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FUTURE.

World Ports Climate Initiative
Carbon Calculator

Bruce Anderson, Principal
Starcrest Consulting Group, LLC
Port of Los Angeles

AAPA American Association of Port Authorities
Alliance of the Ports of Canada, the Caribbean, Latin America and the United States

AAPA Harbor, Navigation, & Environment Seminar Meeting

5 May 2010

CITY OF LOS ANGELES FOUNDED 1781

LA THE PORT OF LOS ANGELES

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Port of Los Angeles
Origins of the Port's Carbon Calculator

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- Climate Change Issues Reach Ports
  - ✓ 2006 Global Warming Solutions Act (AB 32) is Signed
  - ✓ Mid 2007/08 IAPH Houston & Dunkirk Resolutions
  - ✓ Mid 2008 C40 & WPCI
- Early 2008 Port Customers & BCOs Express Interest in GHGs – Static Calculators (Route Analysis)
- POLA Expanded Emissions Inventories 2006 – 2008
- WPCI Carbon Footprinting for Ports
- POLA Develops Dynamic Calculator Tool

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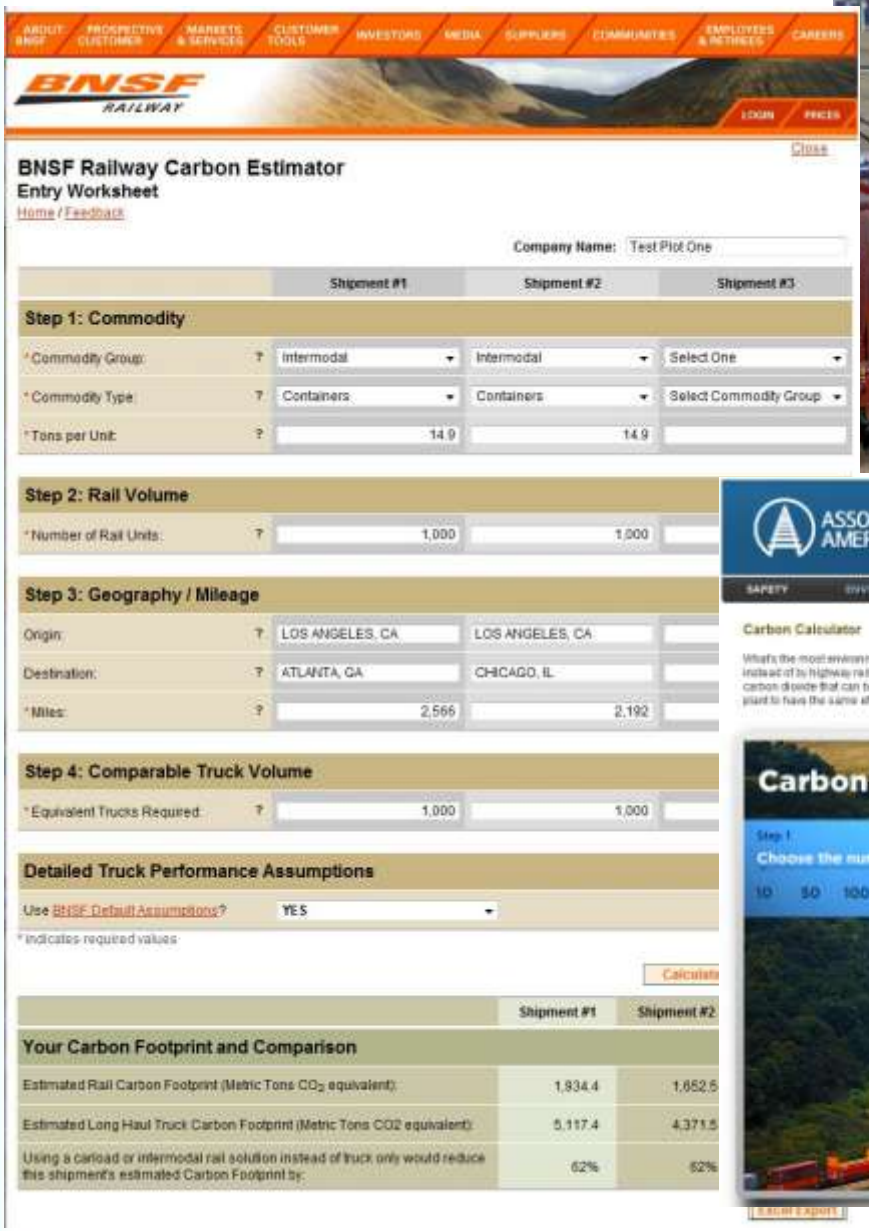
Carbon Calculators
Railroads Have Them



