

# *Imperial County Travel Model (ICTM)*

*presented to*  
ICTC Management Committee

*presented by*

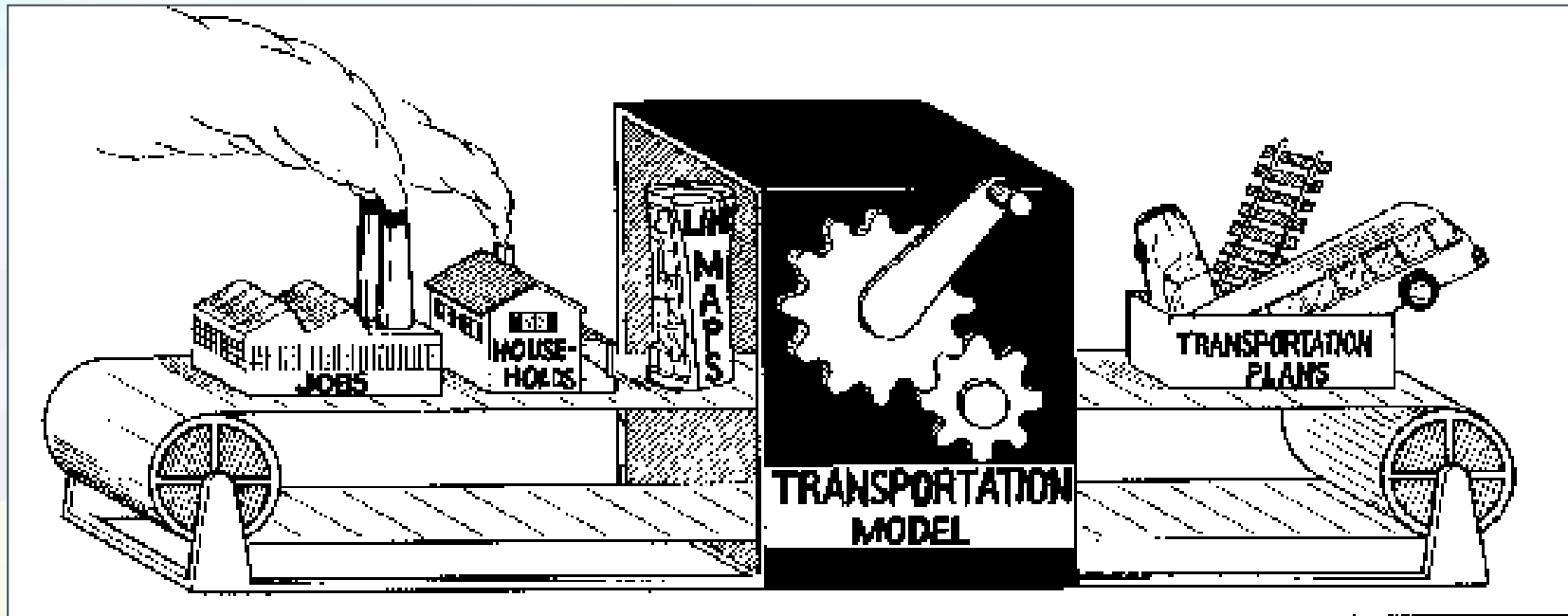
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- ICTM Travel Model Basics
- Adapting from SCAG to Imperial County
- Upcoming uses of the model

# *What is a Travel Demand Model?*

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# What is a Travel Demand Model?

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- A **tool** to provide travel information that can aid in planning for transportation improvements
- A way of **organizing your assumptions**
- A program that can "predict" existing travel demand and forecast travel demand for future scenarios

