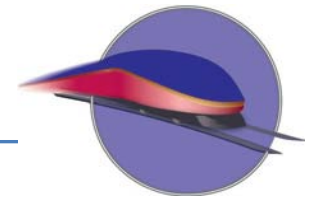




US Department of Transportation
Federal Railroad Administration

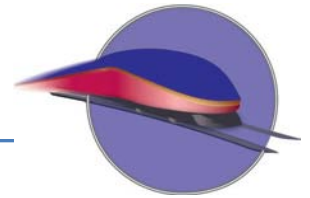


I-81 Corridor Coalition's 2011 Annual Meeting

November 1, 2011

Scott Greene

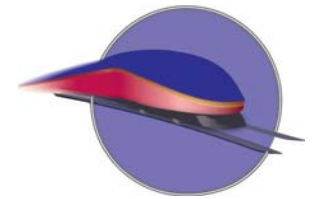
The Role of Rail



Rail, Both Freight and Passenger, Is Positioned to Play a Central Role in America's Transportation Future.

- Context
- Advantages of Rail
- Public Benefits





Population and Freight Tonnage

Based on the U.S. Census Commodity Flow Survey data, in 1993, 9.7 billion tons of freight moved in the U.S. and freight tonnage increased nearly 30% through 2007.

Table 1 also shows the “freight footprint” per person; that is, the average yearly tonnage that that the freight transportation system moves per capita.

Reviewing actual data from 1993 through 2007, it is remarkable that the annual tons of freight moved over the transportation system are fairly constant at approximately 40 tons per capita.

This tonnage per capita number includes, for example, coal used to fire power plants, taconite used to make steel, fertilizer used to grow crops, materials for homes and buildings, and other products such as food, clothes, and automobiles.

Table 1: U.S. Freight Movement

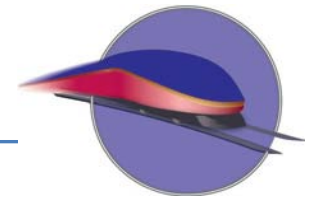
(e=estimates)

YEAR	Population (millions)	Tonnage (billions)	Tons per Capita
1993	258	9.7	37.6
1997	268	11.1	41.4
2002	288	11.7	40.6
2007	301	12.5	41.6
2010 e	310	12.5	40.3
2015 e	322	13	40.3
2020 e	337	13.6	40.3
2025 e	351	14.1	40.3
2030 e	366	14.7	40.3
2035 e	380	15.3	40.3
2050 e	420	16.9	40.3

Source: Population estimates are from the U.S. Census Bureau, Population Division (December, 2009). Tonnage from 1993 through 2007 is from the US DOT/US Census Bureau Commodity Flow Survey. Population for the same years is from U.S. Census Bureau.



Population and Freight Growth



Studies project dramatic growth in population which will drive increased passenger mobility needs

25 years



70 million more people

40 years

100 million more people



The freight transportation system must move **40 tons of freight per person per year** (including bulk commodities such as coal and grains as well as high-value consumer goods)