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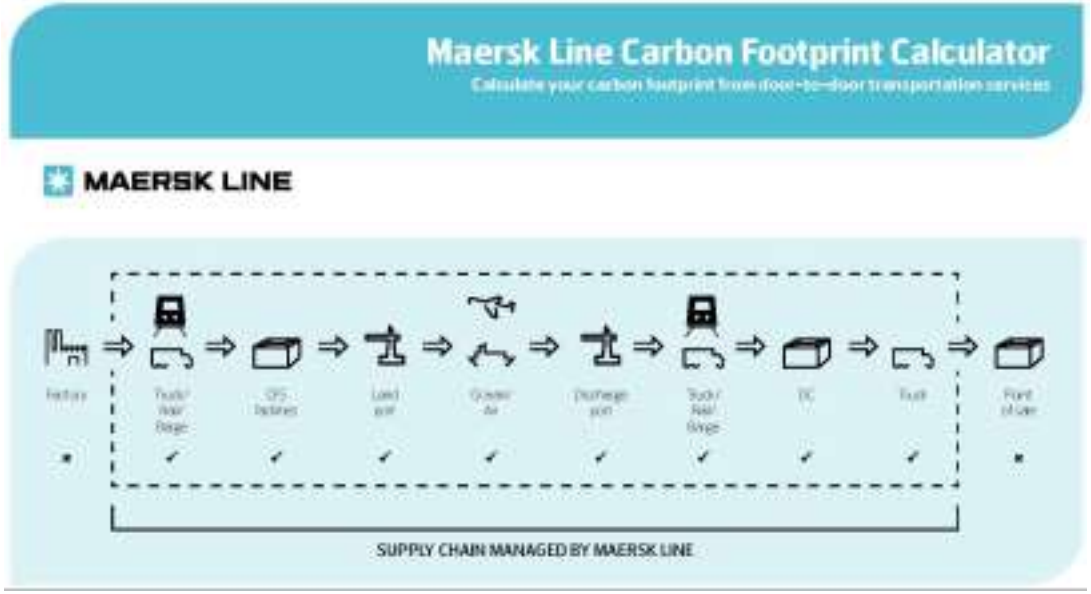
Carbon Calculators
Shippers Have Them

OOCL
We take it personally

Calculate the CO2 emissions in your supply chain with our end-to-end carbon calculator, which includes the following transport modes:



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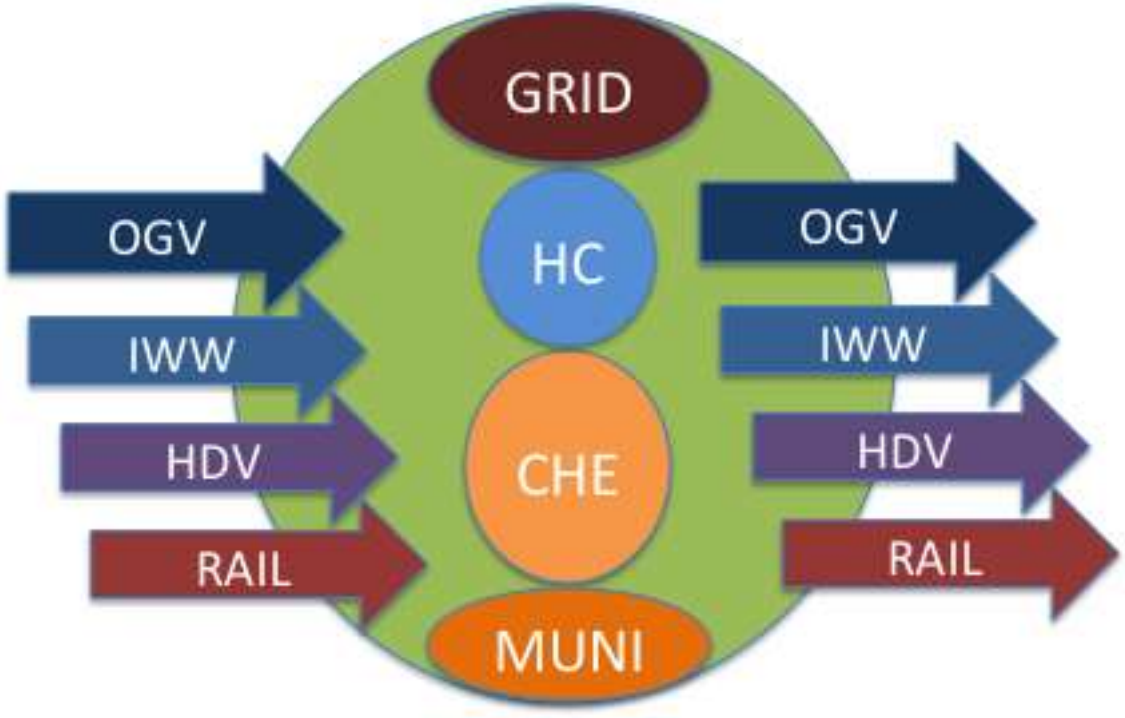
Carbon Calculators

Why Would a Port Make One?

- Ports Are Primary Nodes in Logistics Chain
- Understand the Complex Relationships Between Modes
- Ports Can Assert Influence/Collaborate with Operators to Reduce Carbon Footprint
- Screen/Assess Their Carbon Footprint



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Carbon Calculators
Why Did POLA Make One?

- POLA Has Been Collecting Data & Estimating Emissions Since 2001
- POLA Has Developed a Comprehensive Environmental Data System to Query Data
- Full Understanding of Calculator Methods & Assumptions
- Identify GHG Reduction Opportunities in Port
- Respond to Management & Customer Questions
- Support Member Ports through WPCI

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Dynamic Carbon Calculator
Highlights

- Developed Highly Dynamic Scenario Model Using iThink Logic Platform
- Includes Full Logistics Chain
- Evaluates Container & Noncontainer Cargoes
- Adaptable to Ports, BCO, Shippers, Terminals, etc.