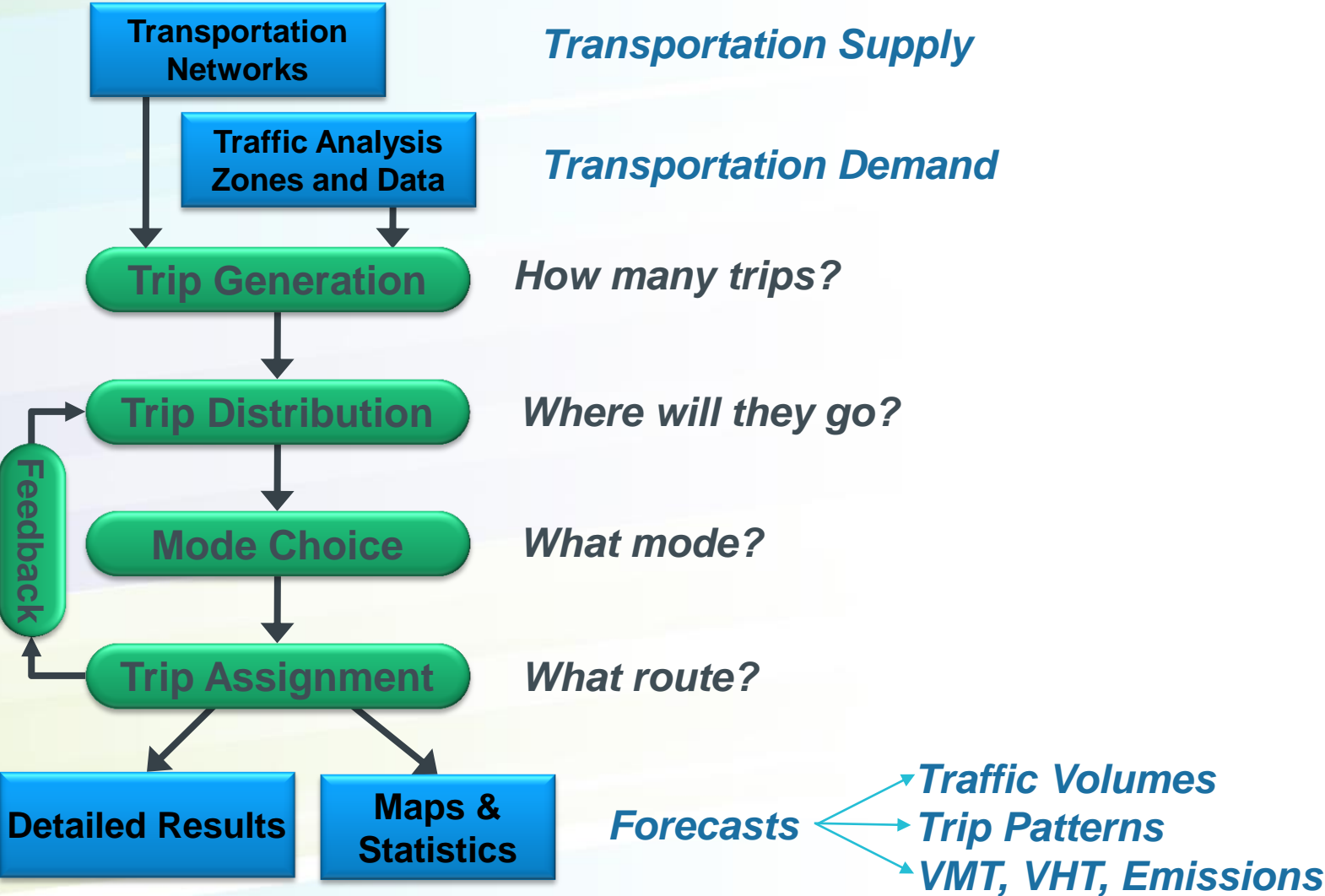
**Real world**



**Modeled World**



# The Four Steps



# Basic Types of Travel

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## Resident Travel

- Travel by county residents, generally within the area but sometimes leaving and/or returning

## Commuter and visitor travel

- Travel by area employees commuting in from outside the county
- Travel by people visiting the county

