



# The SmartWay Transport Partnership

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## Greening Corporate Supply Chains

October 23, 2008





# SmartWay Transport Partnership: General Overview

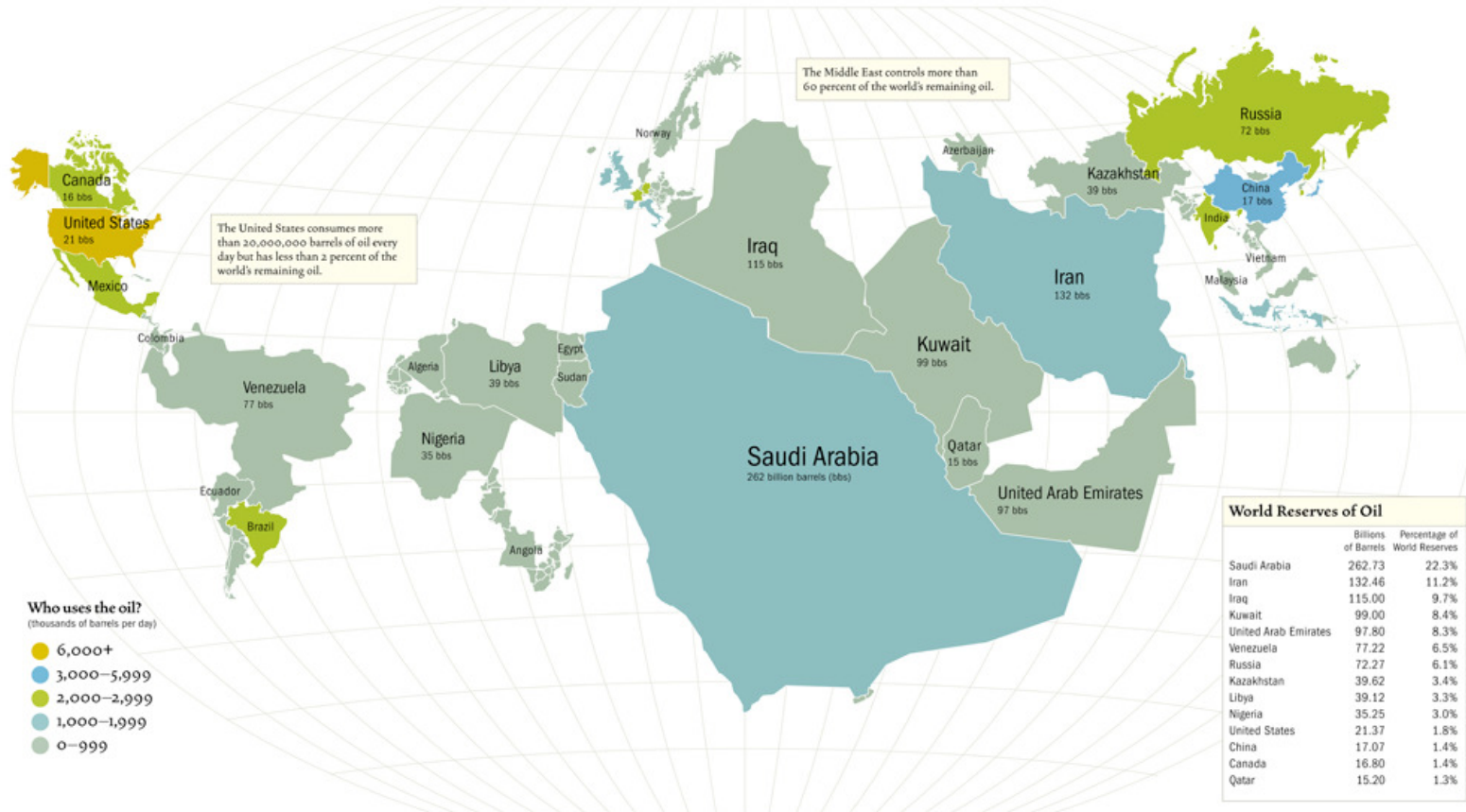
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- SmartWay is a voluntary, market based program that is creating a demand for cleaner, more fuel efficient transportation
  - Major focus on sustainable goods movement
    - Provide tools to help carriers improve their fuel efficiency
    - Through SmartWay, carriers showcase their efficiency to shippers
    - Challenges Shippers and Logistics companies to use SmartWay carriers to move their goods
  
- SmartWay directly addresses 3 significant National issues:
  - Global Climate Change
  - Energy Security
  - Business Financial Bottom Line
  
- SmartWay works from the principle of you can't improve something until you properly measure it



