

SCAG Truck Model Updates

Warehousing, Transloading, and Port Activity

presented to the

SCAG Modeling Task Force

presented by

Cambridge Systematics, Inc.

Sean McAtee, Eric Bierce

with input from

Ramesh Thammiraju, Tara Rima, Dan Beagan, Michael Fischer

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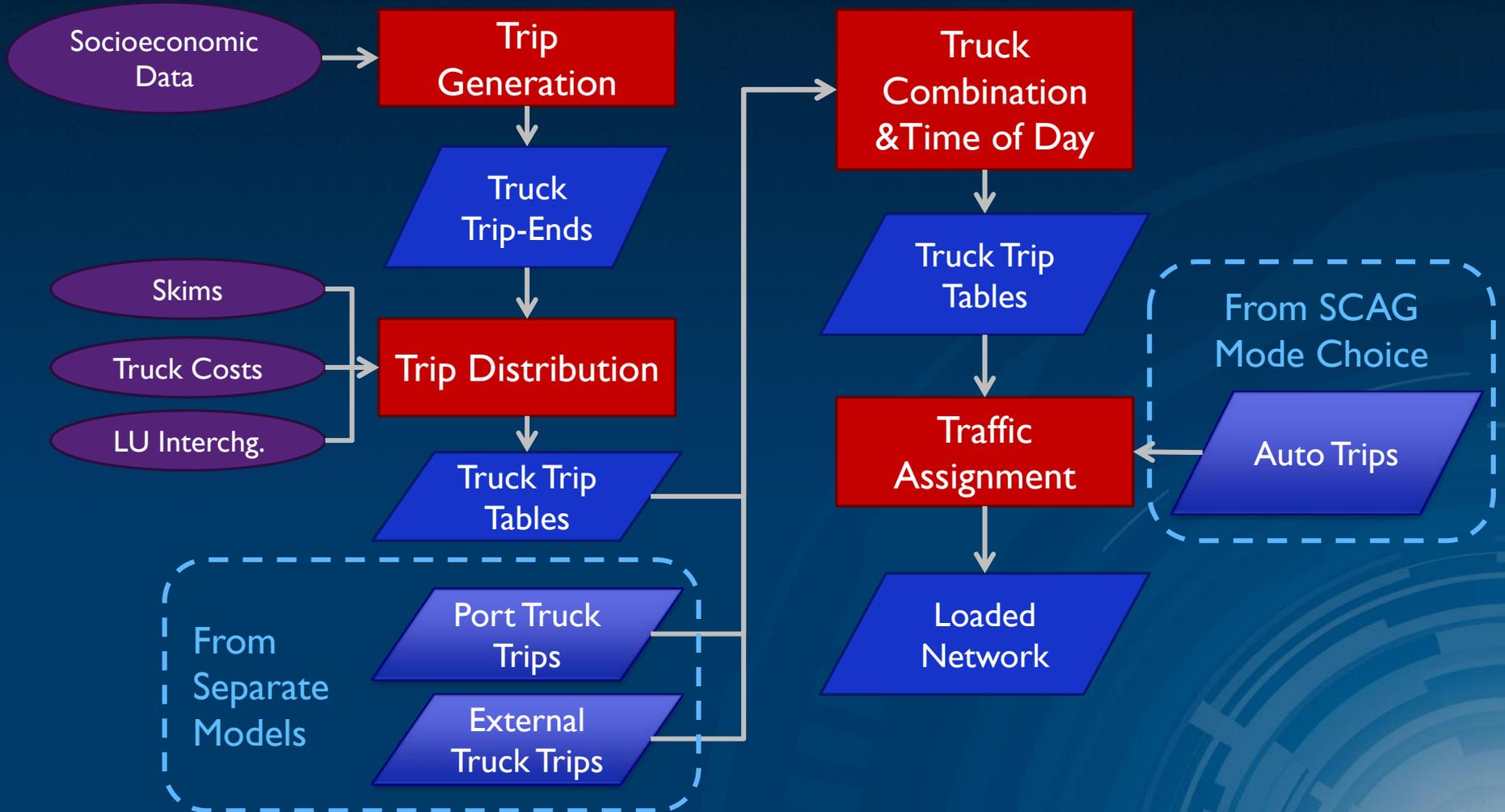


