

# Comprehensive Regional Goods Movement Plan and Implementation Strategy *Study Introduction and Overview*



*presented to*

## Regional Goods Movement Steering Committee

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**CAMBRIDGE  
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# 2008 RTP Includes Three Major Goods Movement Strategies



- Rail Investments (e.g., Mainline Capacity Expansion, Grade Separations, Acceleration of Clean Engine Upgrades)
- Dedicated lanes for clean technology trucks (e.g., I-710)
- High Speed Regional Transport (HSRT) for freight with near zero emissions

# Major Development Since 2008 RTP



- **Changes in the economy have impacted goods movement in the region**
- **Follow-up studies (e.g., 710 EIR/EIS, San Pedro Bay Ports' Inland Port Feasibility Study, Phase II Port & Modal Elasticity Study) will have implications for the RTP update**
- **SB 375 is changing the overall regional planning process**

## Framework for Today's Discussion

- Seeking guidance from Steering Committee on emphasis for regional goods movement policy development
- Build on 2008 RTP and MCGMAP where appropriate, refine or modify as necessary, and develop a shared vision of goods movement in the region
- Goal for RTP update should be to complete any outstanding analysis of system level impacts to refine concepts, cost estimates, phasing plans, implementation obstacles, and funding strategies
- Some strategic objectives are well-established; others are evolving

# Background

## Comprehensive Regional Goods Movement Plan and Implementation Strategy

- Conduct multi-year and multi-phased project
  - Focus initially on a Model Development Plan and Data Collection
- Build upon foundations of the MCGMAP and 2008 RTP Goods Movement Element
  - Ensure that recommended strategies address regional goods movement system-level issues
  - Refine strategic objectives, costs, develop implementation and financing plans
  - Resolve compatibility and connectivity issues
  - Detail project definitions/phasing

# Project Tasks and Products

- **Public Outreach**
- **Evaluate and Recommend Improvements to the SCAG HDT Model**
  - Summary of business needs for model
  - Model performance evaluation
  - Stakeholder workshop on policy/planning needs
  - Model Development Plan
- **Truck Trip Data Collection and Analysis**
  - Compile existing data sets
  - Obtain truck GPS data and GPS/establishment surveys
  - Supply chain surveys
  - Classification counts
- **HDT Model Enhancement and Model Validation**

## Project Tasks and Products (cont.)

- **Needs Assessment of Industrial/Warehouse and Intermodal Facilities & Including Relation to SB375**
  - **Inventory existing space, capacity, and land availability**
  - **Warehouse survey**
  - **Demand forecasting and comparison with supply**
  - **Assess trends in future industrial land use patterns, land use policies, and real estate market trends**
  - **Develop regional strategies & programs to better integrate freight & land use planning**

## Project Tasks and Products (cont.)

- **Evaluation of Goods Movement Element of 2008 RTP**
  - Review RTP projects – port access, rail capacity and grade separations, clean technology truck lanes, alternative technology
  - Identify gaps and redundancy
- **New Technology Alternatives for Line-Haul Freight**
  - Identify technology alternatives
  - Conduct detailed comparisons and ranking of alternatives
  - Recommendations for phased implementation of regional system
- **Recommendations for Enhancing the Regional Goods Movement System**
  - Recommend new projects, develop concept plans and costs, and conduct model runs and analysis
  - Develop portfolio analysis and develop phased implementation plan



## Project Tasks and Products (cont.)

- **Environmental Mitigation Plan**
  - Summarize mitigation strategies in 2008 RTP and other studies
  - Develop new mitigation measures with focus on PM2.5, ozone, and GHG
  - Analyze cost effective measures and implementation plans
- **Financing and Implementation Plan**
  - Estimate project costs and phased implementation plan for regional GM projects
  - Develop financial plan
- **Final Freight Plan**

## Project Tasks and Products (cont.)

- **Port Model Improvements**
  - Conduct port gate surveys
  - Make zones and networks consistent between port model and SCAG regional model
- **Port Activity Tracker**
  - Collect and track information of infrastructure development, transport costs and tariffs, travel times, environmental regulations and warehousing / cross-dock / distribution centers
  - Develop tool by which to track key indicators for the San Pedro Bay Ports in comparison to competing ports