# The World According to Oil Reserves

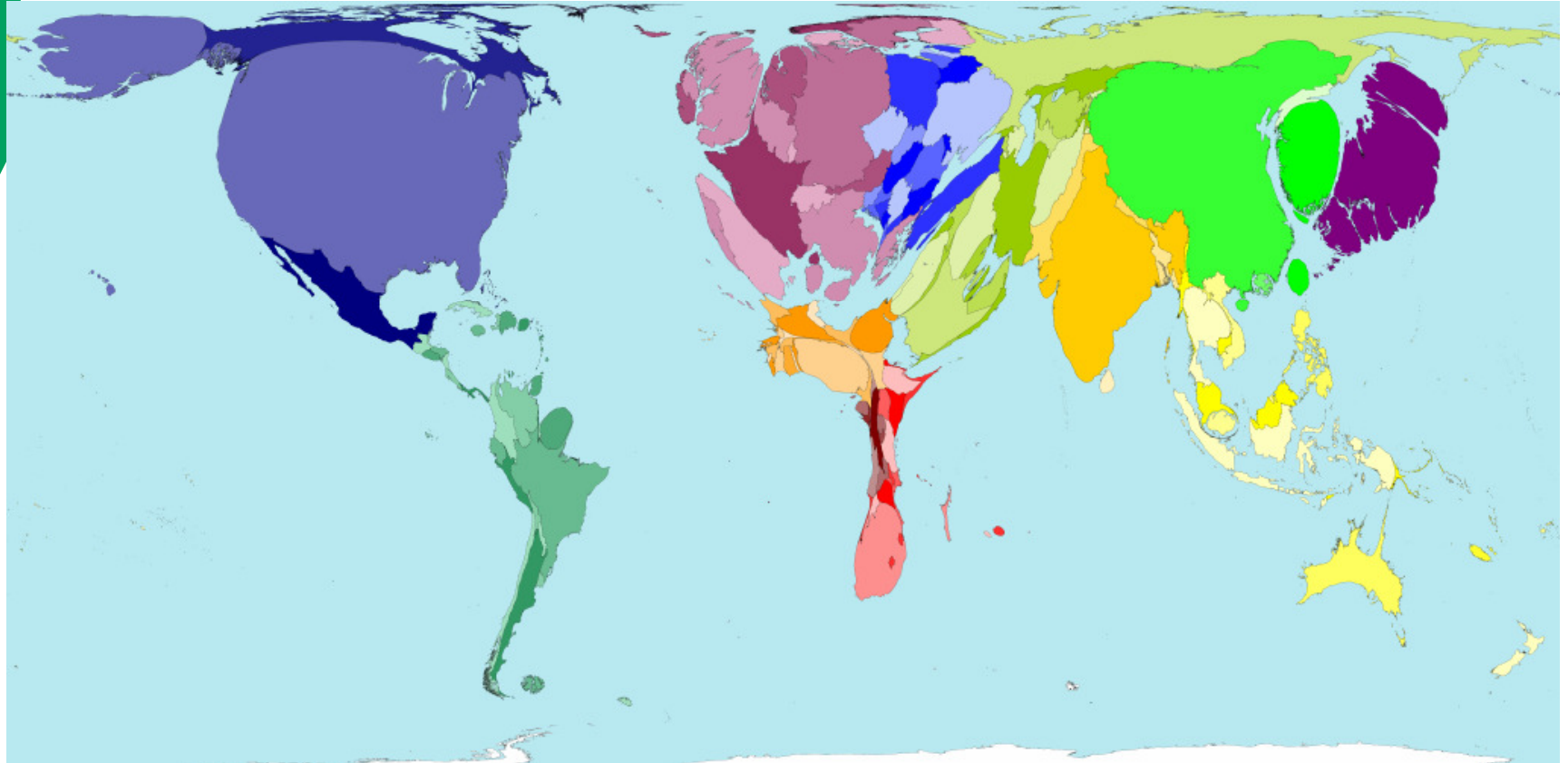
## Who has the oil?



