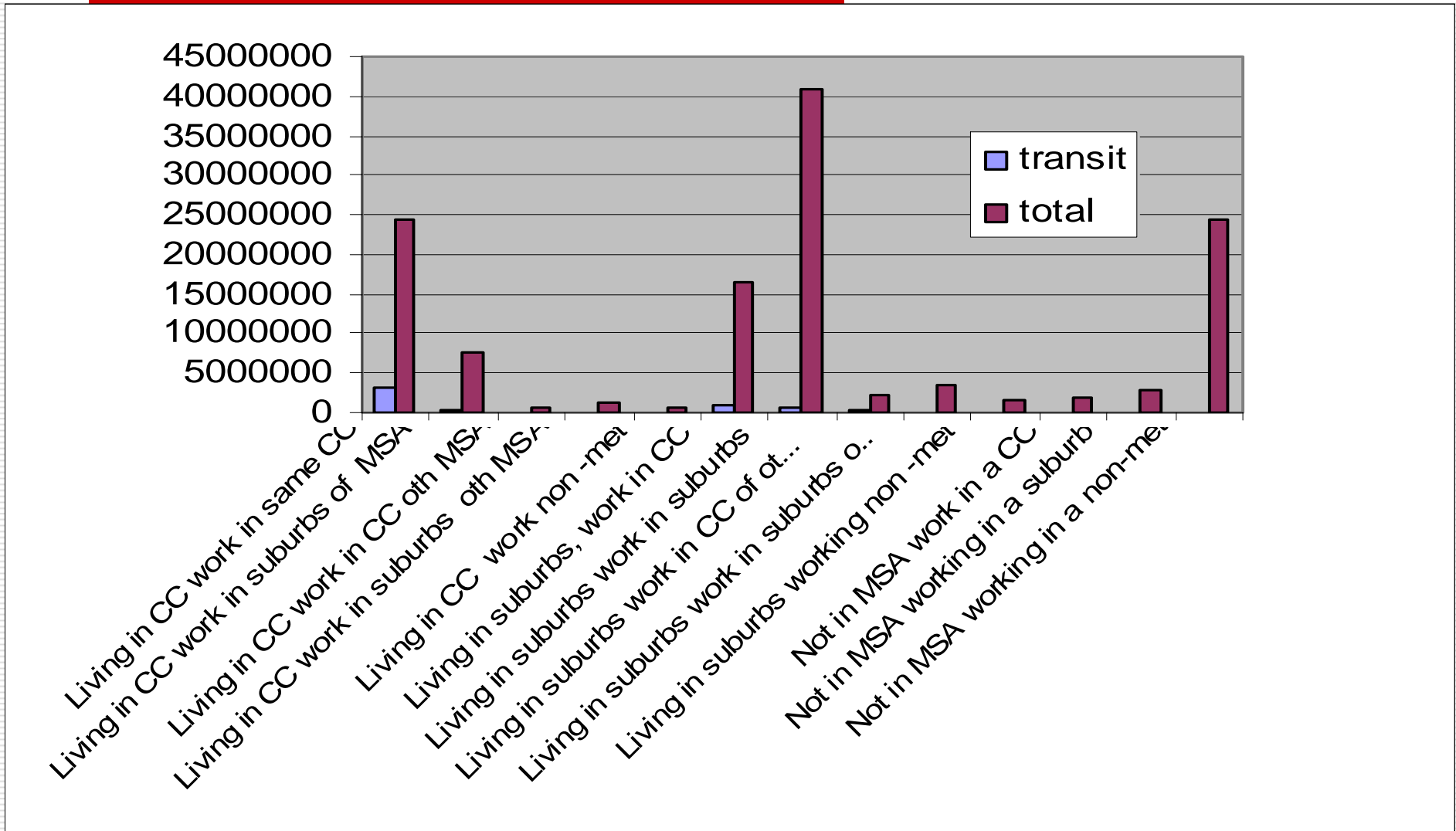


## #4 The “Donut” Metro

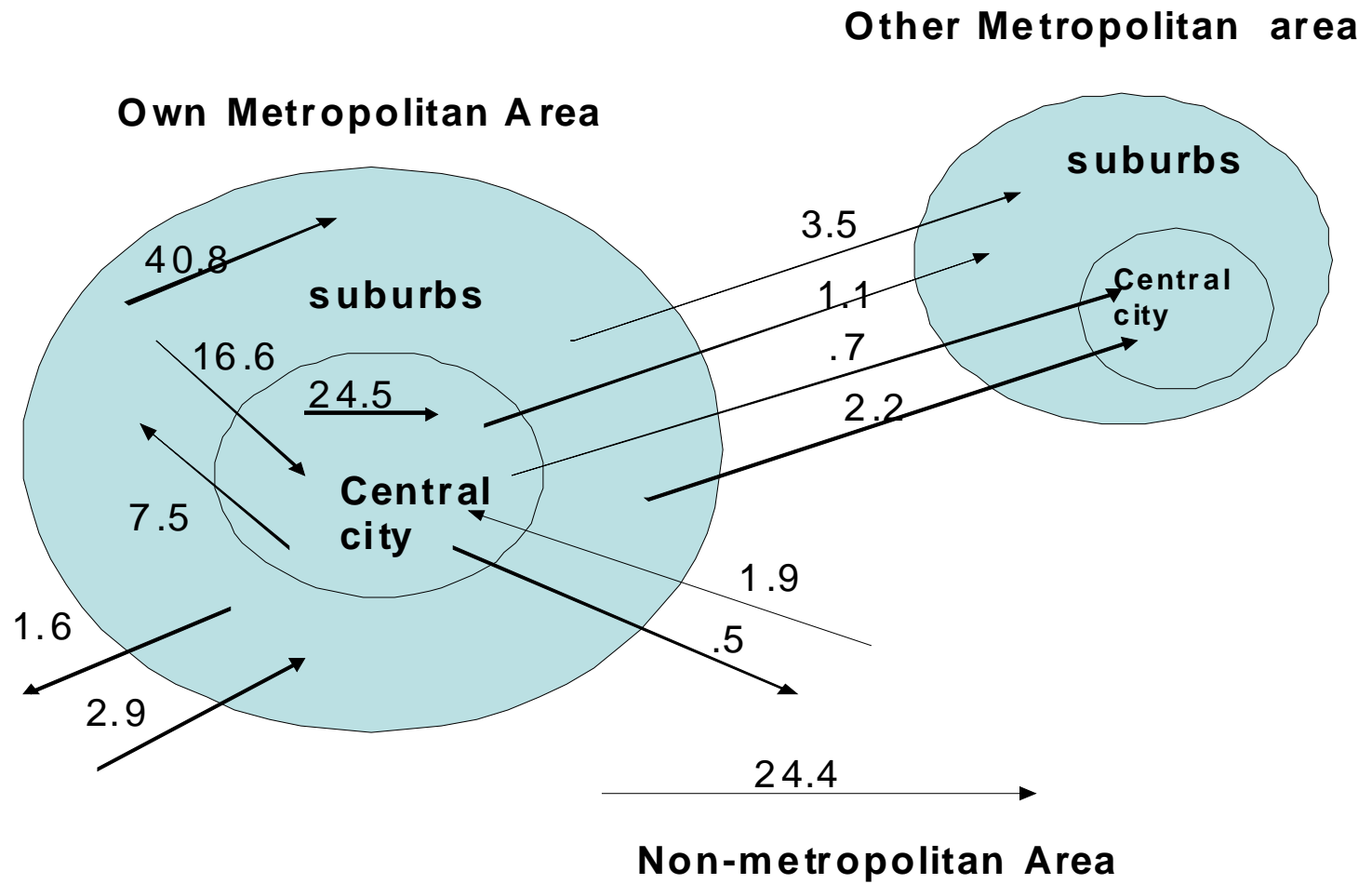
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- Jobs and workers centered in suburbs
  - 46% of commutes;
  - 64% of growth 90-00
  - 7.5 million coming in to the subs from exurbs and other metros each day
  - 7.5 million going out to the subs from central cities
  - CC to subs > Subs to CC in share of growth
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# National commuting flows



# 2000 METRO FLOW MAP



# #1 GREAT INCREASES IN WORKERS LEAVING HOME COUNTIES TO WORK

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- 1990 23.9% of workers left home county
  - 2000 26.7% (2005 almost 28%)
  - 90's - 13.2 meg. new Workers 51% Left home county (6.7 Meg.)
  - 00's - Of 5 meg. new workers 55% left home county (2.6 Meg.)
-