25 years



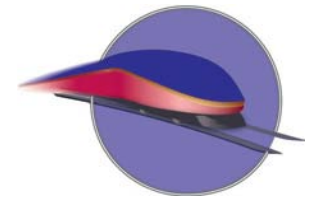
2.8 Billion tons more

40 years

4 Billion tons more



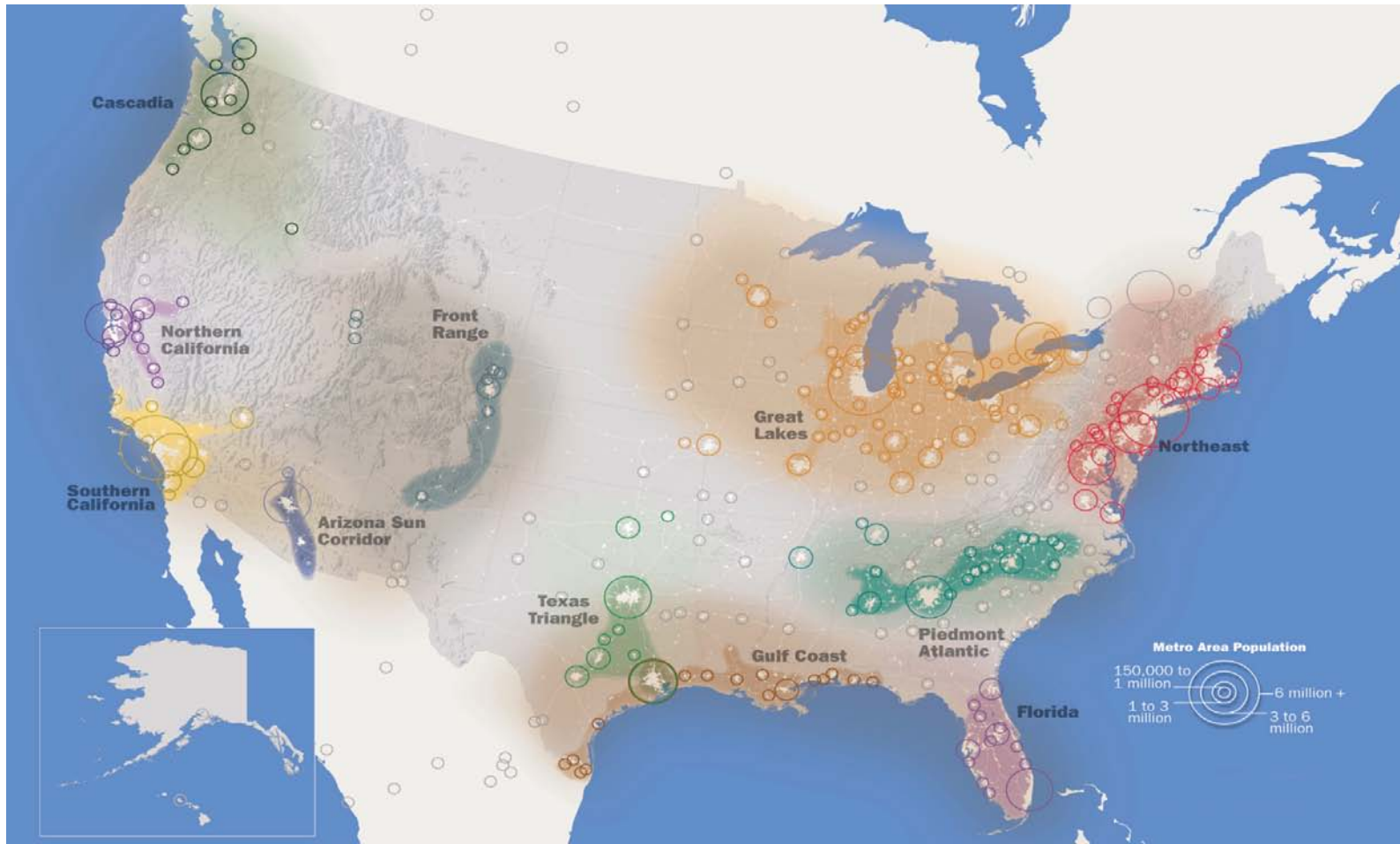
Where will most growth occur... Mega-Regions and Areas of Influence