Source: BP Statistical Review Year End 2004 & Energy Information Administration

# The World According to Oil Consumption

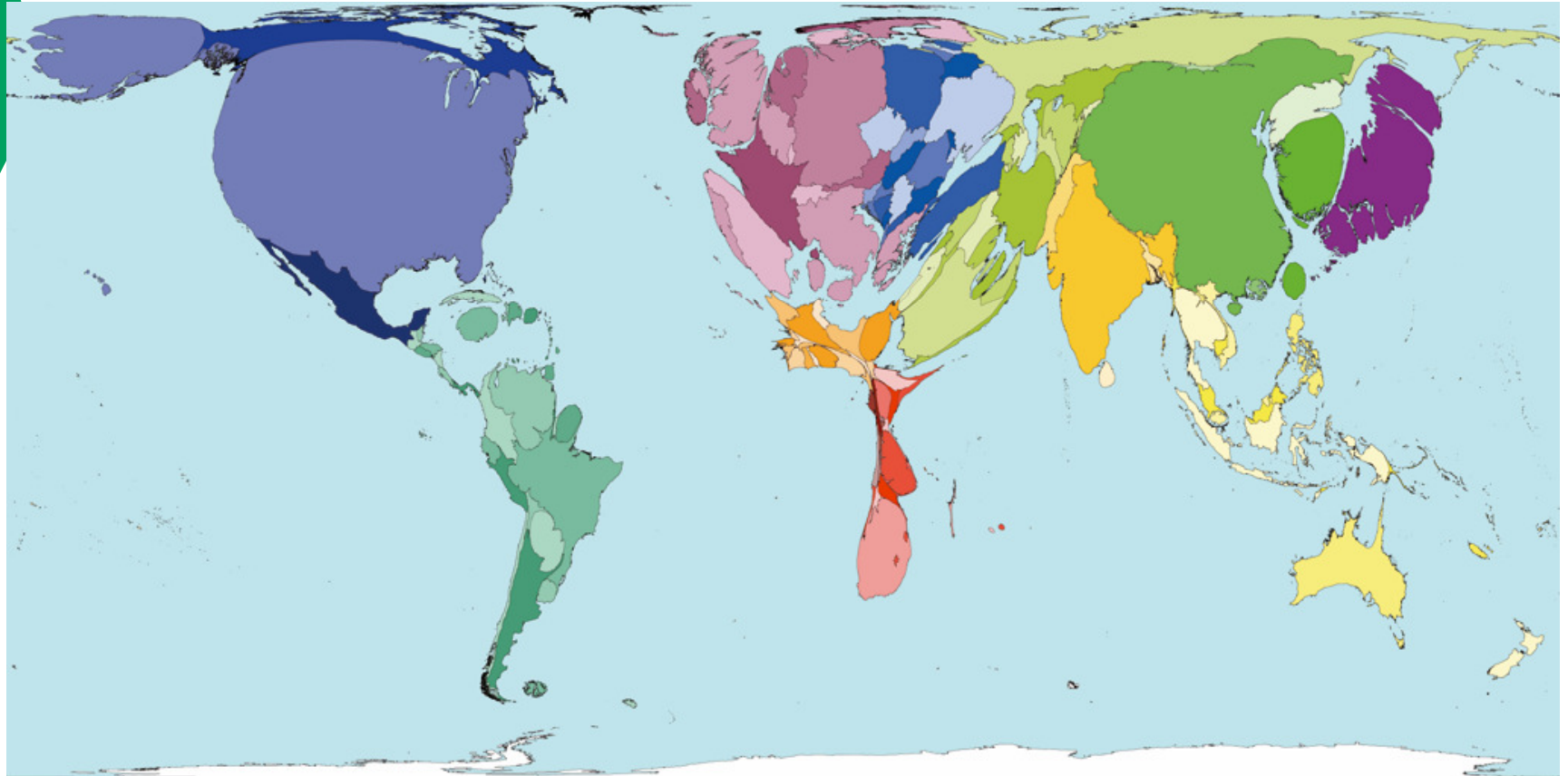
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Source: *Worldmapper.org*. 2005 UN data for GWP in CO<sub>2</sub> equivalents for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O only.

# The World According to GHG Production

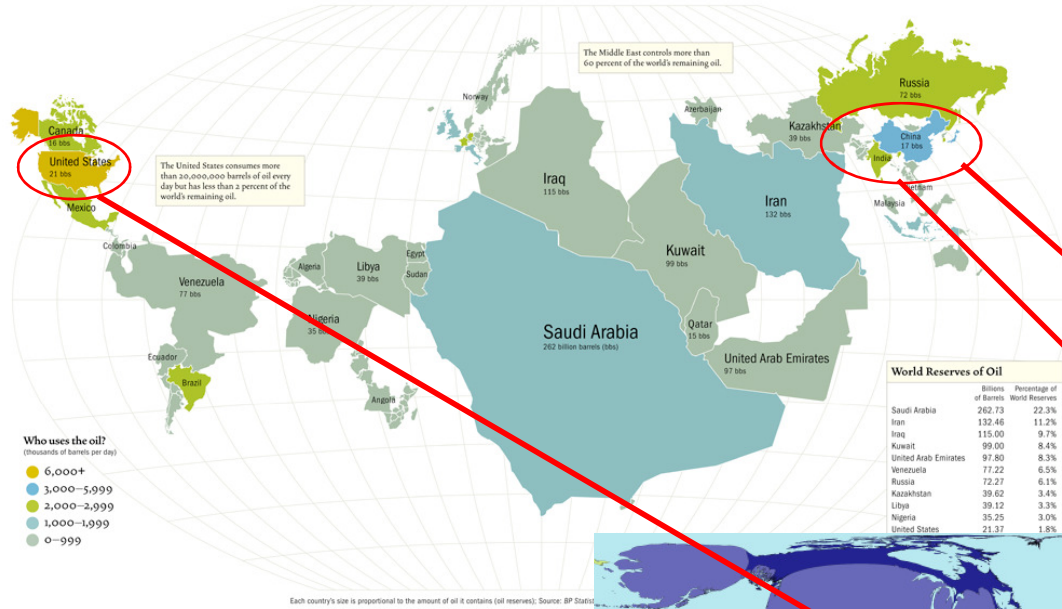
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Source: Worldmapper.org. 2005 UN data for GWP in CO<sub>2</sub> equivalents for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O only.

# Oil Production Versus Consumption

Who has the oil?

