

# Urban Sprawl - Accommodation

## What the Demographic Trends Portend for Shared-Use Station Cars in California

Shared-Use Station Car Summit  
July 19, 2001

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# The Case for the Southern California Region



# Today

## ■ The Drive-Along Commuter

- Professional, upper or middle management: **37%**
- Percent of professional, upper or middle management who drive alone: **82%**
- Income greater than \$80,000: **27%**
- Average two-way commuting distance: **32.4 Miles**
- Need a vehicle at work: **70%**
- Days per week a vehicle is needed at work: **3.1**

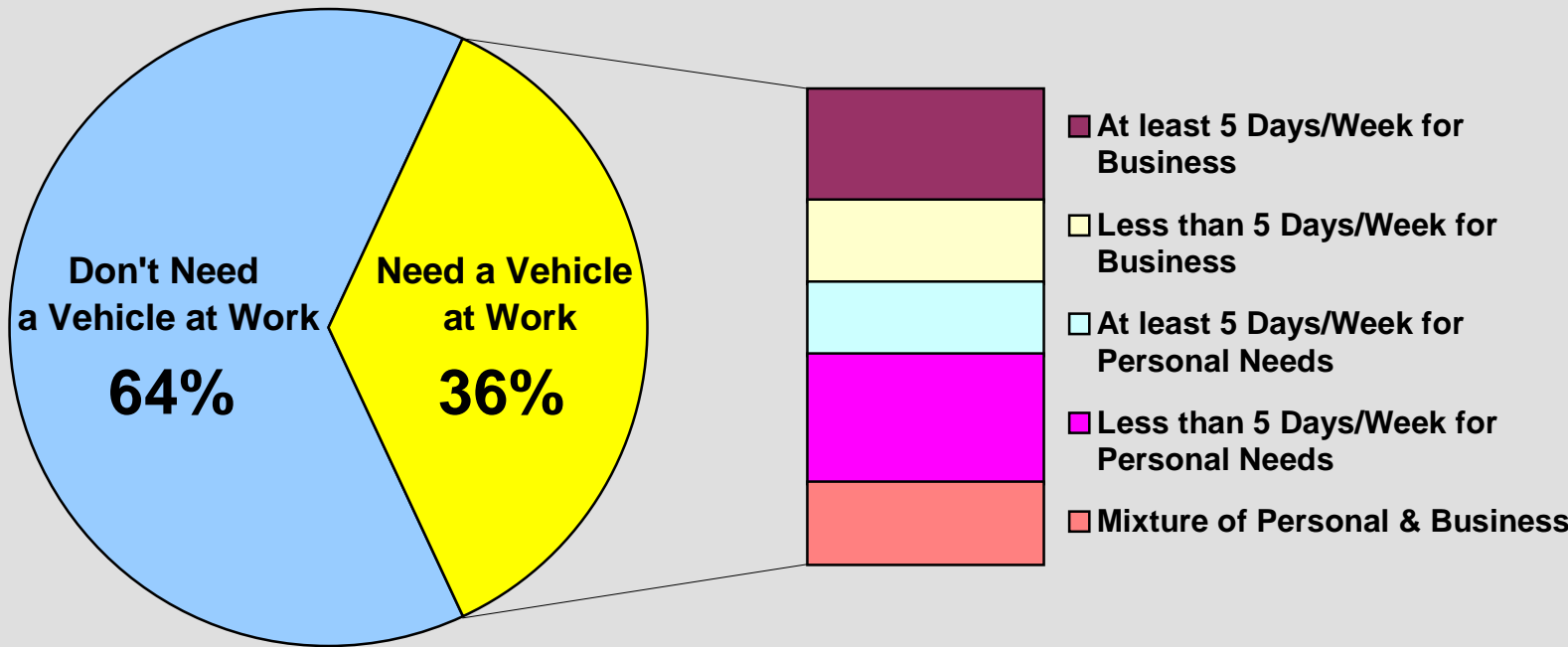


# Today

- Attitudes about commuting
  - Freeway traffic worse than a year ago: **43%**
  - Surface street traffic worse than a year ago: **33%**
- Most common factors cited for driving alone
  - Convenience and flexibility: **29%**
  - Having access to a vehicle during work: **10%**
  - Having access a vehicle before and after work: **6%**
- Leading reason for not using bus or rail
  - Need access to a vehicle at work: **27%**