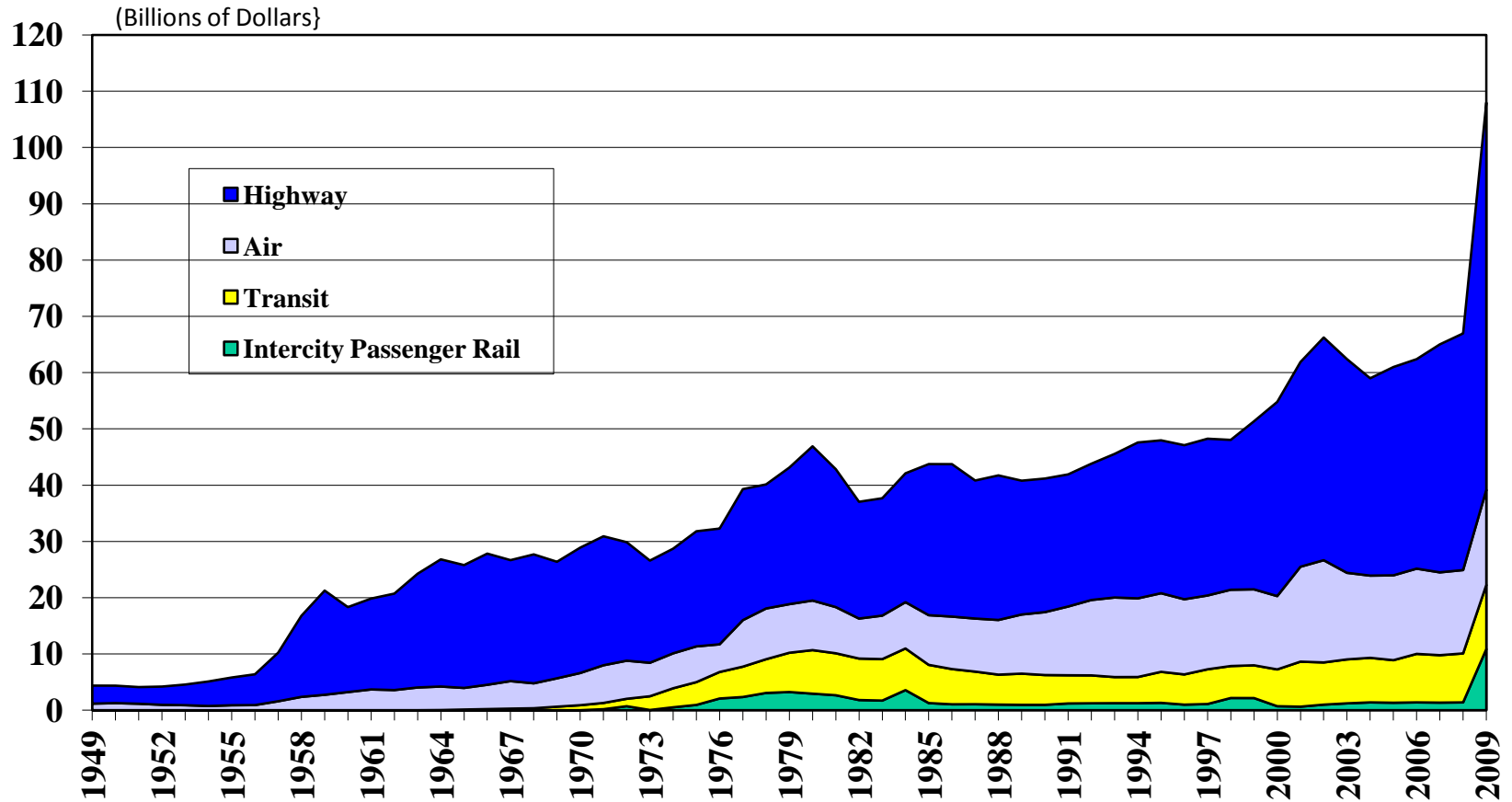
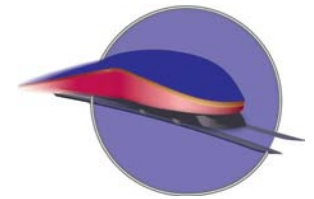
Emerging Megaregions

Source: Regional Plan Association

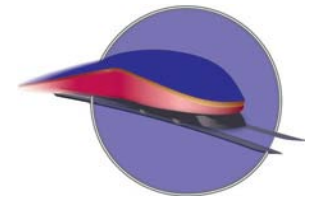
*By 2050, population projected to grow by 100 million people;
75% of new residents will live in one of mega-regions below.*