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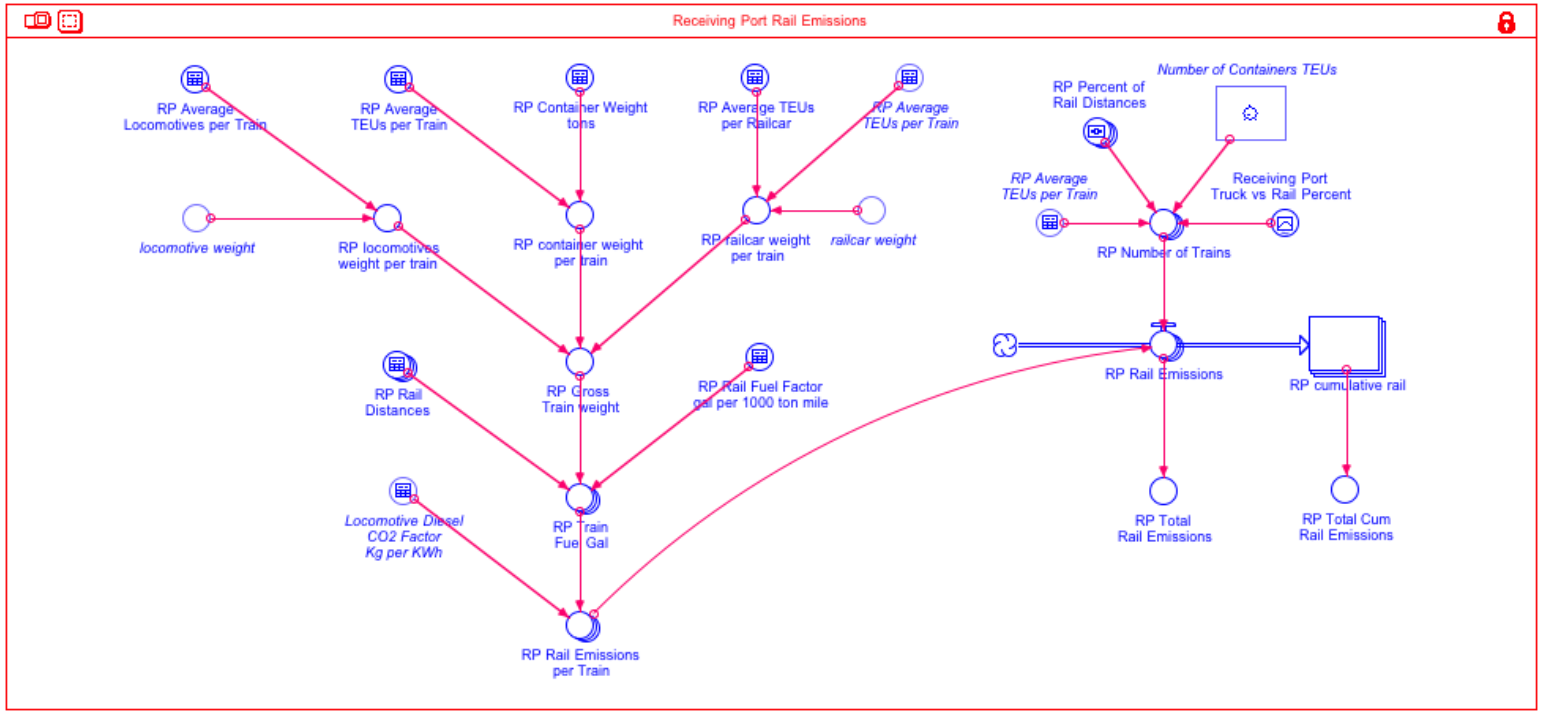

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Dynamic Carbon Calculator
Highlights

- Dynamic Ship Capacity Settings
- Any Route/Any Where Capabilities
- Includes Suez & Panama Transit Profiles
- *Includes Dynamic Growth Forecasting*
- Easily Expandable & Adaptable