# Today

## A Need for Mobility at Work



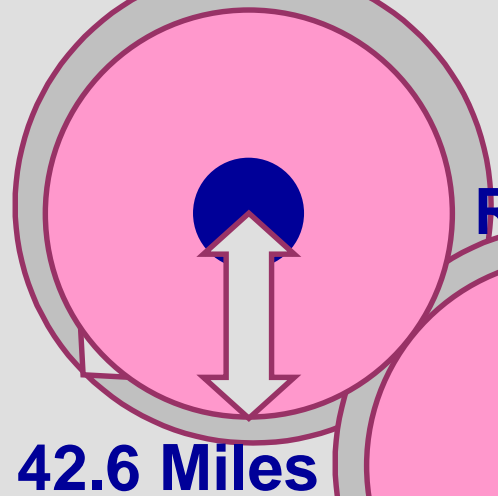
*Implication: Growing dissatisfaction with commuting will not lead to increased use of conventional alternatives*

# Today

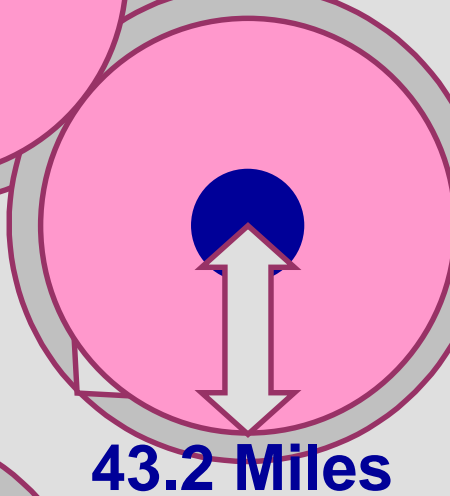
## Average Two-way Commute Distance



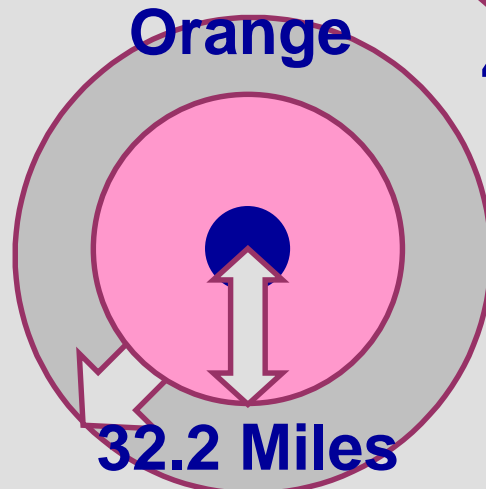
### San Bernardino



### Riverside



### Orange

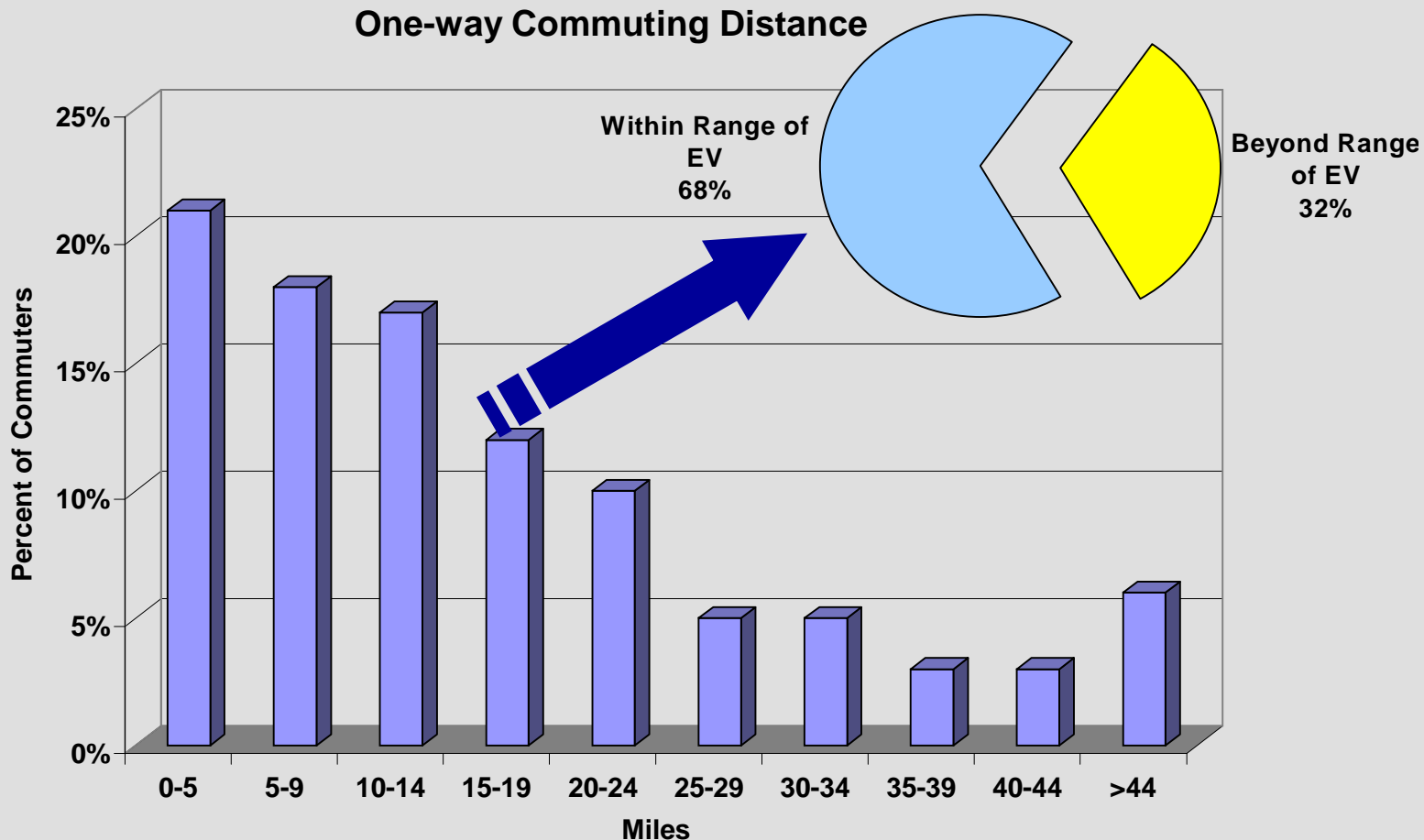


*Implication: "Average" Commute is approaching practical limit of EVs*