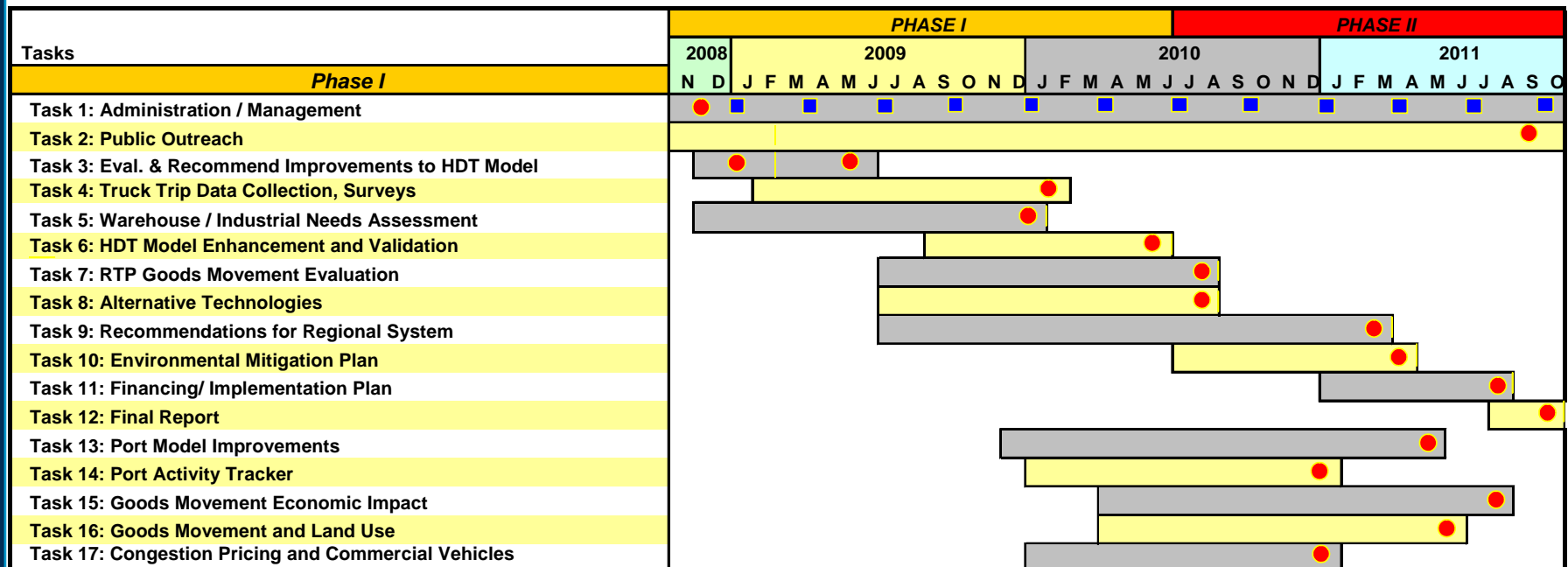
## Project Tasks and Products (cont.)

- **Goods Movement Economic Impact**
  - Evaluate economic impact of existing and proposed freight support activity
  - Quantify economic impacts of intermodal freight movements in the SCAG region
- **Congestion Pricing and Commercial Vehicles**

# Project Schedule



## SCAG Goods Movement Schedule (36 months total)



- Task Deliverable
- Quarterly Progress Report

## 2008 RTP Focus

- **2008 RTP Goods Movement Element intended to address concerns about:**
  - Capacity constraints
  - Efficiency, reliability, and productivity of the system
  - Costs of goods to consumers
  - Regional competitive advantage
  - Traffic congestion
  - Negative environmental, health and other community impacts
- **Three major goods movement strategies**
  - Rail Investments
  - Dedicated lanes for clean technology trucks
  - High Speed Regional Transport (HSRT) with near zero emissions