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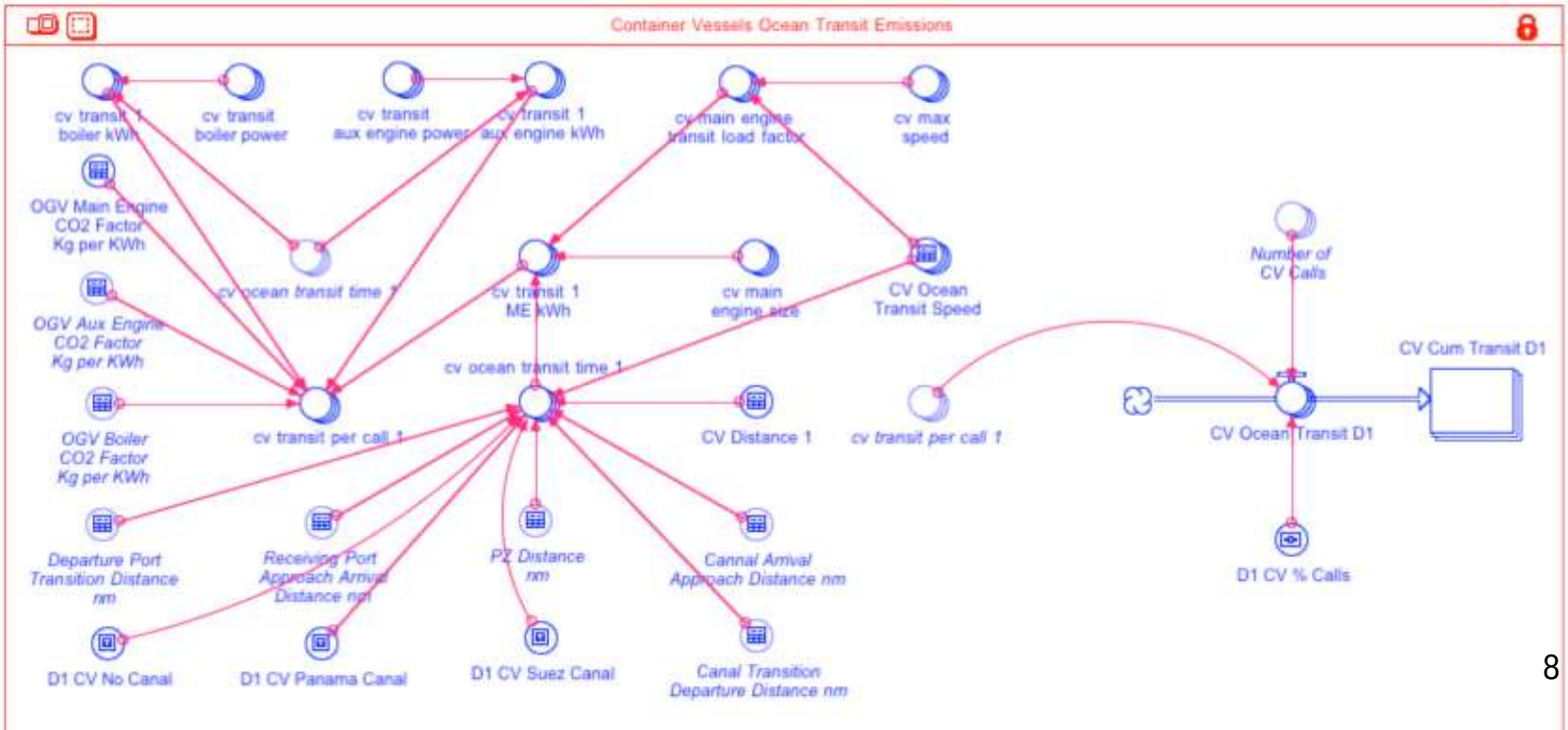