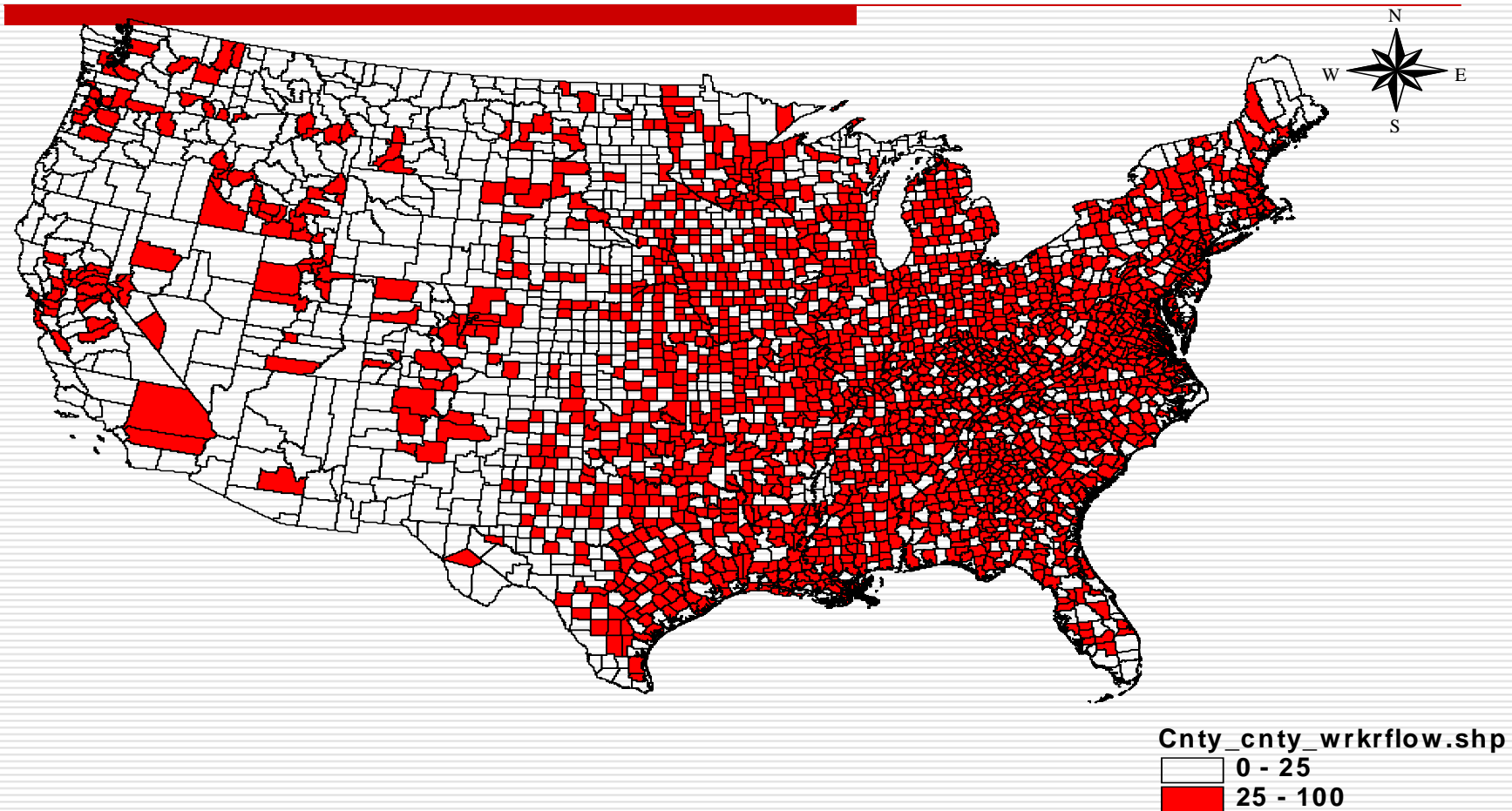
# % of Workers leaving their home county

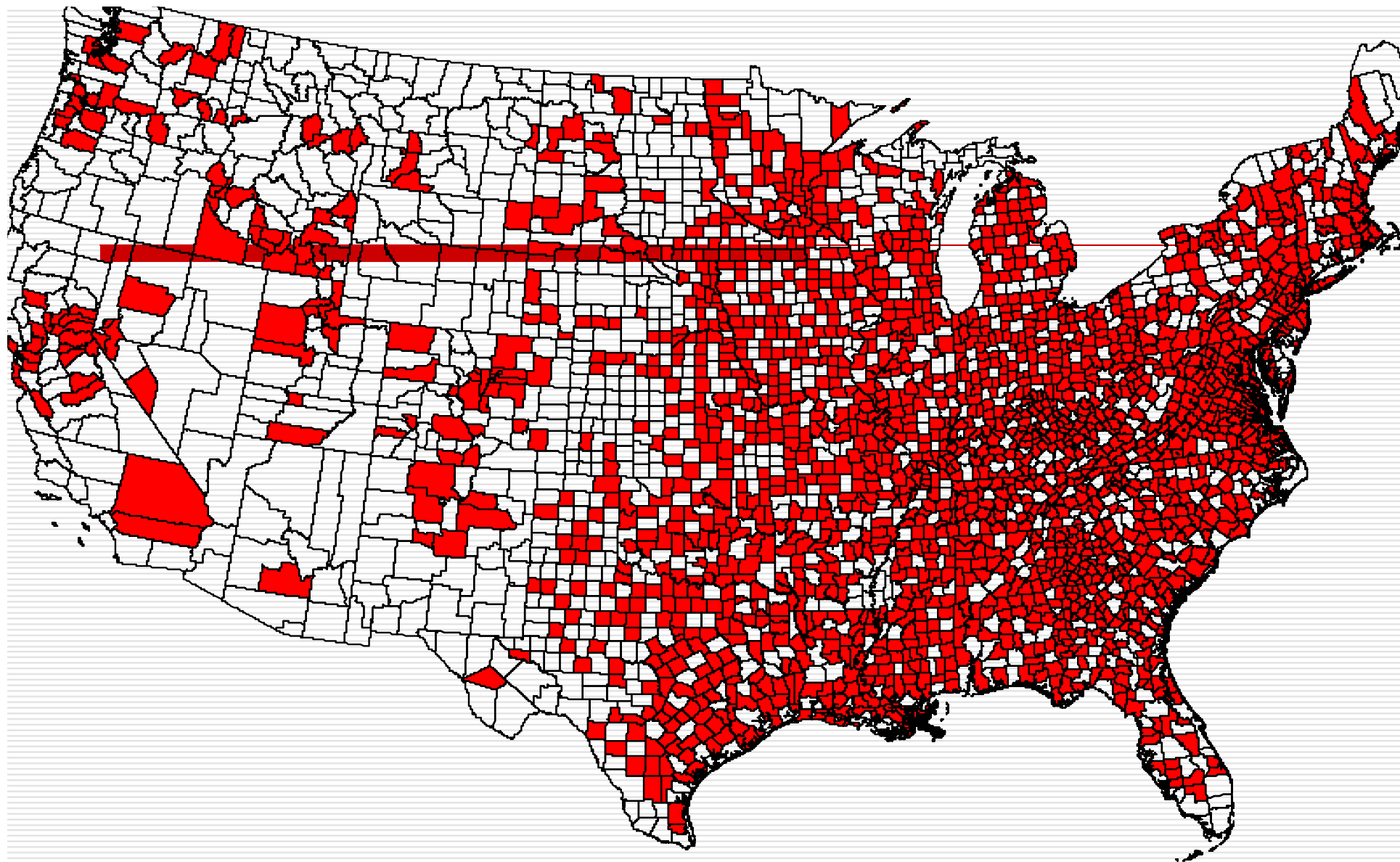
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Austin	26%
Brownsville	8%
Dallas Ft. W.	31%
El Paso	4%
Houston	21%
San Antonio	15%
Texas all	23%