# 2012 RTP – What's Next for Goods Movement?

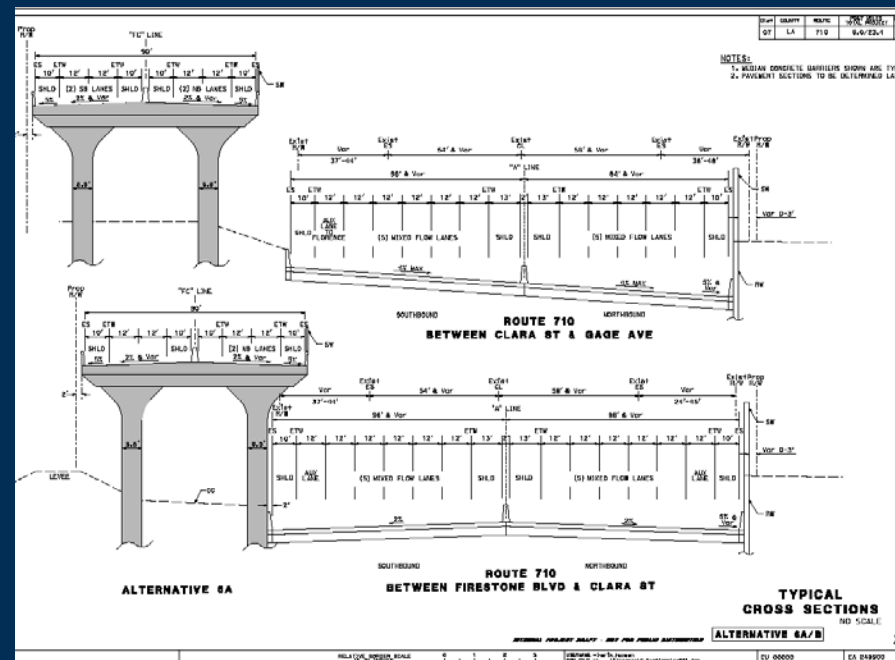


- **International Trade-oriented strategies – implementation plans**
- **Develop strategies for other elements of regional goods movement system**
- **Land use strategies becoming a more critical need (SB 375)**
- **Recent economic events raise questions about how best to address uncertainty**

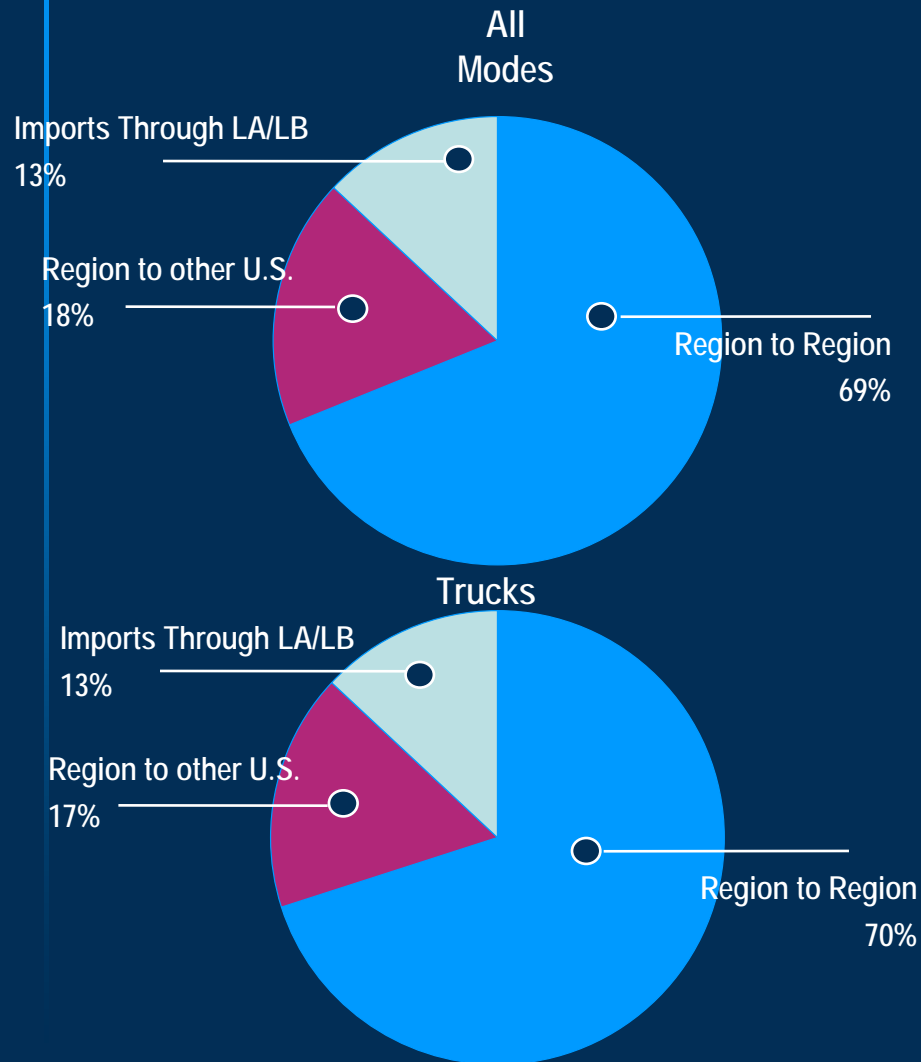
# Implementation Plans for International Trade Strategies