Public Policy and Transportation Choices



Rail's Role in Transportation Network: Passenger Potential



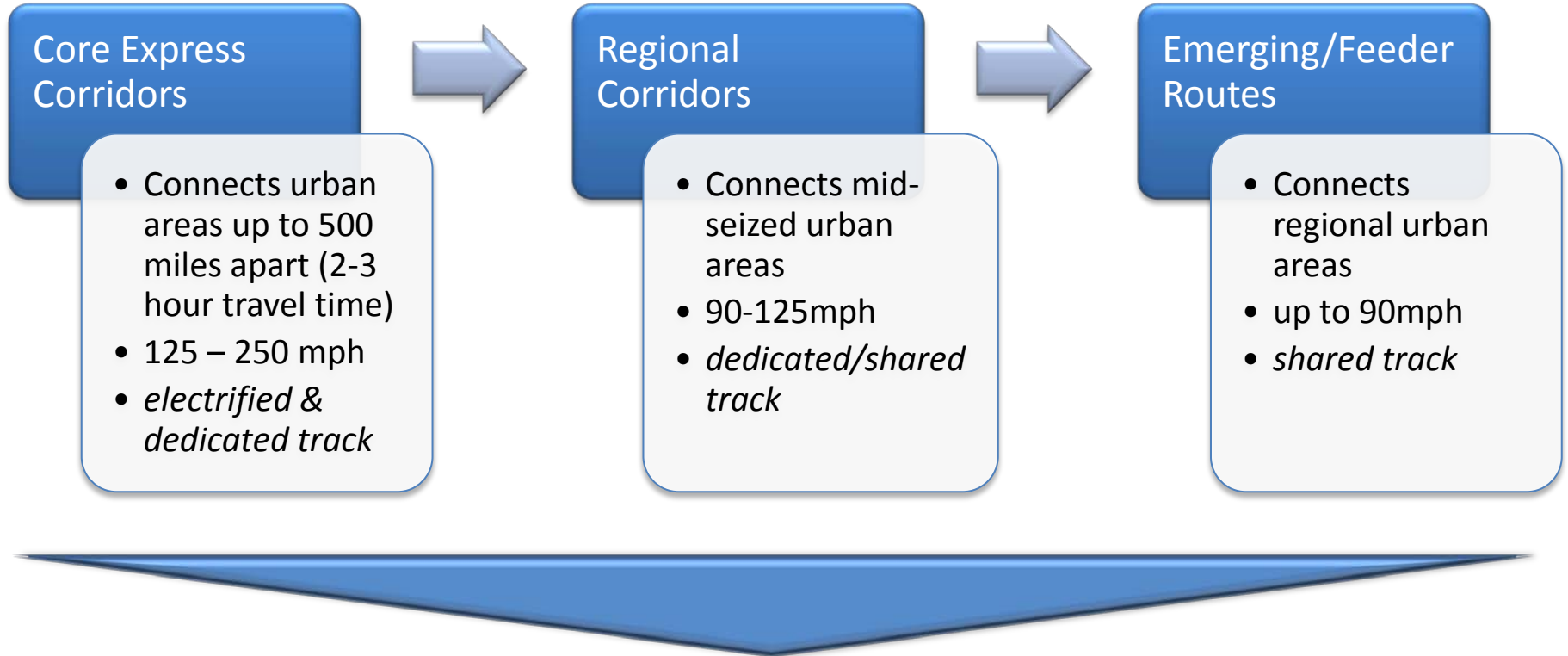
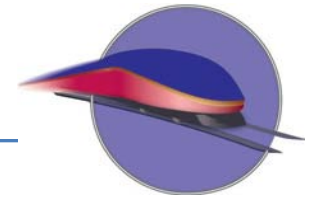
The comparative advantage of different modes based on market factors.

Intercity Distance in Miles				
		0-100	100-600	600-3000
Population Density	Light	Auto and Bus	Auto and Bus Conventional Rail	Auto and Bus Air
	Moderate	Auto and Bus Commuter Rail	High-Speed Rail Auto and Bus	Auto and Bus Air
	High	Auto and Bus Commuter Rail	High-Speed Rail Air	Air

Source: U.S. Conference of Mayors, "The Economic Impact of High-Speed Rail on Cities and Their Metropolitan Areas," 2010, page 26.



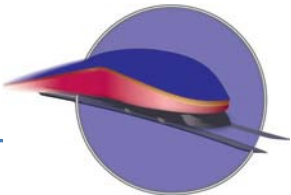
Tiered Passenger Rail Corridors



Build a High-speed and Intercity Passenger Rail Network



Station Development



Identify regions of the country where Core Express, Regional, and Emerging/Feeder corridors could be feasible



Light Rail

Bus

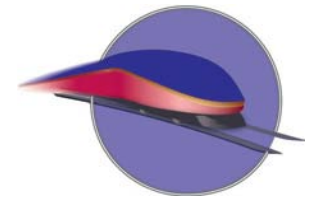
Pedestrians

Bicycles

Town Centers



Rail's Role in Transportation Network: Freight Potential



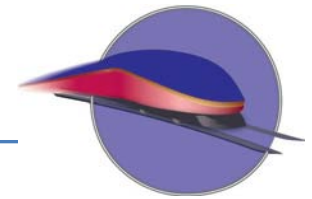
The potential advantage of different modes with respect to weight and distance.