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## County-to-County Worker Flow Percentage: 2000





Cnty\_cnty

	0 - 2
	25 -

## #3 CONTINUING GROWTH IN WORKING AT HOME

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- Only work “mode” with Driving Alone to see continuous growth since 1980
  - ALL Metros over a million saw increases
  - Work at home added 2 million from 1980 to 2000 – almost doubling; another 600,000 by 2005
  - 2005 share 3.6%
  - Texas 3.3% -- 2 x transit
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# There's more to Transportation than just commuting!

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- ❑ COMMUTING (25% of local psgr travel)
  - ❑ OTHER LOCAL TRAVEL
  - ❑ TOURISM/LONG DISTANCE TRAVEL
  - ❑ SERVICES  
(Power/phone/cable/sewer/water)
  - ❑ PUBLIC VEHICLES (gov't. services)
  - ❑ URBAN GOODS MOVEMENT
  - ❑ THRU PASSENGER TRAVEL
  - ❑ THRU FREIGHT TRAVEL
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# THE LEAVENING POWER OF FREIGHT MOVEMENT

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- ❑ Forces serious consideration of costs
- ❑ Costs are direct and immediate
- ❑ Strongly and directly impacts jobs
- ❑ Transportation policy and planning is not a parlor game

How many ton-miles in my breakfast?

- ❑ Think of “Trucks with glass sides”
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# The beginnings of a reaction

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- ❑ freight needs – a dose of reality
- ❑ Irrate reactions to congestion
- ❑ 9/11 as a wakeup call
- ❑ Importance of Reliability, Redundance and Resilience

It is no longer acceptable that things are bad and our plans accept they will get worse

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# A New Plan for Planning for States And MPO's

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- MEET SAFETY NEEDS
  - SUPPORT ECONOMIC DEVELOPMENT
  - ASSURE SECURITY -- REDUNDANCY
  - INCREASE MOBILITY/RELIABILITY
  - SERVE AGING POPULATIONS
  - SERVE LOW-INCOME POPULATIONS
  - CLRP PLUS
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# Policy/Planning Skills Needed

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- Economists:  
Labor/Freight/Competition**
  - Freight/Logistics Specialists**
  - Safety/Security Specialists**
  - Housing Specialists**
  - Operations Specialists**
  - Information Systems  
Technologies**
-

# There's Greater Stability in Future Travel Demand

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## More Stable

- Licenses/Vehicles
- Workers
- Population & Households
- Migration

## Sources of Change

- Incomes
  - Locations
  - Immigrants
  - Aging
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# **HELP STAMP OUT AFFLUENCE**

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**We can do it if we work  
together!**