- Assess regional systems implications of new studies
  - I-710 EIR/EIS
  - Port ZECMS and Inland Port Studies
  - Cargo fee studies
- Assess project interactions at systems level
- Refine funding/finance and institutional strategies



# Develop Strategies for Other Elements of Goods Movement Systems

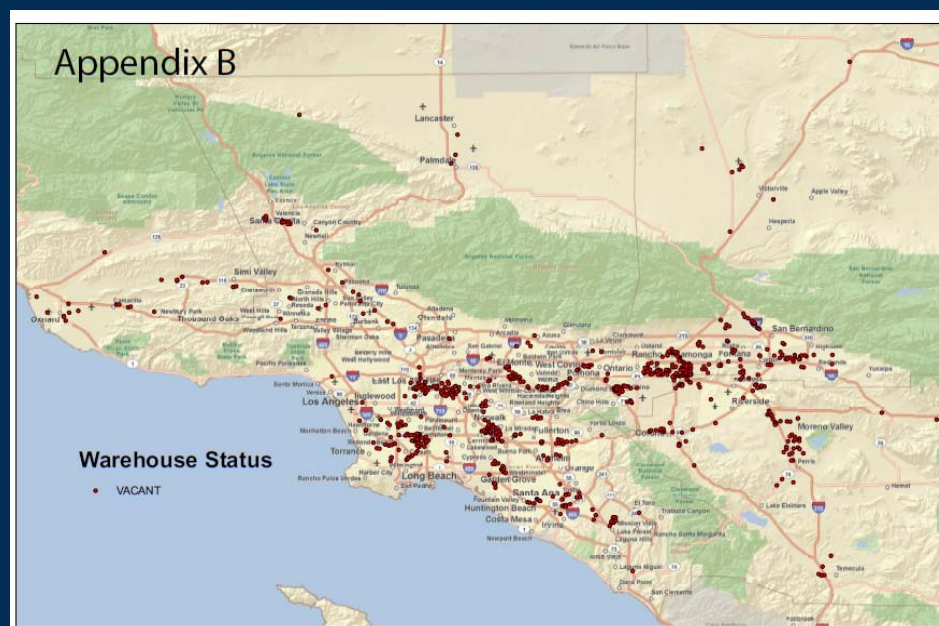


- Southern California is a leading manufacturing center in U.S. - What are key transportation links to domestic suppliers/markets
- Over 50% of trucks and truck VMT is service, utility, construction, and local pickup & delivery
- How well do existing RTP strategies address needs of these sectors?