		Intercity Distance in Miles			
		0-250	250-500	500-2000	>2000
Weight	Retail Goods/ Light	Truck	Truck	Truck Rail Intermodal	Truck Rail Intermodal
	Consumer Durables- Other Manufactured Goods/ Moderate	Truck Rail	Truck Rail Rail Intermodal	Truck Rail Rail Intermodal	Truck Rail Rail Intermodal
	Bulk Goods/ High	Truck Rail Water	Truck Rail Water	Rail Water	Rail Water

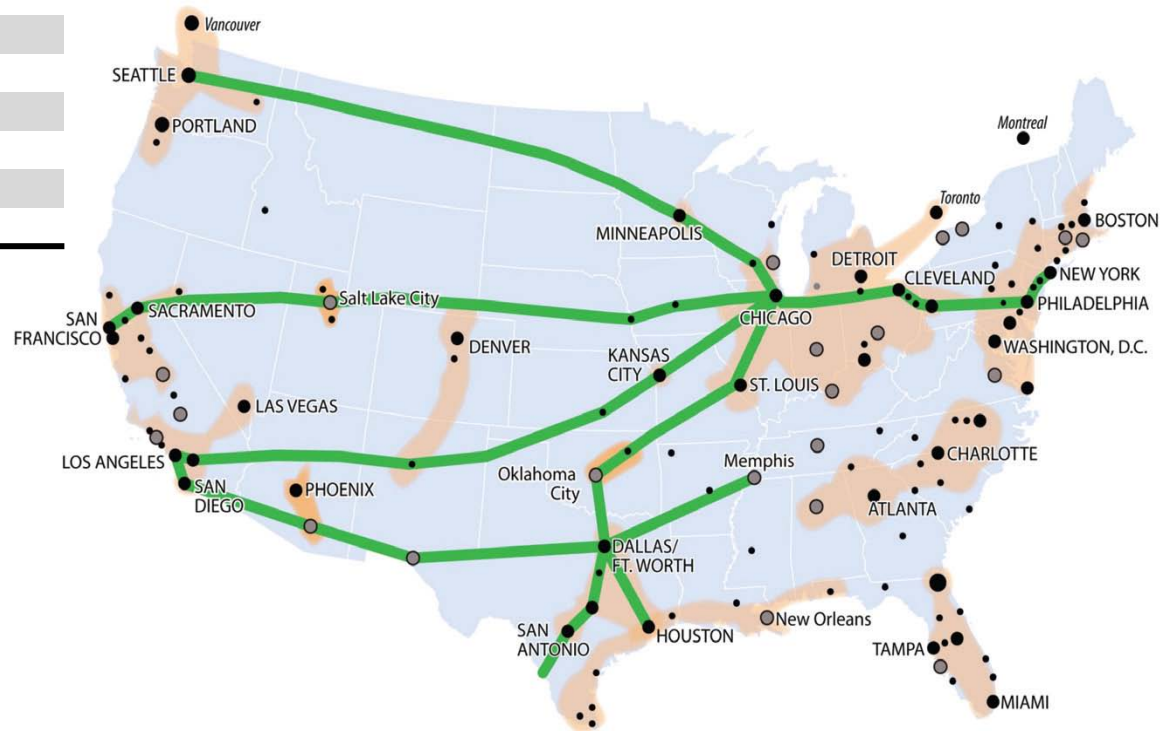
**The various modes of transport are ranked in each of the cells by the comparative efficiency of each.*



Top Intermodal Corridors



Corridor	Trailers/ Containers	Average Length of Haul (miles)
California/Illinois	2,485,880	2,220
California/Texas	1,383,520	1,550
Washington/Illinois	797,480	2,230
New Jersey/Illinois	544,840	950
Pennsylvania/Illinois	498,920	750
Ohio/Illinois	457,240	360
Texas/Illinois	448,000	1,170
California/Tennessee	382,000	2,100
California/Kansas	312,320	1,775
California/Arkansas	297,080	2,025