# An Affluent Society

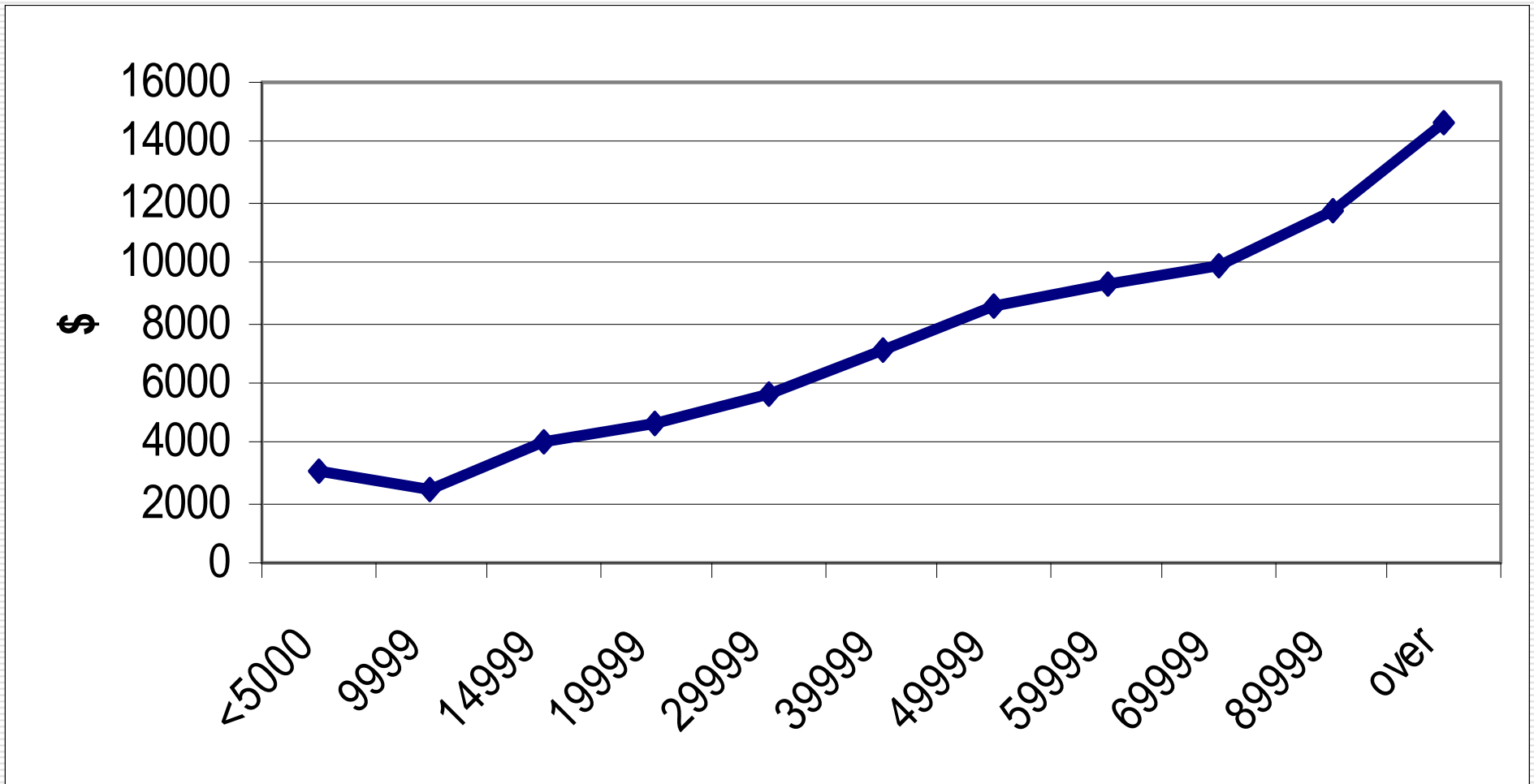
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- Population growing at 1% and GDP at circa 3% means that GDP per capita will grow as dramatically as the last 50 years.
  - The affluence of the emerging society and the resulting immense value of time, will drive most decisions, including those related to transportation.
  - Increased value of goods will make similar demands on the freight side of the transportation system.
  - Both passengers and freight will demand and be able to pay for high quality, reliable, amenity-based, personalized transportation.
  - A large segment of society will have the time and resources for extensive recreation and leisure travel.
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# Household Transportation Spending by Income -2000

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# WHAT IS CONGESTION ?

**Congestion is:**

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**People with the economic means to act on their social and economic interests - getting in the way of other people with the means to act on theirs!**

# The great loss from congestion is not the extra three minutes it takes to get home

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## HOUSEHOLDS

- It's the decline in the number of jobs I could reach in ½ hr!
- It's the decline in the number of affordable homes accessible to my work!

## BUSINESSES

- It's the decline in the number of workers within ½ hr of my employment site!
  - It's the decline in the number of suppliers & customers within ½ hr of my business!
  - It's the decline in shipment reliability!
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# YOUR COMPETITIVE ENVIRONMENT

## Location, Amenities, Flexibility

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- The focus on services in the economy will permit more population to act on location preferences as workers and employers are less tied to resources and more attracted by amenities.
- Areas of the country will compete for workers on the basis of housing cost, life-style, climate, and ease of living. Good transportation will be one of the competitive amenities.
- Employers will be forced to be more flexible in schedules and benefits to attract workers.

# If People Can Be Anywhere?

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**Where Do They Want To Be?**

**What Can Attract Them?**

- AN AMENITY RICH ENVIRONMENT!**
  - NATURAL BEAUTY!**
  - CULTURAL RESOURCES!**
  - ATTRACTIVE ENVIRONMENT!**
  - A FLEXIBLE, WORK PLACE!**
-

# **My Vision for 2030**

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**Create the transportation systems that will serve a society where the average value of time is \$50/hr**

**and**

**where the average value of freight is three times today's.**

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# Further Attributes of a Vision

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- ❑ Time & Cost of Travel -- \$50 hr
  - ❑ Immediate-Action Opportunities
  - ❑ Community Design
  - ❑ Transportation and Productivity
  - ❑ Safety
  - ❑ Long Distance Travel
  - ❑ Congestion & Capacity Needs  
Backlog that needs to be addressed
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# Great Challenges Lie Ahead:

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- ❑ A secure nation with a secure transportation system
  - ❑ Serving “high value” people and “high value” goods
  - ❑ Serving an aging population safely
  - ❑ Pursuing the “democratization of mobility”
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# **Three keys to competitiveness**

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**□ Education**

**□ A sound institutional/  
governmental framework**

**□ Transportation &  
Communications**

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# Texas is up to the Challenges!