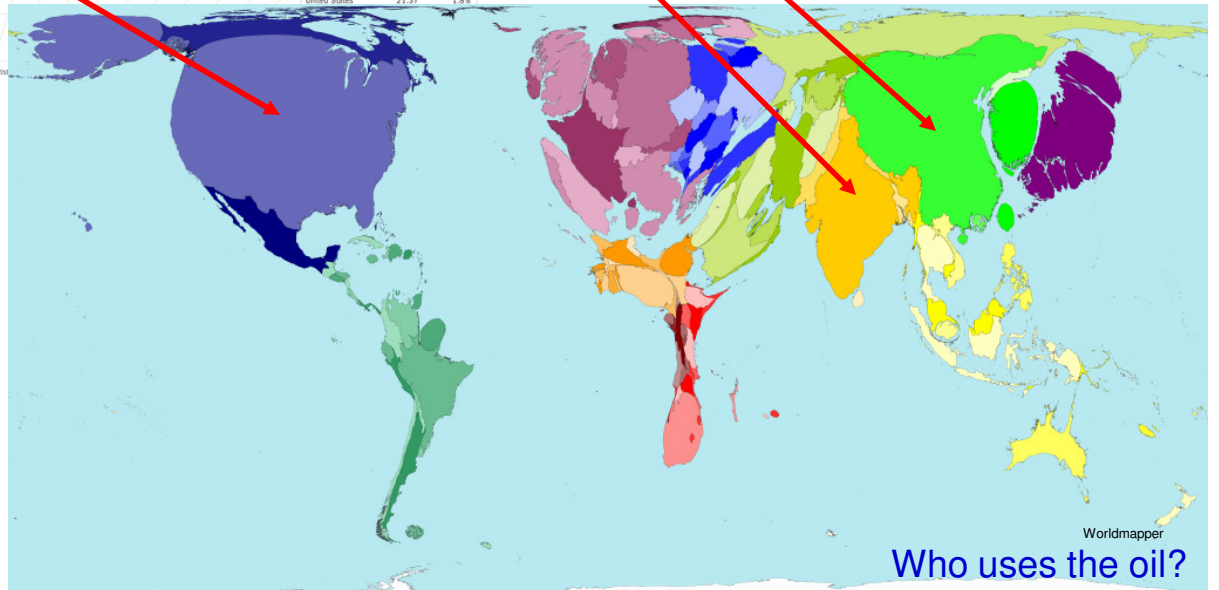


Who uses the oil?  
(thousands of barrels per day)

- 6,000+
- 3,000-5,999
- 2,000-2,999
- 1,000-1,999
- 0-999

Each country's size is proportional to the amount of oil it contains (oil reserves). Source: BP Statistics

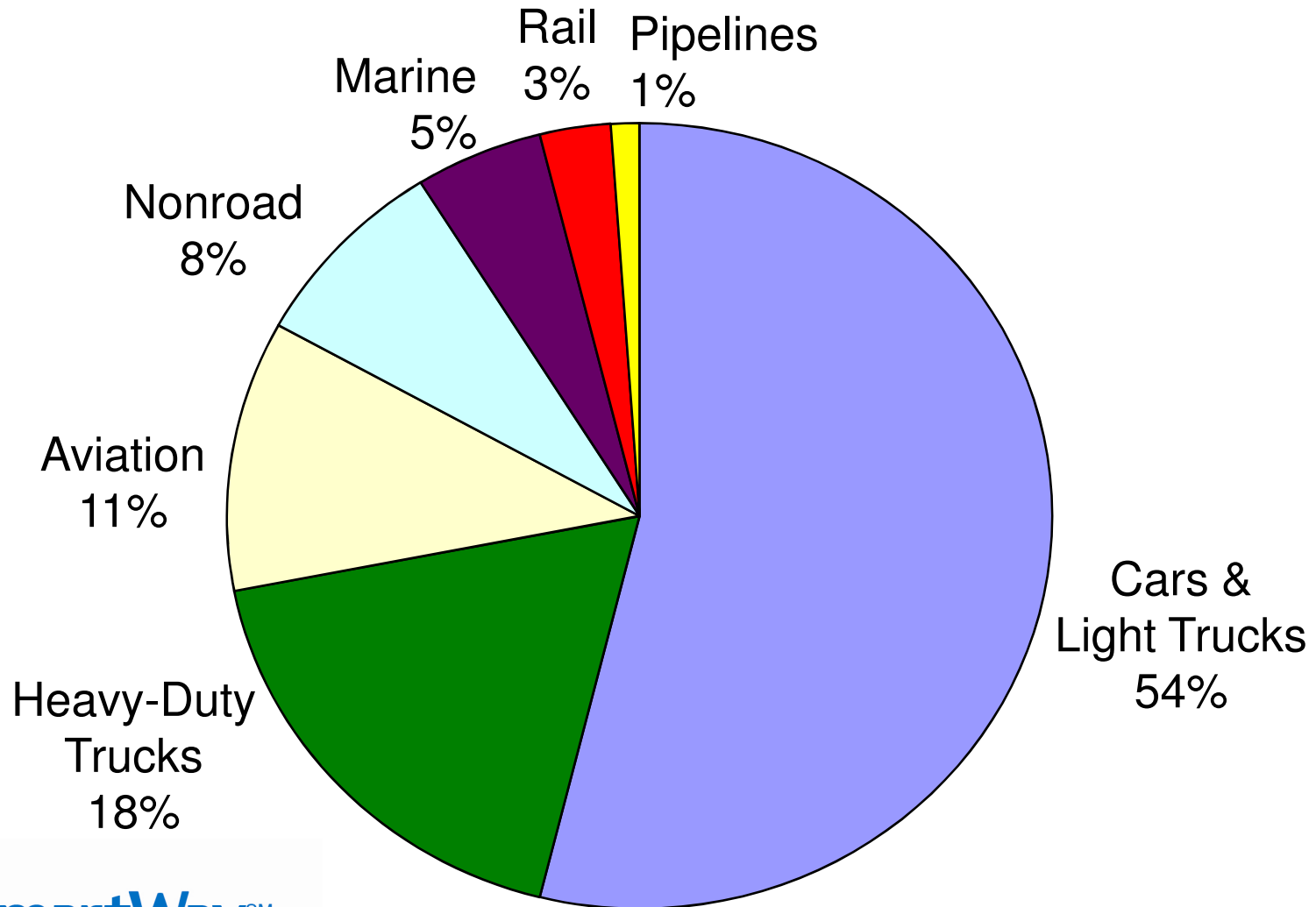
Country	Billions of Barrels	Percentage of World Reserves
Saudi Arabia	262.73	22.3%
Iran	132.46	11.2%
Iraq	115.00	9.7%
Kuwait	99.00	8.4%
United Arab Emirates	97.80	8.3%
Venezuela	77.22	6.5%
Russia	72.21	6.1%
Kazakhstan	39.62	3.4%
Libya	39.12	3.3%
Nigeria	35.25	3.0%
United States	21.37	1.8%