# Land Use and Goods Movement Issues

- How will real estate market trends and land use regulation affect locations of goods movement activities?
- Reconciling regional “smart growth” objectives and industrial land supply needs
- Interaction between transportation investments and industrial land use decisions



# Uncertainty and the Regional Goods Movement Future



San Pedro Bay Ports  
Container Forecasts  
(millions of TEUs)

	Previous	Current
<b>2008 (actual)</b>	<b>14.3</b>	<b>14.3</b>
<b>2015</b>	<b>27.6</b>	<b>17.0</b>
<b>2020</b>	<b>36.7</b>	<b>21.8</b>
<b>2030</b>	<b>43.2</b>	<b>34.6</b>
<b>2035</b>	<b>43.2</b>	<b>43.2</b>

- **How will consumer economy recover?**
- **How will other regions adapt to shifting trade patterns?**
- **How will future energy prices affect mode choice and sourcing patterns?**
- **How will climate change regulation affect supply chain decisions?**

## Suggested Strategic Objectives

- Ensure that the San Pedro Bay ports remain a vital economic asset for the region as the major gateway for Pacific Rim trade. Support regional role as NAFTA trade gateway through targeted border improvements
- Ensure that the manufacturing base of the region has efficient and reliable connections to domestic suppliers and markets.
- Ensure an efficient system for distributing goods and services to the growing population of the region without imposing excessive transport costs and while mitigating impacts of railroad and truck traffic in key corridors.
- Ensure that regional land use strategies promote efficient goods movement while minimizing environmental impacts and supporting regional “smart growth” objectives.

## Discussion

- **Are these the right strategic objectives? What's missing?**
- **What are the critical issues/problems that need to be addressed for each objective?**
- **Have strategies been defined supporting each objective? What questions need to be answered to refine strategies?**
- **What are the critical obstacles to implementation?**

# Scenarios and Risk Management

- **Alternative forecasts for domestic and international trade**
- **Alternative assumptions about the relative competitiveness of other west coast gateways**
- **Alternative energy price scenarios**
- **Alternative national global warming policies**

# Results of Modeling Workshop of March 2, 2009



- **Need to have a better understanding of goods movement markets, both international and domestic**
  - **Develop shares of international vs. domestic trade-related flows on specific facilities**
  - **Identify which market segments and industries benefit from proposed projects**
  - **Need to be able to account for local distribution and service truck activity accurately at regional scale**
  - **Need to understand secondary and tertiary port trips better and to have the ability to link those to the warehousing analysis**
  - **Identify markets to be served by alternative technology; clearly identify market needs and problems to be solved**

## Workshop Results (cont.)

- **Infrastructure improvements, including port access**
  - Identify infrastructure constraints for highways, mainline rail lines rail yards
  - Define “off-dock rail” more clearly
  - Re-state “port” growth as “cargo” growth
  - Link time of day congestion issues with port operational strategies
- **Need to revisit east-west corridor, clean technology truck lanes, and alternative goods movement technology**
  - Clean technology truck lanes should consider local and domestic truck usage as well as international

## Workshop Results (cont.)

- **Freight Facility Developments**
  - Include warehouse developments and intermodal terminals within this framework (including inland ports)
  - Link facility capacity constraints with future facility developments and associated impacts
  - Take warehouse productivity into account in capacity constraints analysis
  - Consider impacts of land use policy on warehouse and other freight facility development
- **Emissions Analysis**
  - In allocating resources for model development, develop relative priorities for estimating VMT and emissions from:
    - Freight truck traffic
    - “Non-freight” truck traffic; e.g., utility trucks, service trucks  
(**need to do both of the above at some level**)