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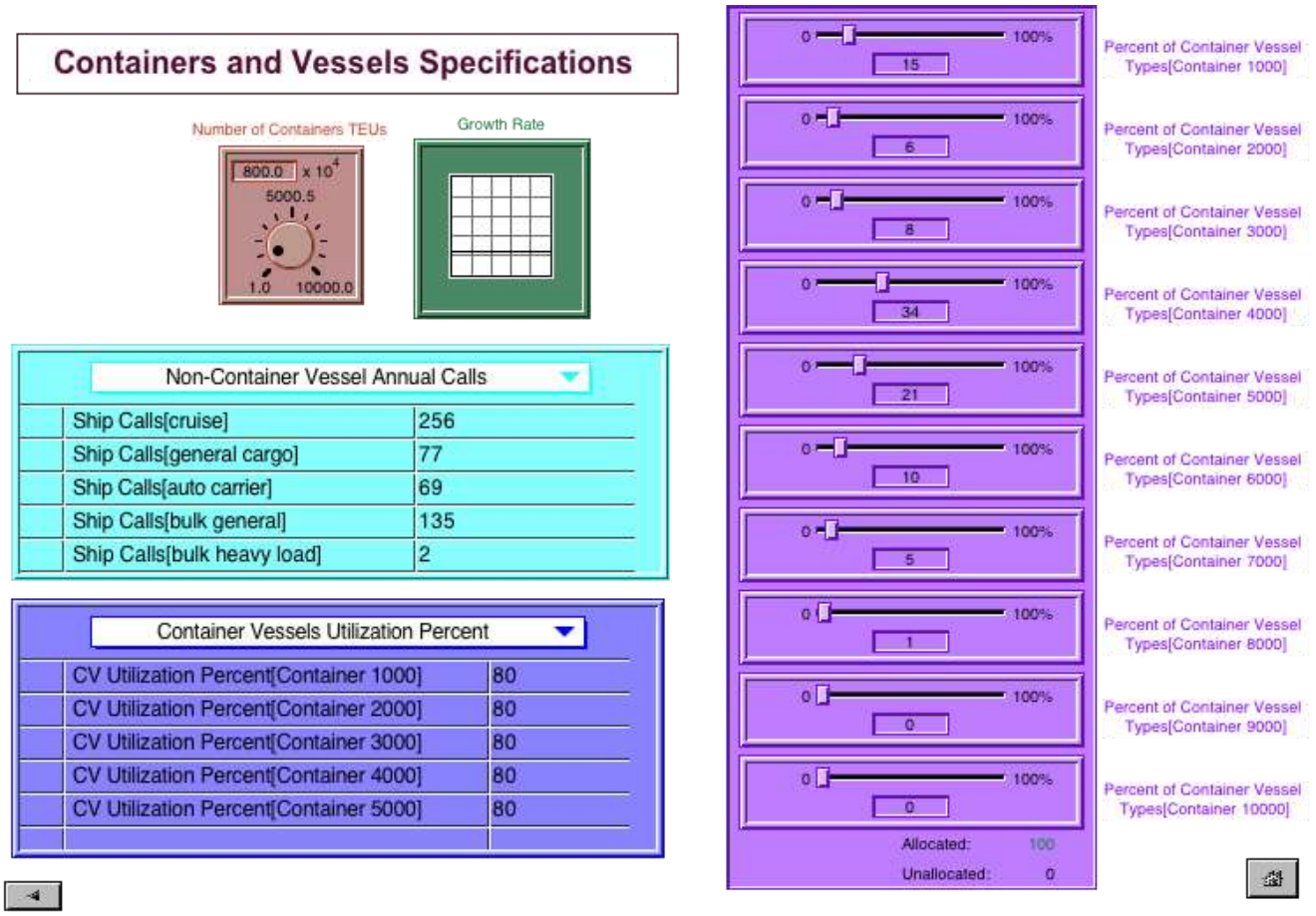
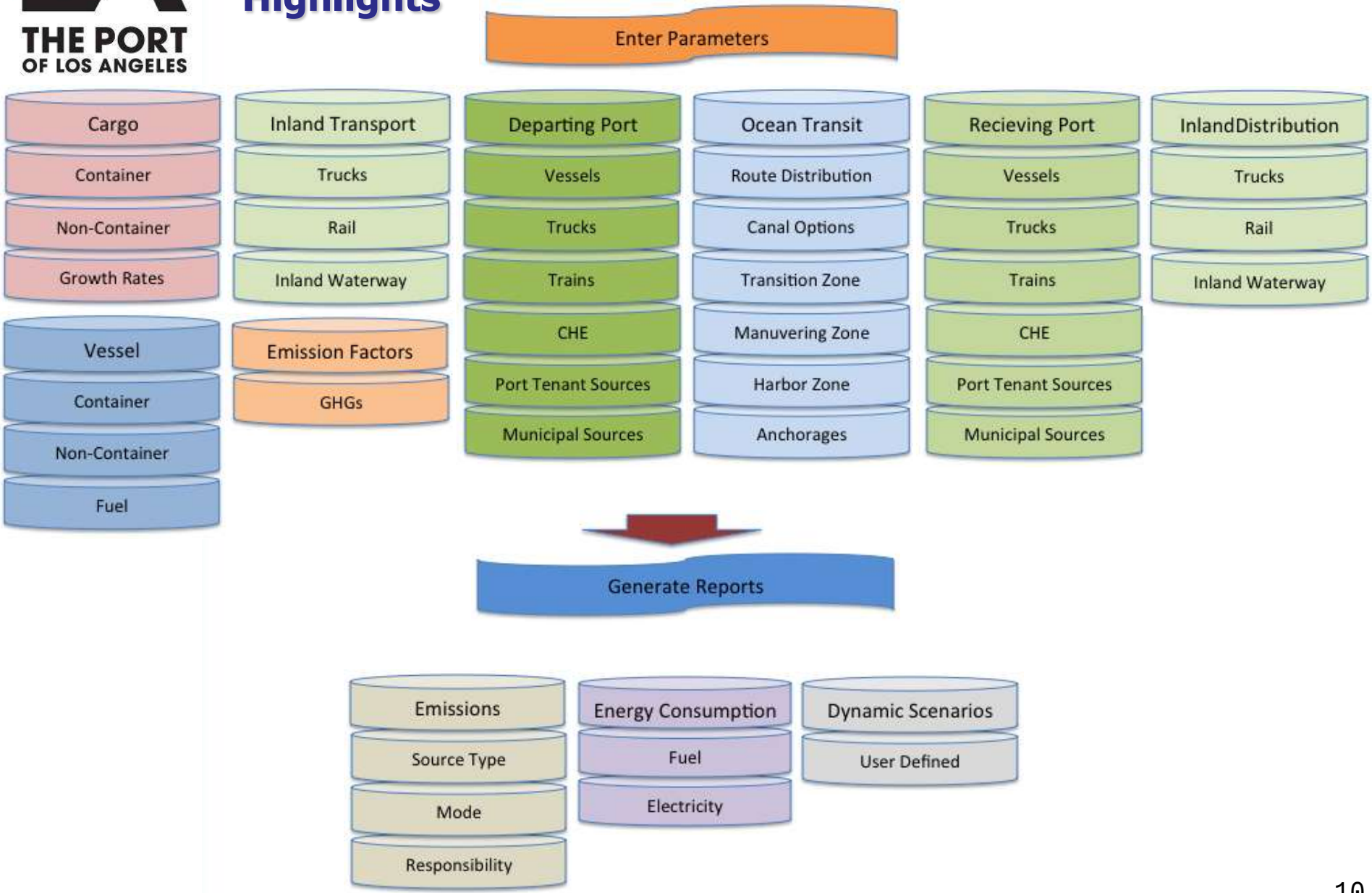
Dynamic Carbon Calculator
Highlights