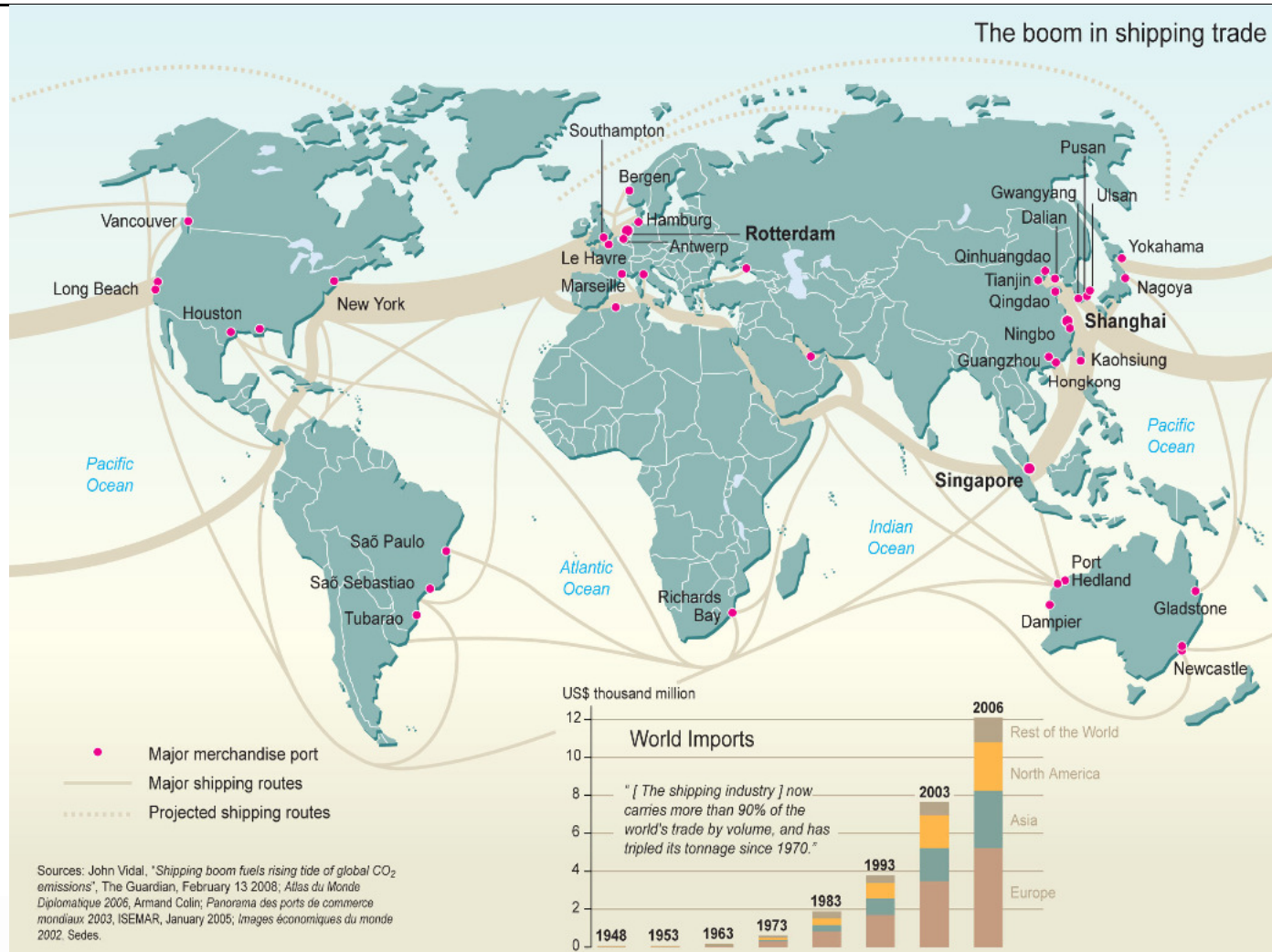
Worldmapper

Who uses the oil?