Refreshing the SCAG Truck Model

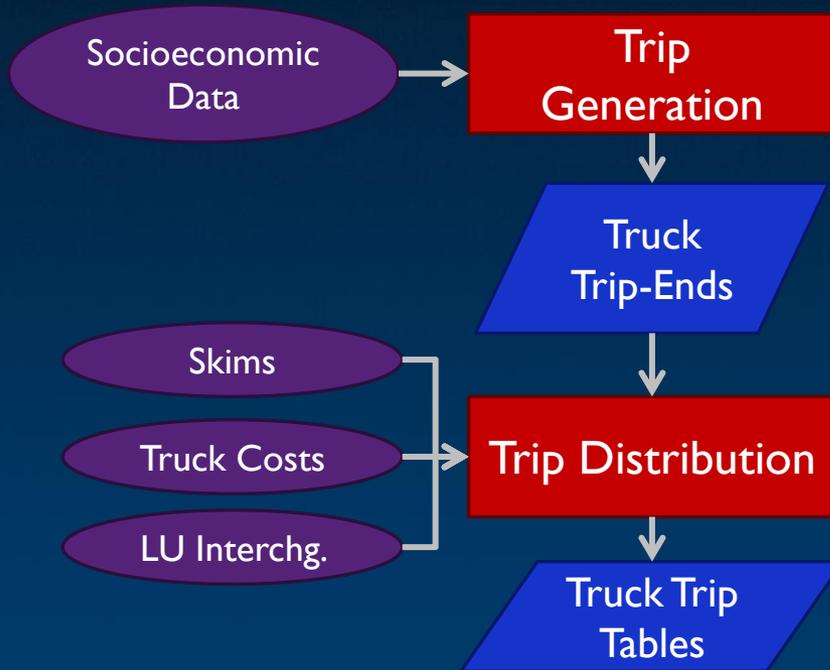
- ◎ High Cube Warehousing
- ◎ Updated Port Models



Truck Model Structure



Truck Model Inputs



SED / LU Categories

1. Households
2. Agriculture, mining & construction;
3. Manufacturing
4. Retail
5. **Transportation & warehousing**
6. Government
7. Wholesale
8. Other

High Cube Warehousing

- ⦿ Different trip generation rates than “general” warehousing
- ⦿ Analytic needs related to regional analysis
- ⦿ Add new employment categories

Transportation and Warehousing

Transportation

General
Warehousing

High Cube
Warehousing

High Cube Warehousing

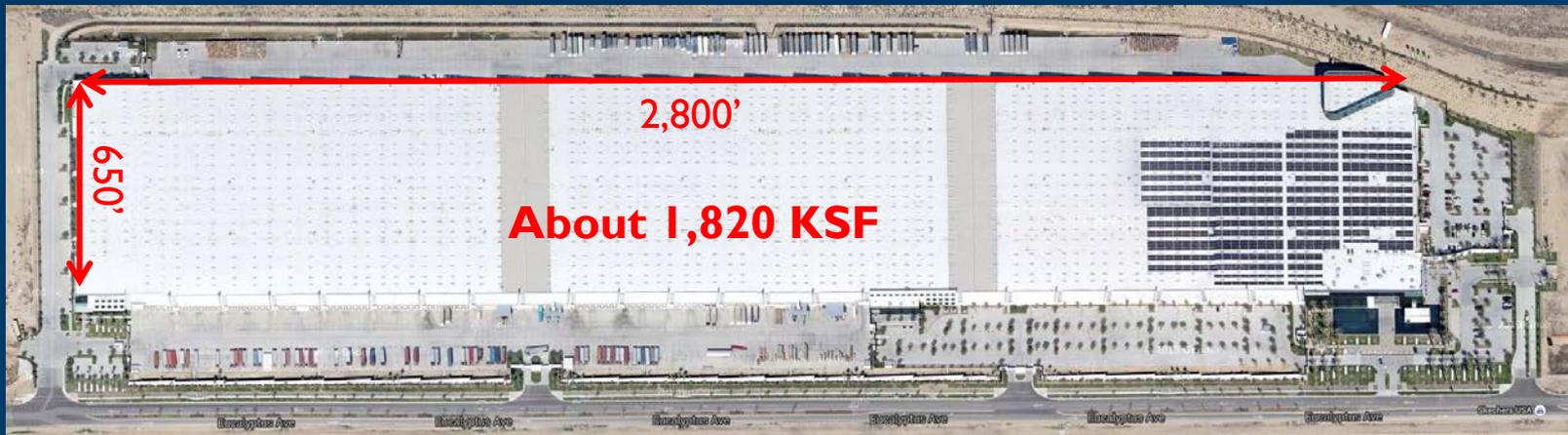
© Source Data

- » ITE Trip Generation Handbook (2012)
- » Fontana Truck Study (2003)
- » Florida DOT trip generation Study
- » Inland Empire NAOIP
- » Moreno Valley trip generation study

What exactly is a High Cube Warehouse?