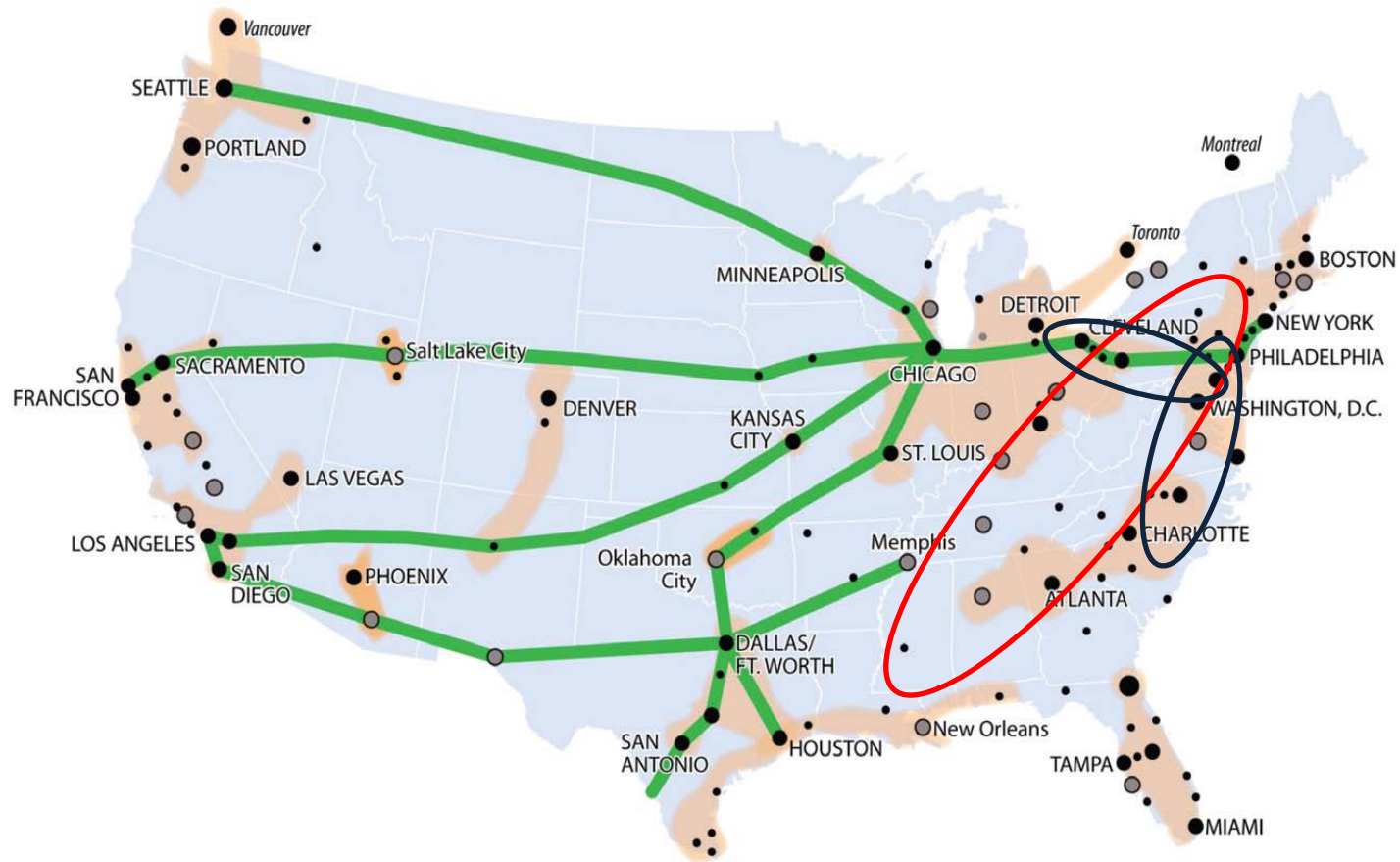
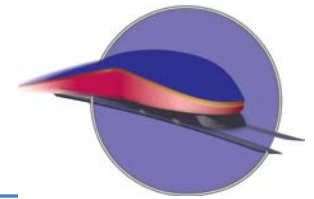