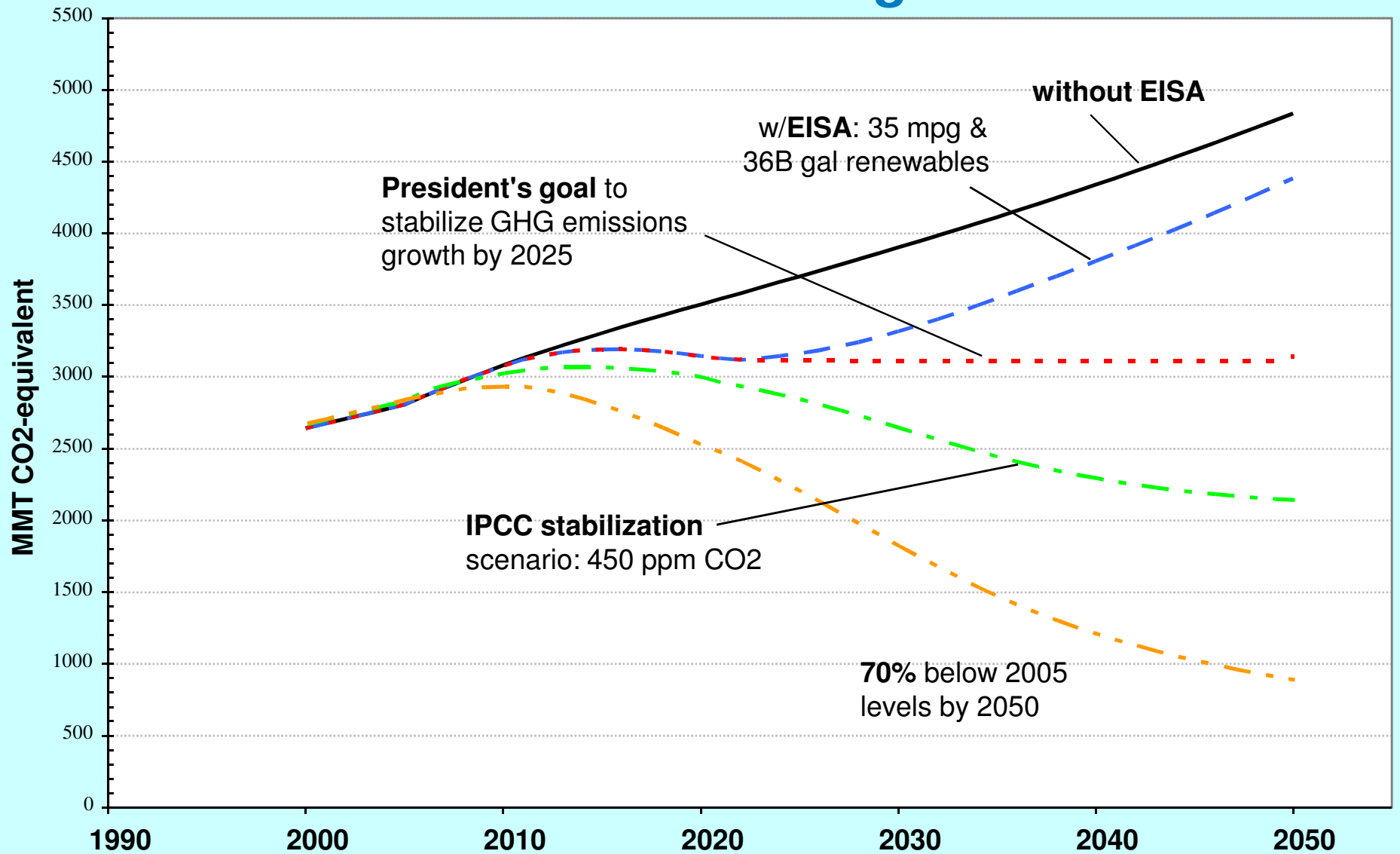
# Breakdown of U.S. Transportation GHG Emissions (2006)



# Goods Movement is the Fastest Growing Transportation Component



# U.S. Transportation GHG Challenges and Illustrative Targets



# Vehicle Fuel Efficiency Comparison

Type of Vehicle	MPG	Loaded Weight (lbs)	Vehicle Efficiency (ton-miles/gallon)
Class 8 Long Haul Truck	7	70,000	245
Large SUV	12	6,800	41
Compact Hybrid	46	3,300	75
????	140	3,500	245

For the freight system to achieve aggressive GHG goals class 8 trucks may need to achieve 20 MPG:

- We are going to have to do what they say can't be done
- We have a long way to go and a short time to get there