- ◎ Used for the storage of manufactured goods prior to their distribution locally or regionally
- ◎ Typically 24-30 feet tall
- ◎ Contain many dock doors for loading/unloading trucks
- ◎ Can facilitate many different types of operations

Example High Cube Warehouse



Relative Trip Rates

High Cube Warehouses have fewer employees per KSF

High Cube

- More truck trips per Employee
- Fewer truck trips per KSF

General

- Fewer truck trips per Employee
- More truck trips per KSF

Draft HDT Trip Rates

Activity Type	Trips per KSF	Trips per Employee
General Warehouse	1.068	0.673
HC Warehouse	0.560	0.767
Transportation*	n/a	0.658

**Transportation rates were specified to retain the overall Transportation and Warehousing trip rates from the original model*

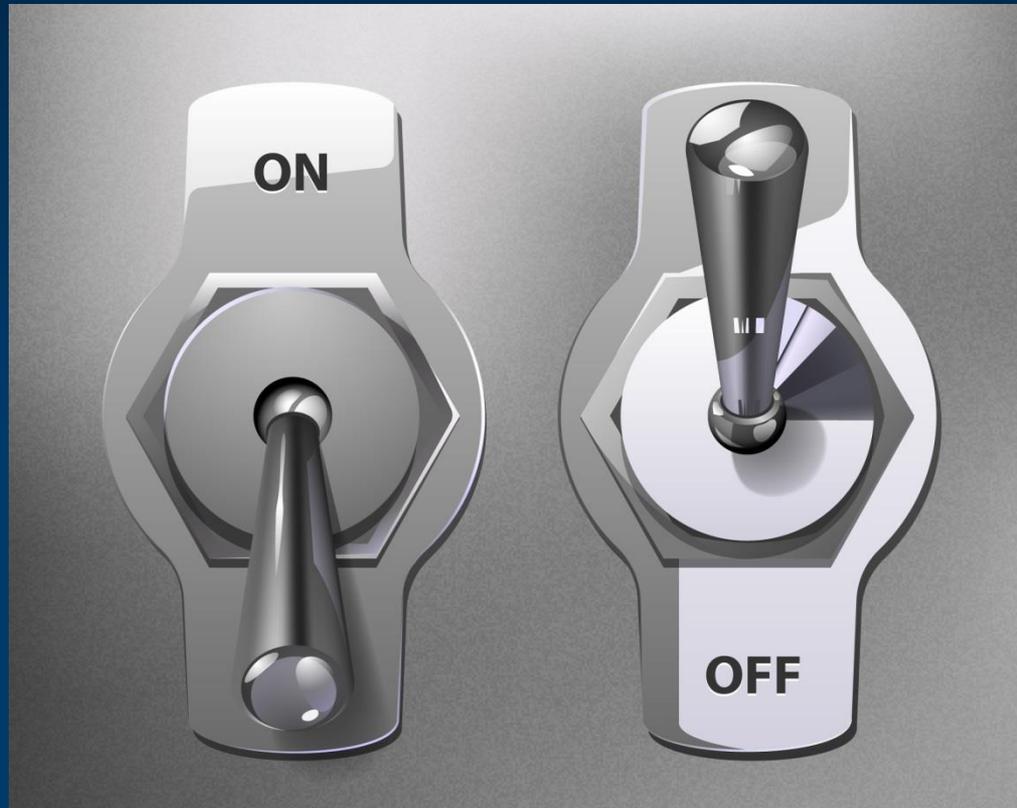
Implementation

Warehouse
Data

Activity
Types

Land Use
(KSF)