Based on 2007 Waybill

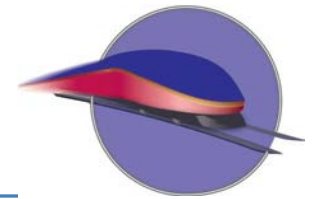
***This map depicts linkages between megaregions to show intermodal rail movement, not the actual routes.*



Crescent Corridor/National Gateway



Truck Rail Intermodal Market Share



Truck and Rail Intermodal in Markets 500 Miles and Greater

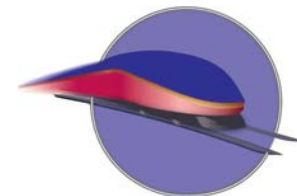
Mileage Blocks	Truck	Rail Intermodal	Total Market	Truck Share	Rail Share
500 to 749	17.8	1.2	19.0	94%	6%
750 to 999	10.1	2.3	12.4	82%	18%
1000 to 1499	7.7	2.0	9.7	79%	21%
1500 to 2000	3.7	2.1	5.8	63%	37%
>2000	2.8	4.9	7.7	36%	64%
Total	42.1	12.5	54.6	77%	23%

Millions of units

Source: Assessment of 2007 Commodity Flow Survey and 2007 Rail Carload Waybill Sample



Truck Rail Intermodal Market Share 2035 Status Quo



Truck and Rail Intermodal in Markets 500 Miles and Greater

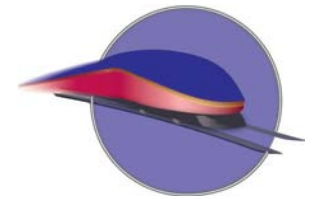
Mileage Blocks	Truck	Rail Intermodal	Total Market	Truck Share	Rail Share
500 to 749	22.0	1.5	23.5	94%	6%
750 to 999	12.4	2.8	15.2	82%	18%
1000 to 1499	9.4	2.5	11.9	79%	21%
1500 to 2000	4.6	2.7	7.3	63%	37%
>2000	3.4	6.0	9.4	36%	64%
Total	51.8	15.5	67.3	77%	23%

Millions of units

Source: Assessment of 2007 Commodity Flow Survey and 2007
Rail Carload Waybill Sample