# How Does SmartWay work?

## Carriers:

- Gain competitive advantage:
  - Preferred status, plus
  - Fuel efficiency, savings
- Reduce emissions
- Integrate fuel saving technologies and strategies into fleets, such as:
  - Idle Reduction
  - Improved Aerodynamics
  - Efficient Tire Systems
  - Driver Training
  - Renewable Fuels
  - Advanced Lubricants
  - Improved logistics
- Get recognition and PR value with SmartWay brand

## Shippers:

- Top of the supply chain, drive marketplace demand
- Give preferred status to SmartWay Carrier Partners
- Get better data to improve their own shipping operations
- Modify logistics operations to improve efficiency and reduce emissions, for example:
  - Inter-modal Shipping
  - Full Truck Loads
  - Warehouse Improvements
  - Idle-Reduction at Docks
  - Reduced package weight and size
- Get recognition and PR value with SmartWay brand





# SmartWay Transport Partnership Progress

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- Over 1,114 Partners (As of 10/10/08)
- Drive approximately 600,000 trucks (7% of industry)
- Travel over 51 billion miles per year (24% of industry)
- Consume over 12 billion gallons of fuel (24% of industry)
- Are on track for 2008 to:
  - Reduce greenhouse gas and pollutant emissions by:
    - 6 million tons of CO<sub>2</sub>
    - 800 tons of PM
    - 30,000 tons of NOx
  - Save over 540 million gallons of diesel fuel this year;
  - Save the freight industry over \$2 billion in annual fuel and maintenance costs.



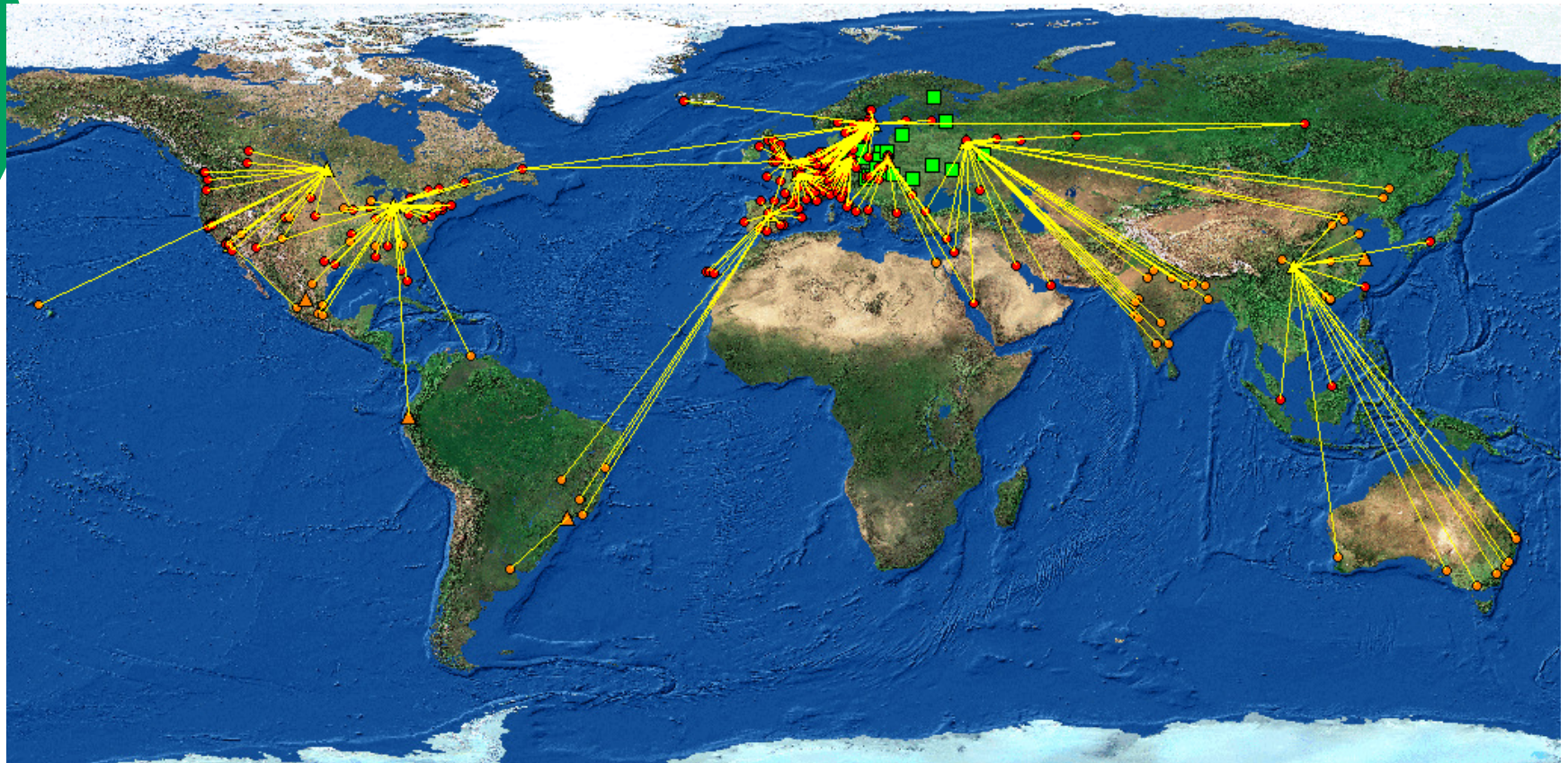
# What Have We Learned in the U.S.?