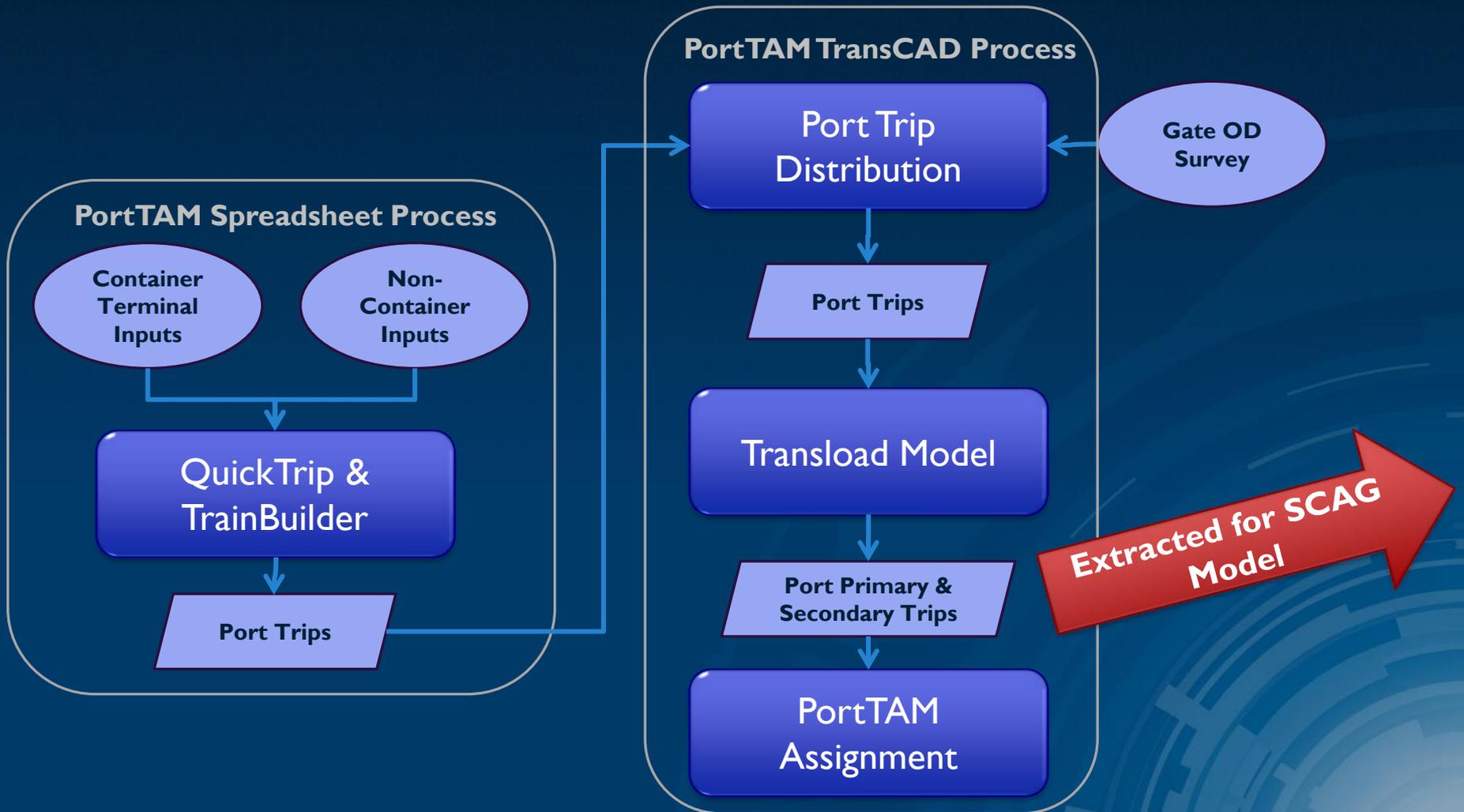
10-Category



Employees

8-Category

Updated Port Model



Specific Truck Types



Bobtail

Chassis



Specific Truck Types

Marine Container



20-Foot

40-Foot



Specific Truck Types

Domestic Container



45, 48, or 53 Foot

Intermodal Containers

- ◎ Many marine and domestic containers are transferred to rail

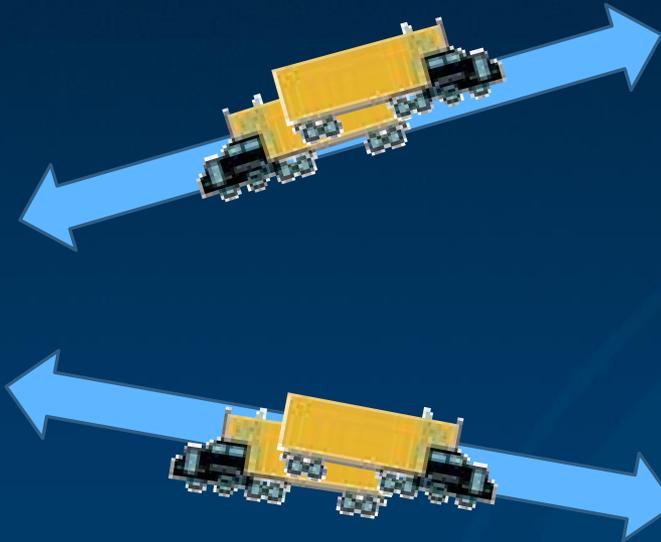


Primary Port Trips

*Near-Dock (< 5 miles)