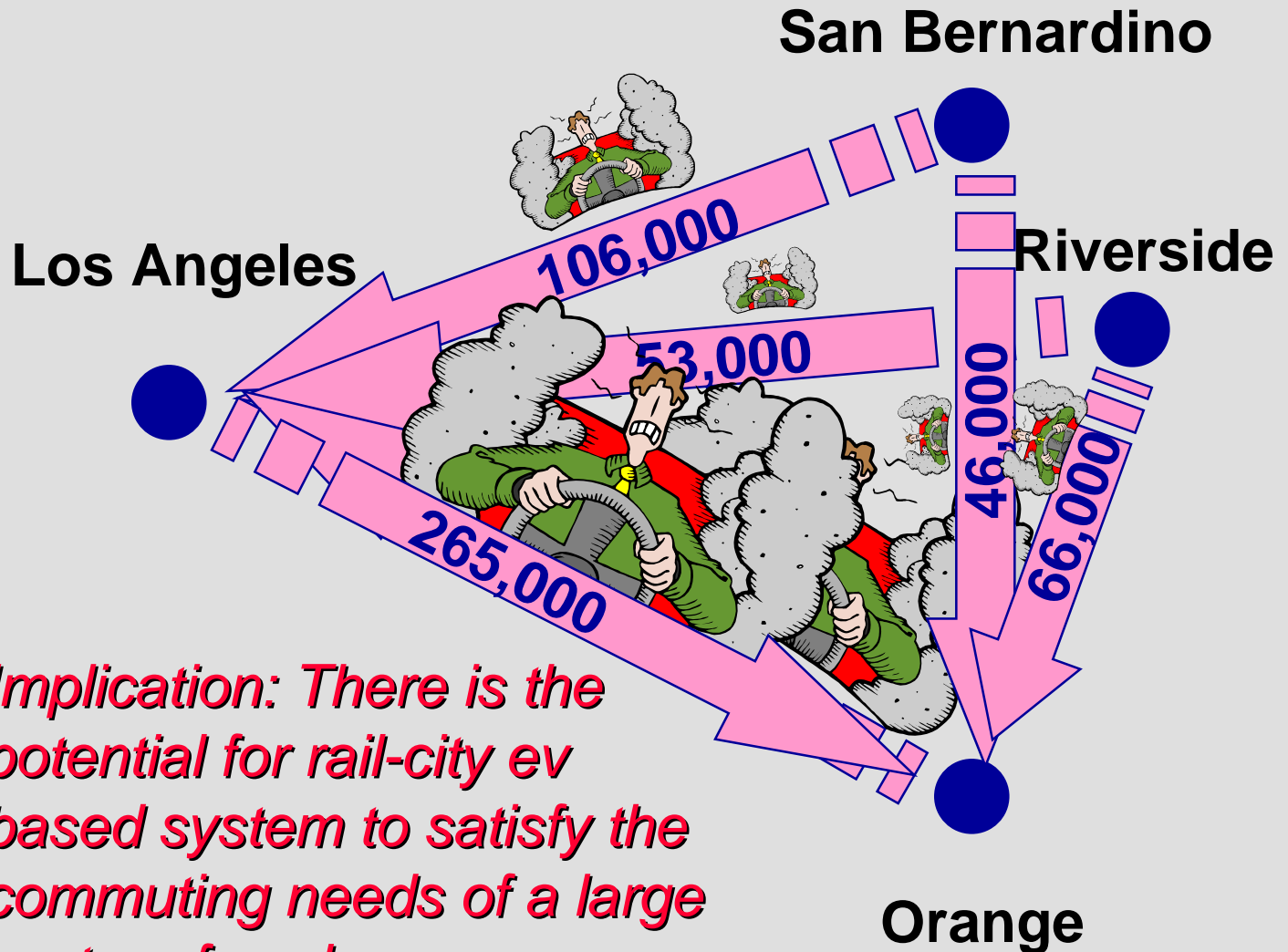
# Today's Commuting Distances

*Implication: A substantial market of commuters is unavailable to an EV alternative*



# Today

## Regional Commuting Patterns



*Implication: There is the potential for rail-city ev based system to satisfy the commuting needs of a large sector of workers*



# ***By 2020***

- 6.7 million more people (two more Chicago's)
  - More planned communities in far suburbs
- 4 million new jobs
  - More job growth in suburbs
  - Not clustered with amenity-driven residential locations
  - Drive-alone commuting will continue as preferred mode
- Traffic conditions will worsen
  - Traffic will grow by more than 48%
  - Traffic delay will more than double
  - Travel speeds will slow to 20 mph
  - Average commute times will increase by 13 minutes
- Multiple-worker households will continue to dominate
  - Vehicles generally must be capable of meeting commuting needs