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- ❑ A Focus on National and International Competitiveness
  - ❑ A Focus on Transportation Productivity Needs
    - Freight
    - Passenger
  - ❑ Recognition of Housing Cost Advantages
  - ❑ Great Educational Institutions
  - ❑ Responsive, Effective Governmental Institutions.
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# A VERY POSITIVE FUTURE

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- More Operable Problems
  - The Resources to Respond are there
    - People, Technology, Political & Financial
  - **MUST RECOGNIZE CENTRAL ROLE OF MOBILITY IN OUR SOCIETY**
  - **MUST BE WILLING TO ACT TO FOCUS RESOURCES**
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Thank you!

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# Supporting materials

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# THE CIA III TOP TEN

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- ❑ 10 SOV Growth slows
  - ❑ 9 Variable Carpool & Transit trends
  - ❑ 8 Af-Am Auto growth
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-

# Base stats Texas 2005

	Texas	Austin	Brownsville	Dallas F T W	El Paso	Houston	San Antonio
Total:	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Car, truck, or van:	91.76%	88.47%	92.49%	92.00%	90.18%	91.07%	91.41%
Drove alone	79.25%	76.95%	81.09%	80.34%	79.30%	78.28%	79.57%
Carpooled:	12.51%	11.52%	11.41%	11.65%	10.88%	12.79%	11.84%
In 2-person carpool	9.32%	8.59%	9.04%	8.69%	8.43%	9.25%	9.12%
In 3-person carpool	1.84%	1.50%	1.70%	1.88%	1.42%	1.86%	1.83%
In 4-or-more-person carpool	1.35%	1.43%	0.67%	1.08%	1.02%	1.69%	0.90%
Public transportation	1.66%	2.76%	0.85%	1.52%	2.26%	2.76%	2.12%
Bicycle	0.23%	0.71%	0.17%	0.13%	0.27%	0.22%	0.15%
Walked	1.49%	1.52%	1.63%	1.22%	2.00%	1.38%	1.29%
Taxicab, motorcycle, or other means	1.54%	1.51%	3.33%	1.28%	3.03%	1.67%	1.59%
Worked at home	3.33%	5.03%	1.52%	3.85%	2.28%	2.90%	3.44%

# A FUTURE WORLD WHERE TIME, RELIABILITY AND RESPONSIVENESS ARE KEY

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## KEYS

- Personal Vs Mass
  - On-demand Vs Scheduled
  - Private Vs Public
  - Self-operated Vs Managed
  - Time sensitive Vs cost sensitive
  - Responsive to Security
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# WHAT DOES THE FUTURE LOOK LIKE?

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- MORE AFFLUENCE ✓ More
  - LOWER DENSITY ✓ Less
  - AUTO AFFORDABILITY ✓ More
  - AUTO PRONE AGE ✓ More
  - AUTO TRIP PURPOSE ✓ More
  - TRIP DESTINATIONS ✓ Dispersed
  - FREIGHT VALUE ✓ More
  - TIME SENSITIVITY ✓ More
  - DEMOCRATIZATION OF MOBILITY ✓ More
-

# **WE HAVE NO CHOICE BUT TO CARE GREATLY ABOUT TRANSPORTATION!**

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*Transportation is all about reducing the time and cost penalties of distance on our economic and social interactions.*

*To the extent that nations succeed in that function they enable tremendous forces of economic opportunity, social cohesion and national unity.*

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# For the first time in history

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- ❑ A nation's population is approaching a state where it can live and work wherever it wants!
  - ❑ Affluence and low cost transportation and communications have made that possible
  - ❑ Some recoil at that idea.
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# A BRAVE NEW WORLD?

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- ❑ SKILLED WORKERS AT A PREMIUM
  - ❑ A GLOBAL ECONOMY
  - ❑ "HIGH COST" TRANSPORT OK
  - ❑ A STABLE "OLD" POP
  - ❑ WHO, WHERE ARE THE IMMIGRANTS
  - ❑ LIVE, WORK ANYWHERE
  - ❑ A CHALLENGED AFFLUENT SOCIETY
-

# **WHAT ARE THE ISSUES**

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- ❑ AGING POP'S NEEDS/DEMANDS**
  - ❑ THE SEARCH FOR SKILLED WORKERS**
  - ❑ RECOGNIZING CHANGING CHARACTER OF DEMAND**
  - ❑ NICHINESS OF DEMAND**
-

# DISPERSAL TECHNOLOGIES

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- ALL GROUND TRANSPORT
  - AIR TRANSPORT
  - OVERNIGHT DELIVERY
  - TELEPHONE/CELLPHONE
  - RADIO/TELEVISION
  - COMPUTER
  - INTERNET
-