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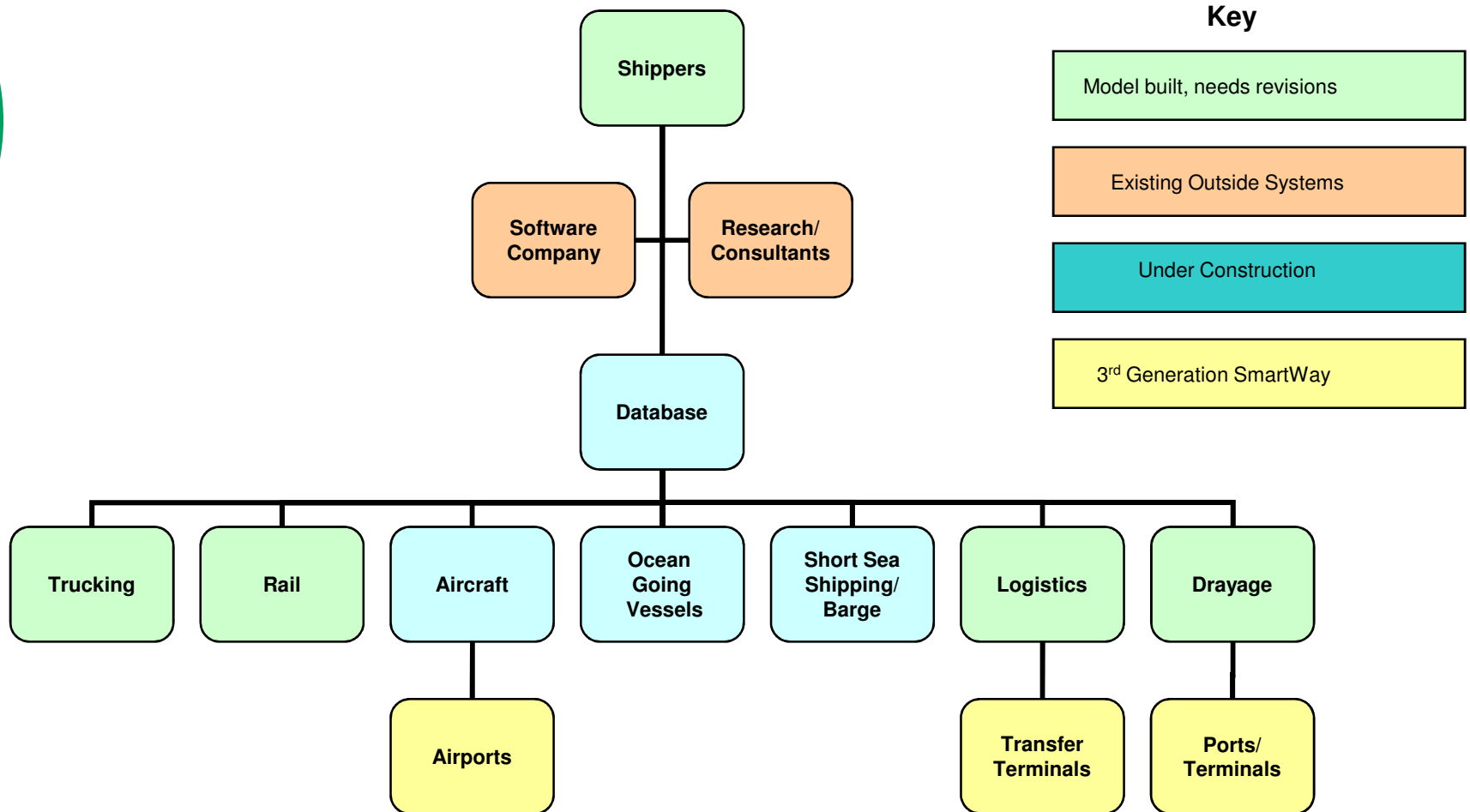
- There is a strong business case for more sustainable supply chains
  - Transportation is a significant piece of corporate emissions footprint
  - Transportation becoming greater portion of operating costs
  - All companies want to save fuel
- Globalization of supply chains introduces new challenges and opportunities
  - Multinational corporations linking their operations across more of the worlds ports and borders
  - Longer, multimodal supply chains can also mean more emissions from trade
  - Increased pressure to reduce embedded carbon emissions
- Companies want a global supply chain program that:
  - Provides transparent emission factors from all modes (truck, rail, air, sea...)
  - Allows companies to make the best decisions about:
    - Mode choice, company choice, technology choice

# Measuring and Reducing Emissions from the Supply Chain

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# SmartWay Supply Chain Model Architecture



- Modular Construction: Carrier modules feed emissions data to a database that is accessed by shippers, software companies, and consultants



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