# By 2020

## Population Forecast (% Change 1994-2020)

Los Angeles



12,249,088  
32.7%

San Bernardino

2,830,050

81.6%

Riverside



2,815,987  
104.5%

Entire Region  
22,352,394  
43.2%

3,244,602  
25.0%

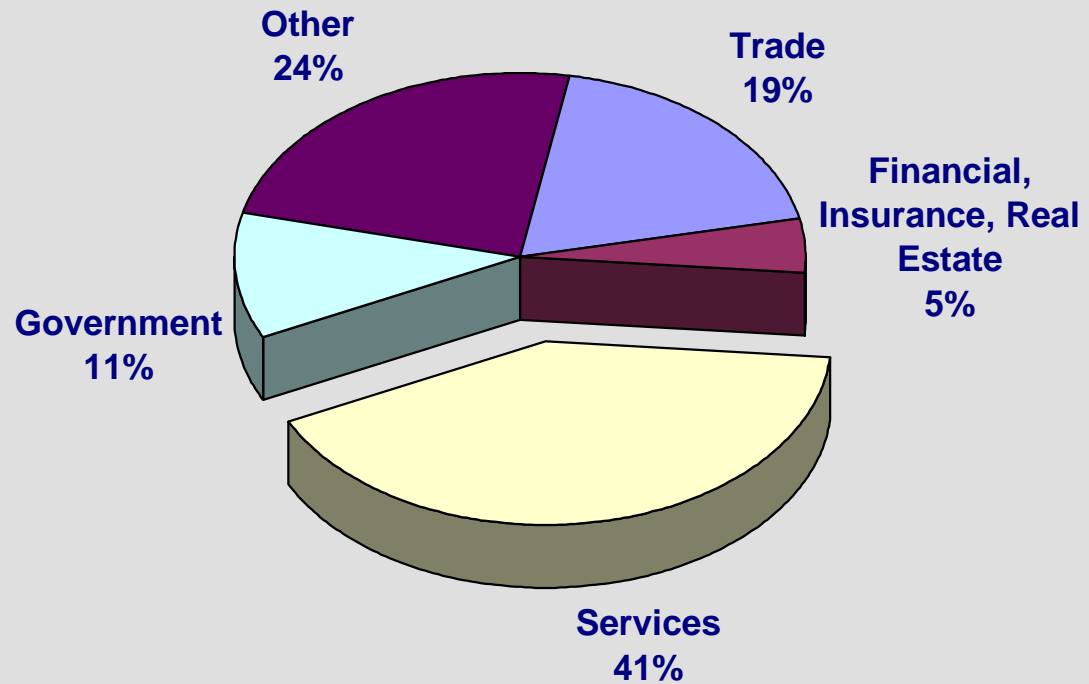
Orange

*Implication: Growth in the outlying regions will produce even greater demand for "corridor" transportation systems and solutions*