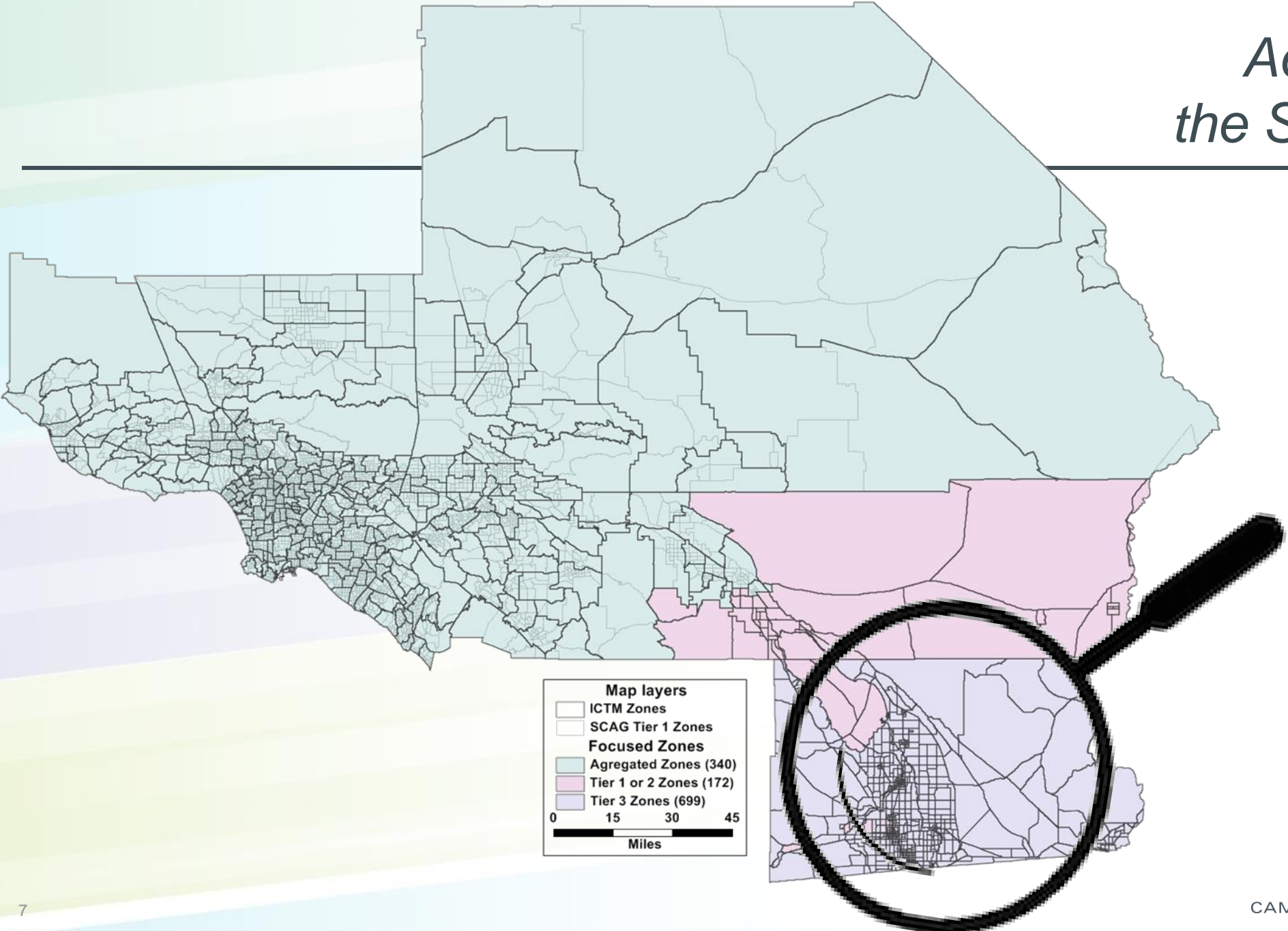
## Freight Travel

- Travel by trucks traveling to, from, and within the county

## Through travel

- Travel by those just passing through

# Adapting from the SCAG Model



## *Adapting from the SCAG Model*

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### ➤ **SCAG Region:**

- » About 18 Million people
- » Large urbanized area
- » Extensive congestion

### ➤ **SCAG Model**

- » Regional in nature
- » Uses a broad brush to understand regional travel

### ➤ **Imperial County**

- » About 180,000 people
- » Mostly rural / agricultural
- » Multiple smaller communities
- » Different type of congestion
- » Three border crossings

### ➤ **Imperial County Model**

- » Focused on Imperial County
- » Localized detail
- » Accounts for cross-border traffic



# Testing Model Scenarios

- Model roadway capacity Increases
  - » Additional lanes
  - » New roadways
  - » Intersection improvements,
    - The model can help, but must be supported with other traffic analysis tools
- Model changes in transit service
  - » New / improved routes
  - » Expansion of transit service
- Model changes in travel demand
  - » New or growing developments
  - » Changes in border crossing volume
- Plan for long term growth
  - » Size the 2040 infrastructure to meet 2040 demand



## *Upcoming uses of ICTM*

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### ➤ General Planning

- » Regional air quality analysis
- » Understanding impacts of land use growth on transportation
- » Planning for changes related to the border crossings

### ➤ Project Specific

- » Forecast traffic to correctly size infrastructure
- » Understand and plan for impacts of changes

### ➤ Example Projects:

- » Work on SR-98
- » Port of Entry work
- » Ongoing I-8 work
- » SR-86 relocation to Forrester
- » Imperial Ave. Extension

# ***TRAVEL MODEL***



# Testing Demand Changes

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- » Evaluate base, interim, and forecast years
- » Consider testing large development proposals (e.g., over ~50 households or employees)
  - Use the model's trip distribution to compare to traffic study assumptions
  - Cross-check development model runs with ITE-based traffic studies
- » Test border crossing changes



- » Use the model to test very small developments or events
- » Test unreasonable changes to the jobs/housing balance

# Testing Roadway Changes



- » Test addition or removal of lanes
- » Test addition of new roads or closure of existing roads
- » Test a comprehensive roadway plan
- » Test various corridor configurations



- » Test scenarios that do not impact system capacity
- » Try to model very small capacity or speed changes
- » Rely on the demand model alone to test intersection configurations
  - But, the model can provide some valuable information

# Active Transportation



- » Focus on **potential** non-motorized demand
  - 1, 2, and 5 mile trip bandwidth maps
  - Identify good places for infrastructure improvements
- » Consider non-motorized model results to be rough estimates
  - The model is only one tool to aid in analysis



- » Expect detailed numbers
  - YES: “There is a high demand for a new bike lane in this corridor”
  - NO: “This new bike lane will result in X new bike trips”

# Transit Results



- » Evaluate major system adjustments
- » Test large route changes
- » Focus on a system-wide results
- » Compare different possible options



- » Test fine tuning of route alignments
- » Expect detailed forecasts by transit route or transit stop
  - This information is available, but must be interpreted with extreme caution and skepticism



- » Post process traffic volumes based on counts
- » Focus on **changes** rather than exact values
- » Consider corridors as a whole
- » Use the model to plan changes to the arterial and highway system



- » Rely on raw model volumes alone
- » Expect detailed collector and intersection forecasts
  - This information is available, but must be interpreted and may require additional post processing



***QUESTIONS?***