# Going forward

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- ❑ The great Commuter boom is behind us
- ❑ Most of the determinants of travel will be more stable in the future
- ❑ Racial and Ethnic Minorities will be a major source of travel growth in the future
- ❑ Immigrant populations will be a major source of growth

# The Personal Vehicle And Our Future

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- A More/Less Affluent Pop?
  - Living at Higher/Lower Density?
  - Auto use more/less affordable?
  - Will Age distribution be more/less oriented to the auto?
  - Trip length?
  - Purpose?
  - Freight more/less valuable ?
  - Freight more/less time sensitive?
  - Destinations more/less dispersed?
-



# Key Competitive Factors for the Future

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- Metro mobility on an increasing scale.**
  - Competition for skilled workers – the demographic imperative**
  - Furthering domestic and international competitiveness**
  - Competition thru amenities.**
-

# New Patterns to Watch

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- **Who, where will the workers be?**
- **Will long distance commute expand further?**
- **Will role of commuting decline/grow or just change?**
- **Will value of time still be the guiding factor?**
- **Will we see greater employer flexibility?**
- **Will the value of mobility be recognized?**

# **The New Millennium World in the U.S.**

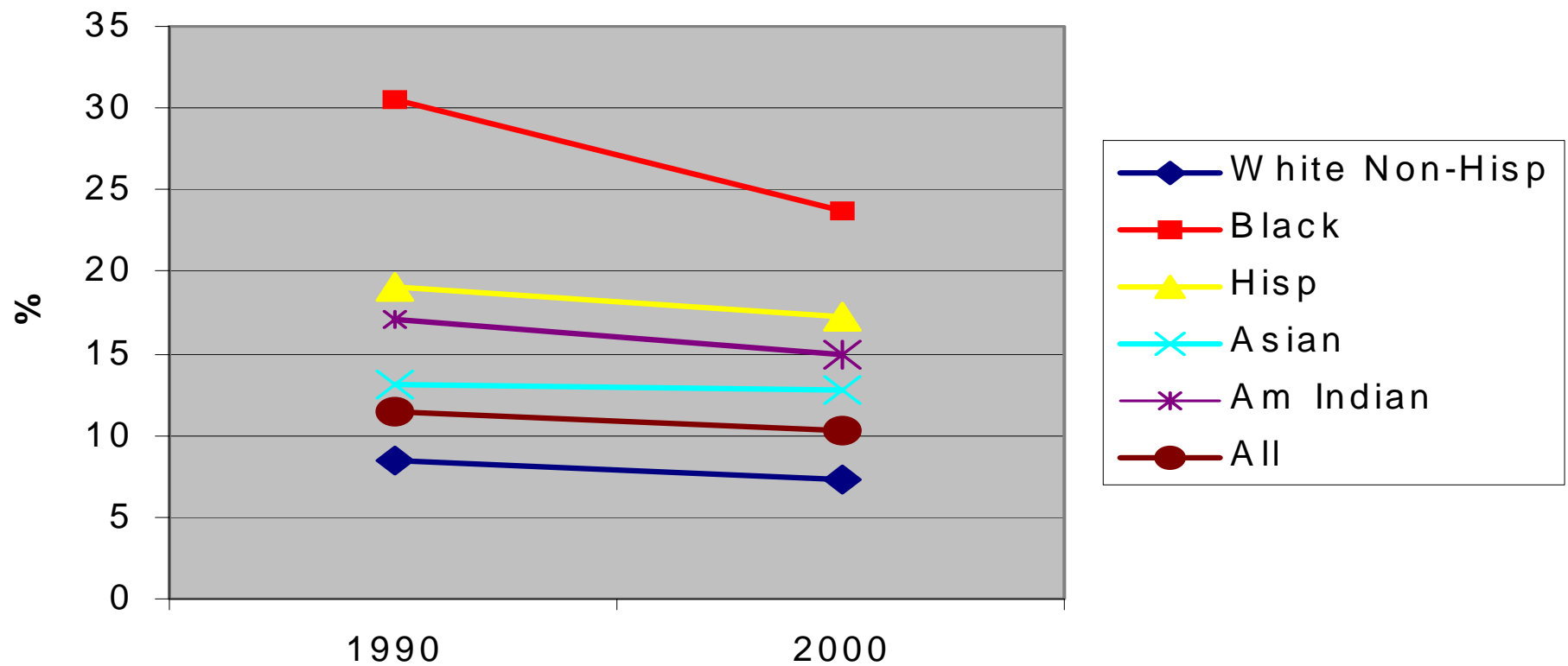
- **A STABLE “OLDER” POP.**
  - **OPERATING IN A GLOBAL ECONOMY**
  - **WHERE “HIGH COST” TRANSPORT OK**
  - **SKILLED WORKERS AT A PREMIUM**
  - **WORKERS CAN LIVE, WORK ANYWHERE**
  - **WHO, WHERE ARE THE IMMIGRANTS**
  - **MAINSTREAMING MINORITIES**
- A CHALLENGED AFFLUENT SOCIETY**