## Workshop Results (cont.)

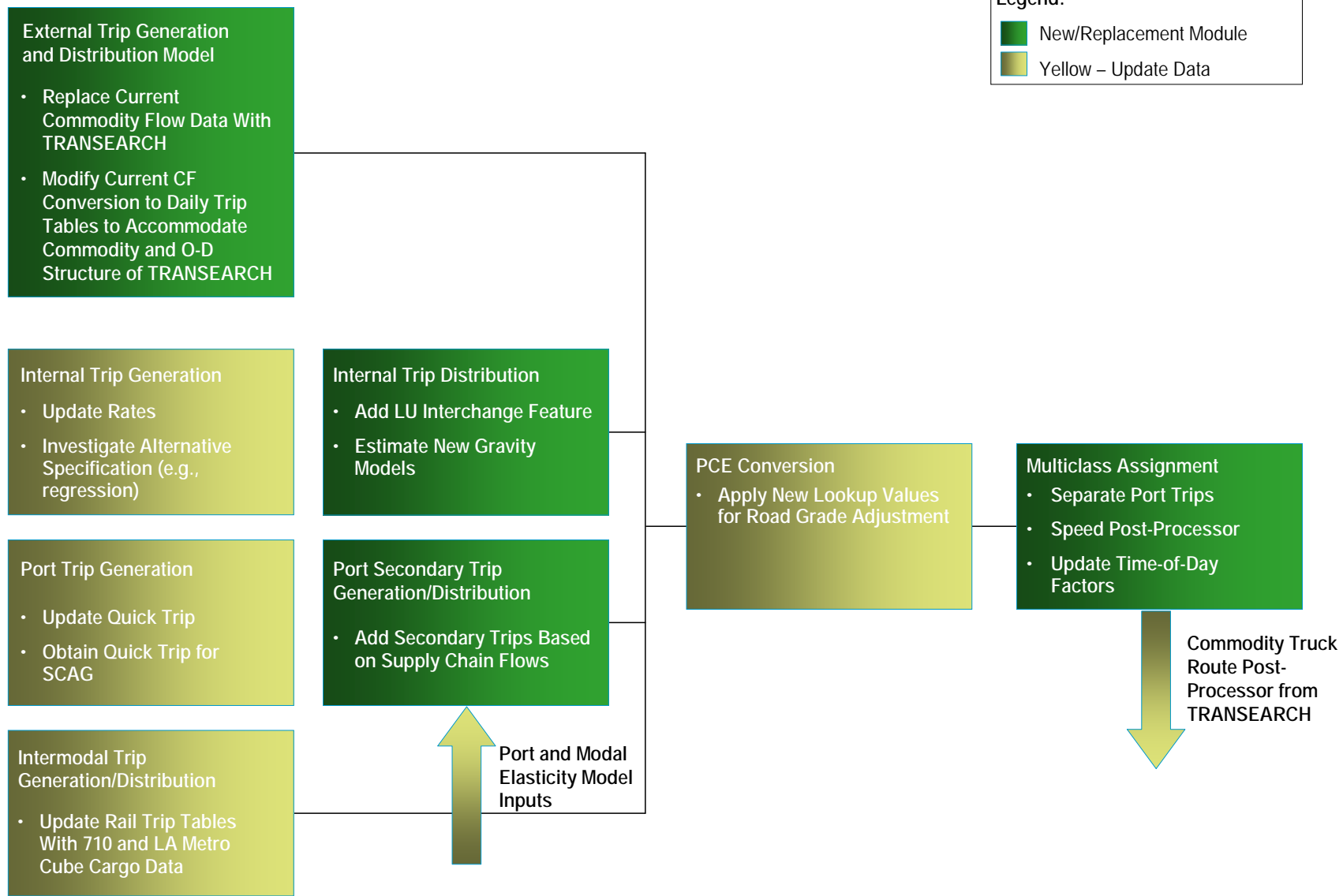
- **Economic Impact Analysis**
  - Link input/output model framework
  - Can we analyze reliability?
  - Economic flows modeling linking commodities to nodes

# Technical Approach for Model Improvements



**Legend:**

- New/Replacement Module
- Yellow – Update Data



# Data Collection Activities

- **Supply Chain Survey**
  - CSULB
  - Survey questionnaire nearly ready for pilot (“pre-test”)
  - Identification of secondary and tertiary trips, commodities handled, origins and destinations
- **Establishment Survey**
  - Developing survey questionnaire and pilot plan
  - Verification of truck trip generation rates and origins and destinations

## Data Collection Activities (cont.)

- **GPS Historic Data**
  - First data arriving this month
  - Tracking of truck traffic
- **GPS Placements**
  - Participants get free usage with many reports
  - Developing survey questionnaire and pilot plan
- **Classification Counts**
  - Developing data collection plan
  - For traffic assignment validation

## Data Collection Activities (cont.)

- **Warehouse survey**
  - John Husing, Lea & Associates, The Resource Group
  - Questionnaire and survey plan being reviewed by SCAG
  - Focus on warehouse characteristics, operating practices
  - Will help in calibrating model of future warehouse demand
  - Survey “pre-test” to begin in about two weeks
- **Updated port gate surveys**
  - Port truck trip generation rates and origins and destinations