and Off-Dock Railyards*

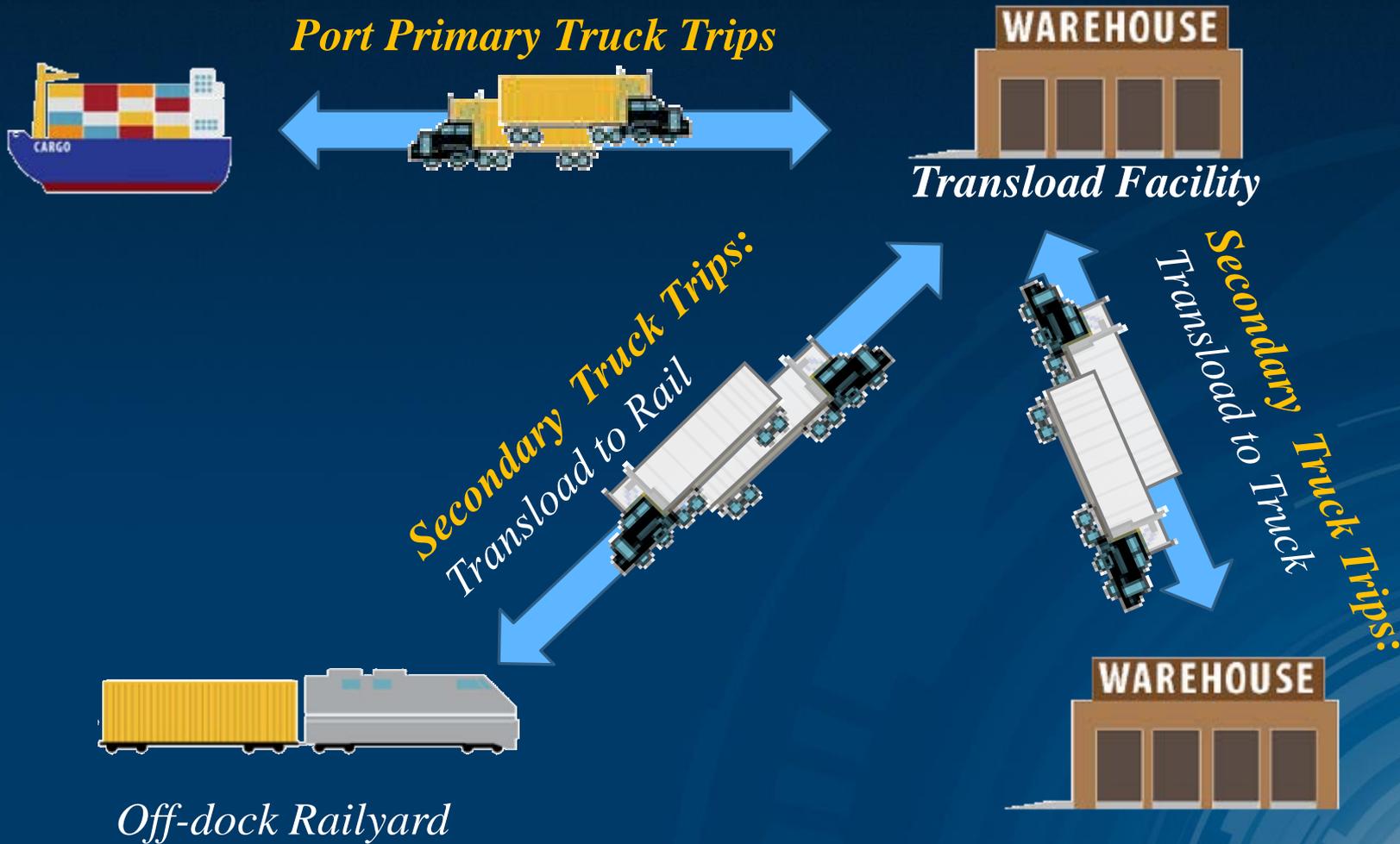


*On-Dock
Rail
no truck
trips*

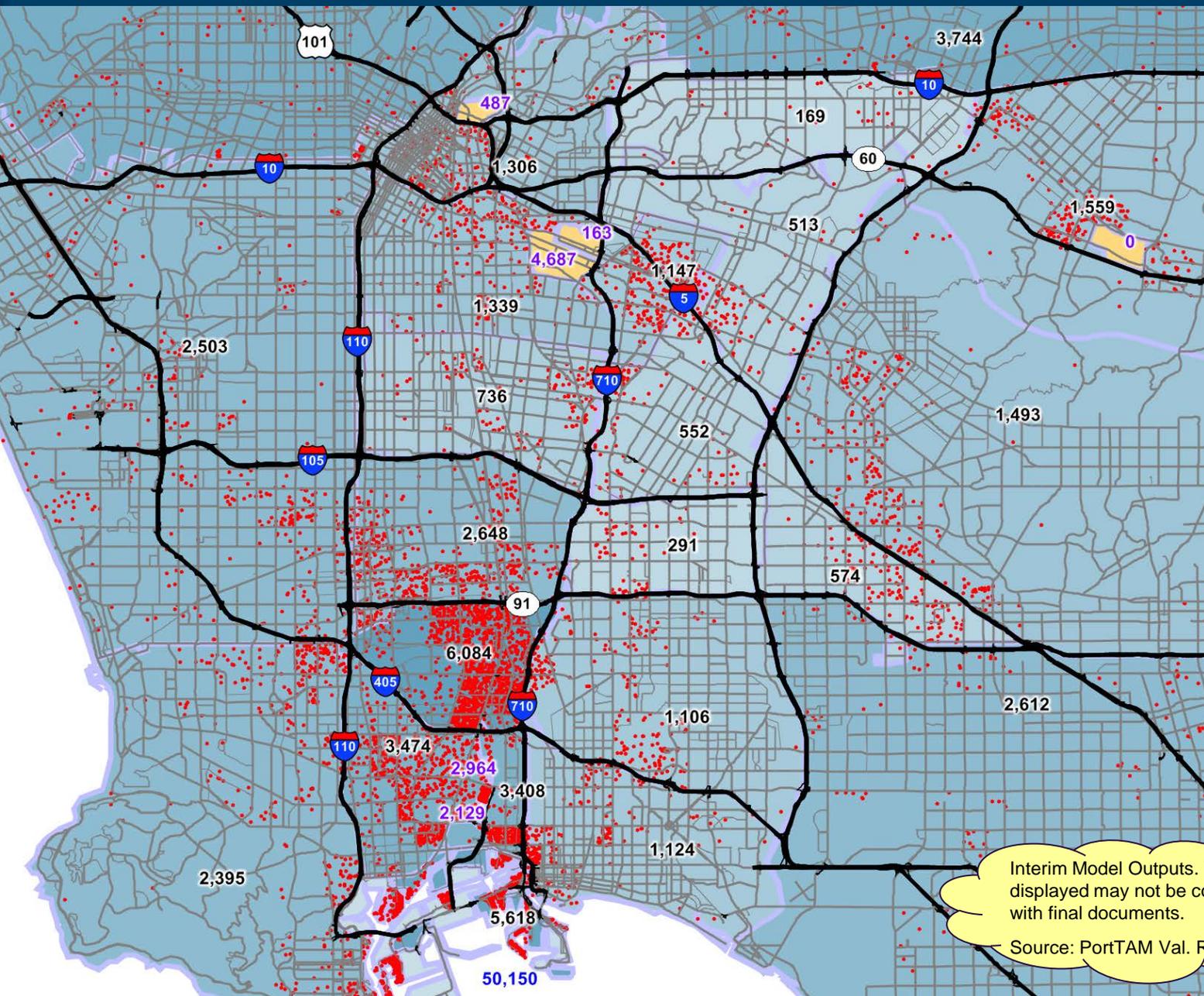


*Warehouse, Transload Facility,
or other destination*

Transloading



Port Primary Trips



Interim Model Outputs. Values displayed may not be consistent with final documents.
Source: PortTAM Val. Run #22

Conclusion

- ◎ SCAG's Next Trip-Based Model version includes these updates
- ◎ PortTAM is updated continuously through environmental documents
- ◎ Next Steps
 - » Continue to Maintain and monitor both models
 - » Periodic validation to vehicle class counts
 - » Integration with SCAG's Activity Based Model

Thank You

A decorative graphic in the bottom right corner of the slide, consisting of several overlapping, semi-transparent circles of varying shades of blue, creating a sense of depth and movement.