***By 2020***

**Economic Forecast  
(% of Total Jobs)**



***Implication: Increasing flexibility/mobility will be needed at workplace***

***148% Increase over 1994 Levels***



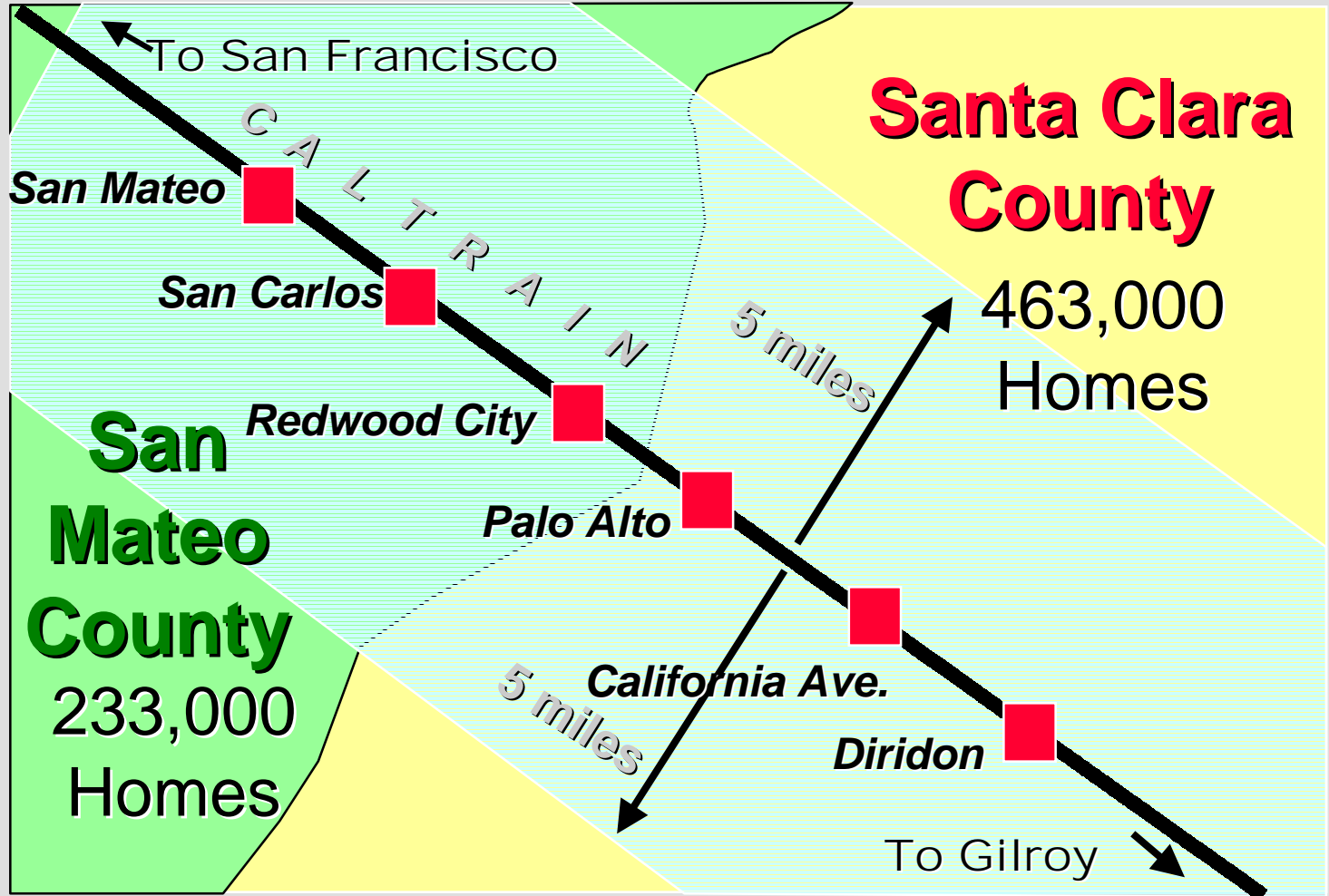


# The Case for the Northern California Region

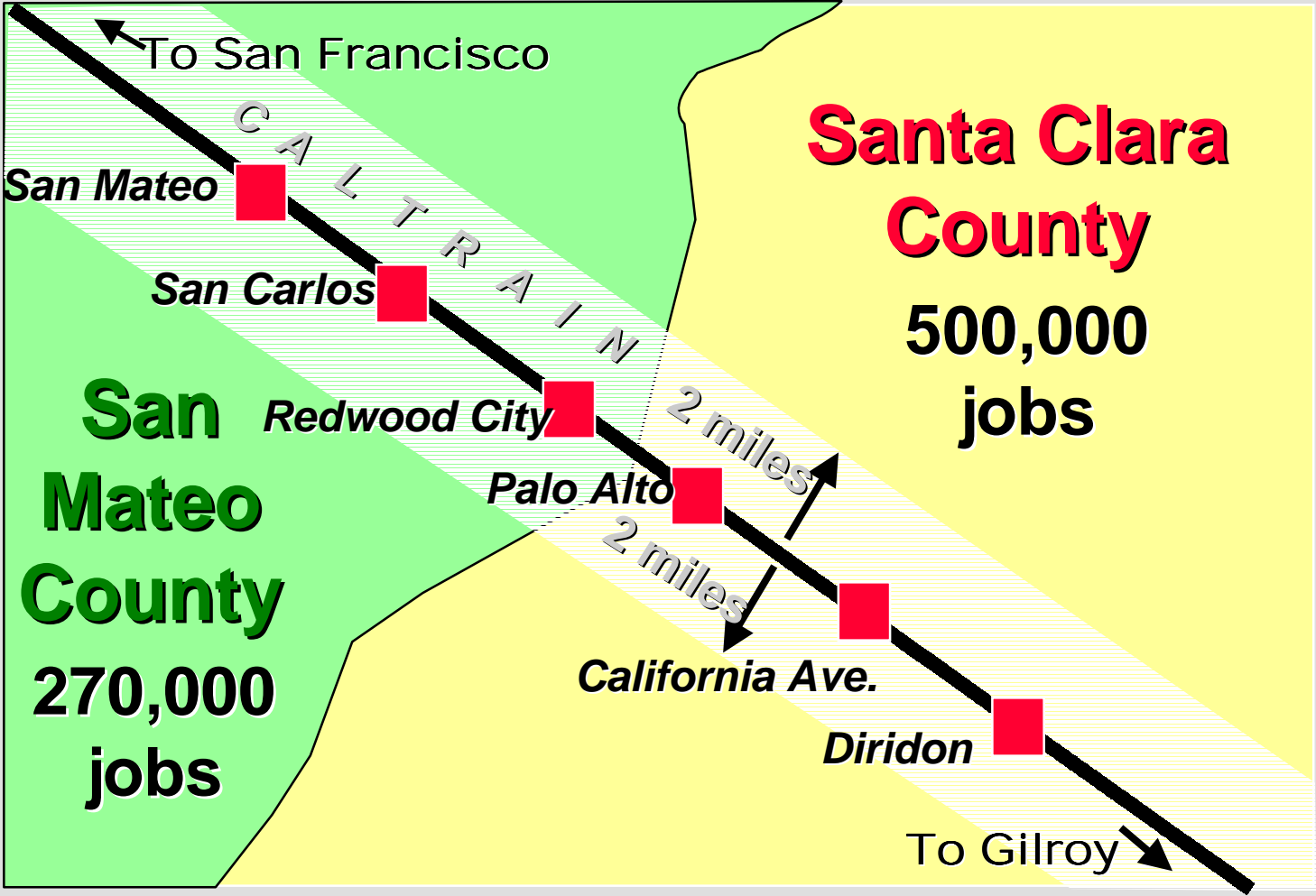
# The Silicon Valley Caltrain Corridor San Francisco - San Jose & Gilroy



# 696,000 Silicon Valley Homes Are Within 5 Miles of Caltrain



# 770,000 Silicon Valley Jobs are Within 2 Miles of Caltrain





# ***Conclusions Drawn***

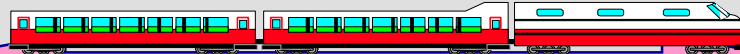
- Range of current ZEV technology seriously limits its marketability as a “stand-alone” system
- Rise in congestion levels and concomitant dissatisfaction with commuting will push solo drivers toward alternative solutions
- Accelerated economic development in the service high-tech industries will continue to place a premium on mobility at the workplace
- Regional commuting patterns support a demand for a regional transportation system that maintains the convenience and flexibility of solo driving

# Shared-Use Station Car Solution

Clean Limited-Range Mobility

Rigid Line-Haul Performance

Clean Limited-Range Mobility



Urban Mobility

Congestion-free flow

Urban Mobility