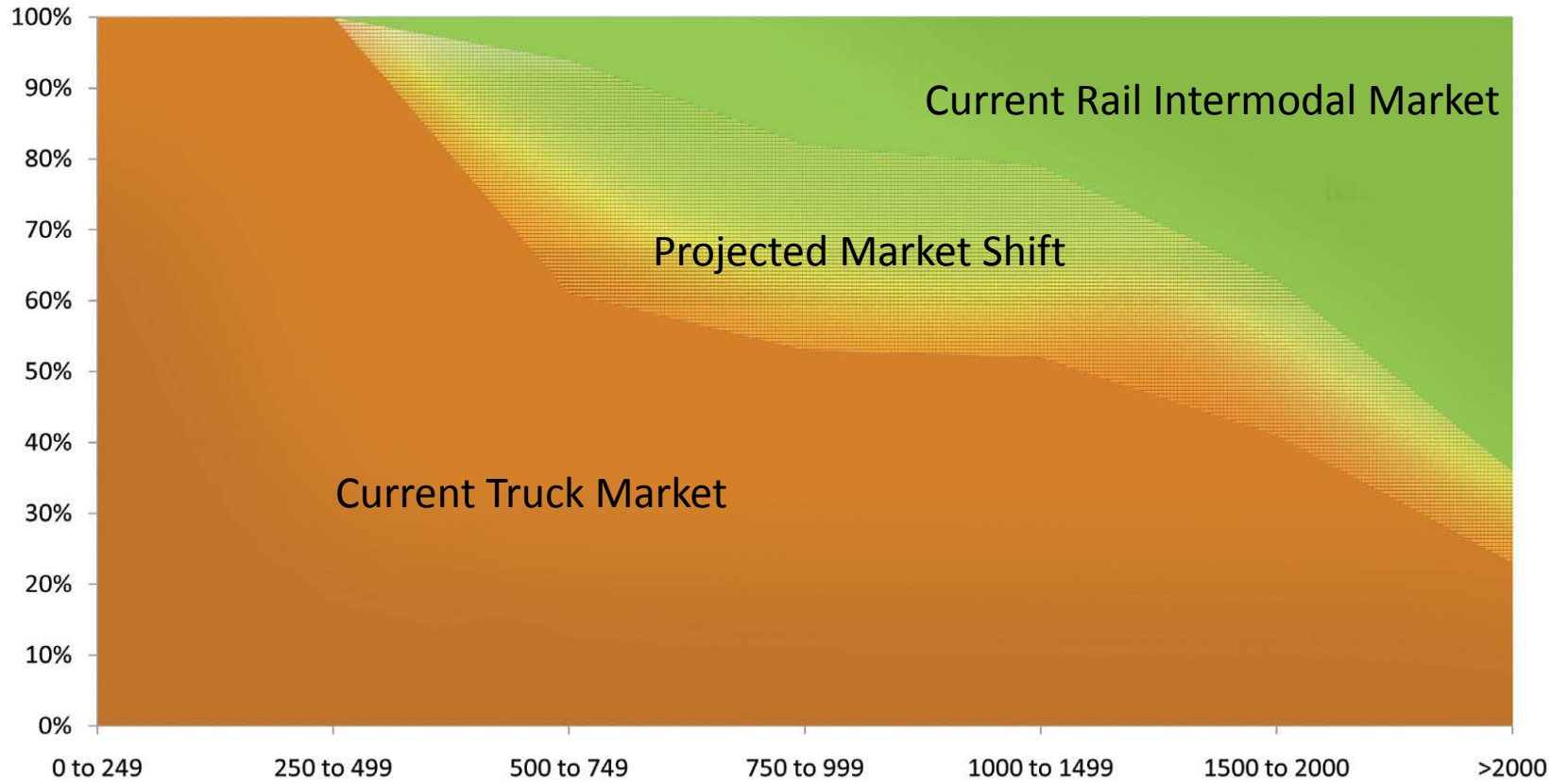


Modal Shift Projection

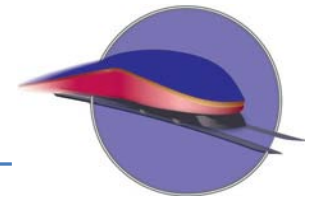


■ % truck ■ % intermodal conversions ■ % rail

% of Market Share



TIGER I Funding



TIGER I Rail Capital Grants

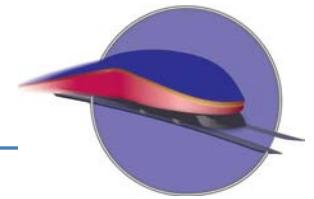
Crescent Corridor Intermodal Freight Rail Project (\$105 million)

National Gateway Freight Rail Corridor (\$98 million)

- Both Projects Presented a Corridor Approach to Make Transportation Assets More Productive
- Both Projects Demonstrated that They Could Deliver Significant Public Benefits



DOT Strategic Goals



Safety

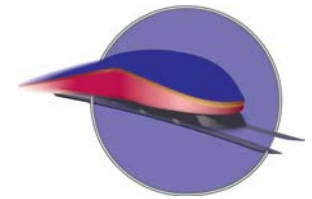
State of Good Repair

Economic Competitiveness

Livable Communities

Environmental Sustainability

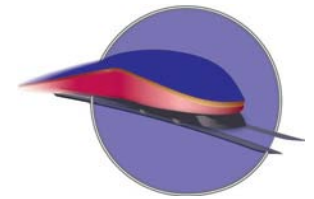




Strategic Transportation Goals

	Passenger	Freight
Safety	Average fatalities per year 2002-2008 = less than 9	Rail and intermodal rail can enhance safety in competitive corridors
Energy	Consumes 21% less energy per passenger mile than automobiles	1.9 to 5.5 times more fuel efficient than trucks
Livable Communities	Encourages efficient land use	Mitigates urban congestion
Economic Growth	Improves regional interconnectivity	Reduces logistics costs
Environment	Reduces greenhouse gasses and pollutants	Reduces greenhouse gasses and pollutants





Key Points

- **Remain Attentive to the Public Benefits that a Project Can Deliver**
- **Public Infrastructure Investments Should Look at the Full Array of Opportunities Across Modes.**
- **Continue To Work Outside of the Normal Boundaries—the Corridor Approach Works.**
- **Consider the Importance of Performance Metrics To Attain Goals.**