# IDEAS TO ADDRESS

- 
- Scope of Automobility**
  - Meaning of Mobility**
  - The Democratization of Mobility**
  - Idea of “efficiency”**
  - Aging of fleet**
  - The scourge of affluence**
  - Housing plus transportation**
  - Division of labor**
  - Broadening of opportunity and choice**
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# THE DEMOCRATIZATION OF MOBILITY HAS MORE TO GO!

zero vehicle households by Race and Ethnicity



# "The Critical Issues List" –TRB

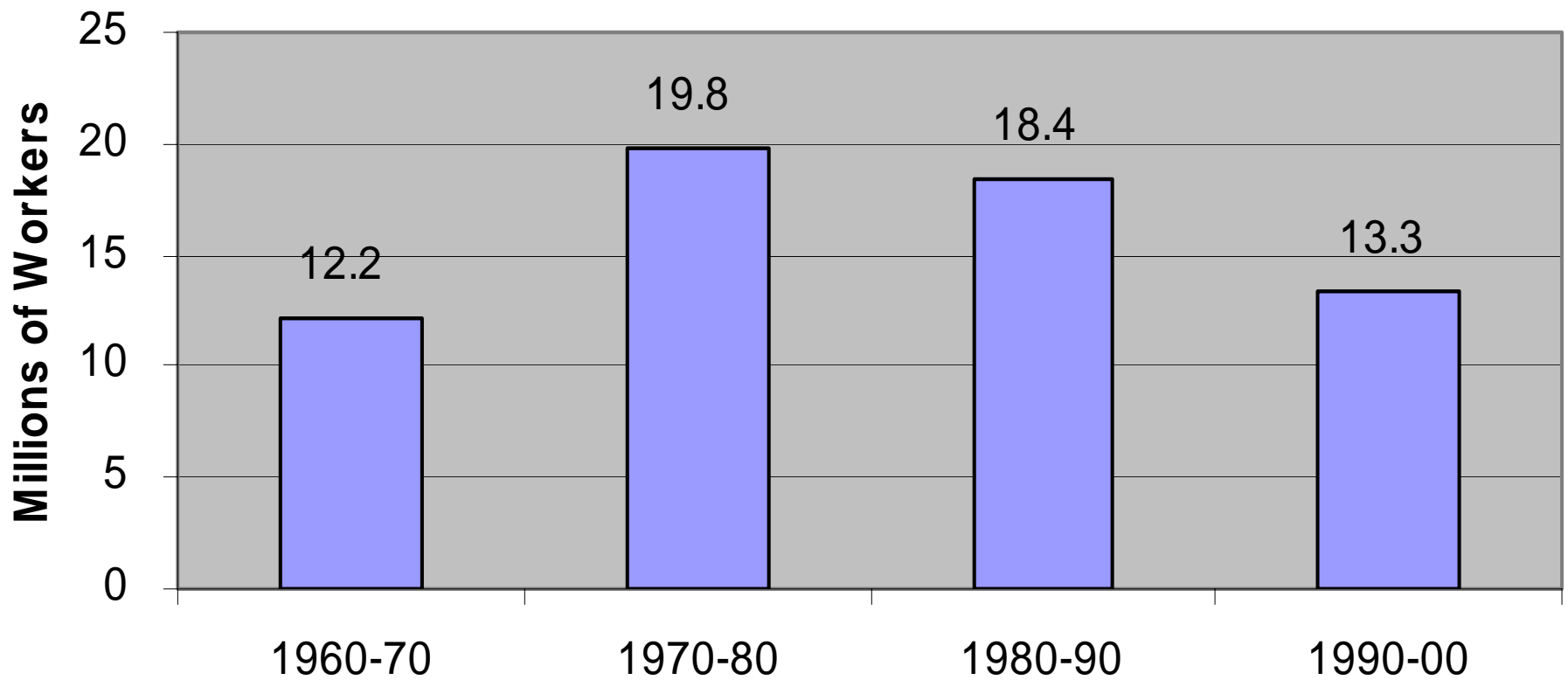
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- 1. Transportation and ...**
    - Negative - Energy/Environment/safety
    - Positive/Neutral - Ec. Devel. & Trade/Productivity /land use
  - 2. "I'm going to coordinate you!"**
  - 3. Getting More out of the System.**
  - 4. Saving some – (perpetually Amtrak)**
  - 5. Respice/Adspice/Prospice**
  - 6. Where's the money?**
-

# Fewer Workers = Fewer Commuters

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WORKERS ADDED PER DECADE



# New Forces Of Change

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- ◆ **DEMOCRATIZATION OF MOBILITY**
  - ◆ **IMMIGRATION**
  - ◆ **THAT OLD "VILLAIN" AFFLUENCE**
  - ◆ **LACK OF SKILLED WORKERS**
  - ◆ **TECHNOLOGIES**
-



# What about tourism and long distance travel?

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- ❑ Conflicts between visitations and preservation

“loving things to death.”

- ❑ Speed and cost improvements!
  - ❑ A world of continued security threats?
-