- Uses Data/Assumptions Taken From Actual EIs
- Does Not Replace Emissions Inventories
- Displays Results Real-Time & Web-Based Version



Dynamic Carbon Calculator
Highlights



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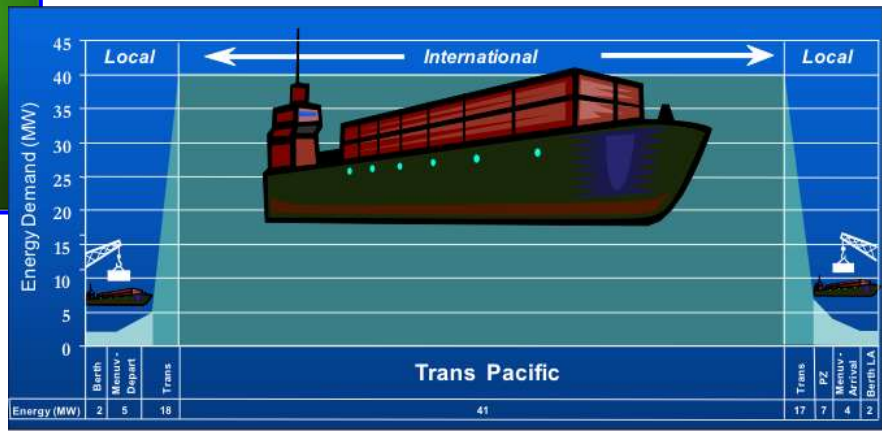
Dynamic Carbon Calculator
Next Steps

- Engage POLA Marketing Group
- Engage WPCI Carbon Footprinting Workgroup
- Discuss Further with Interested Parties



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