

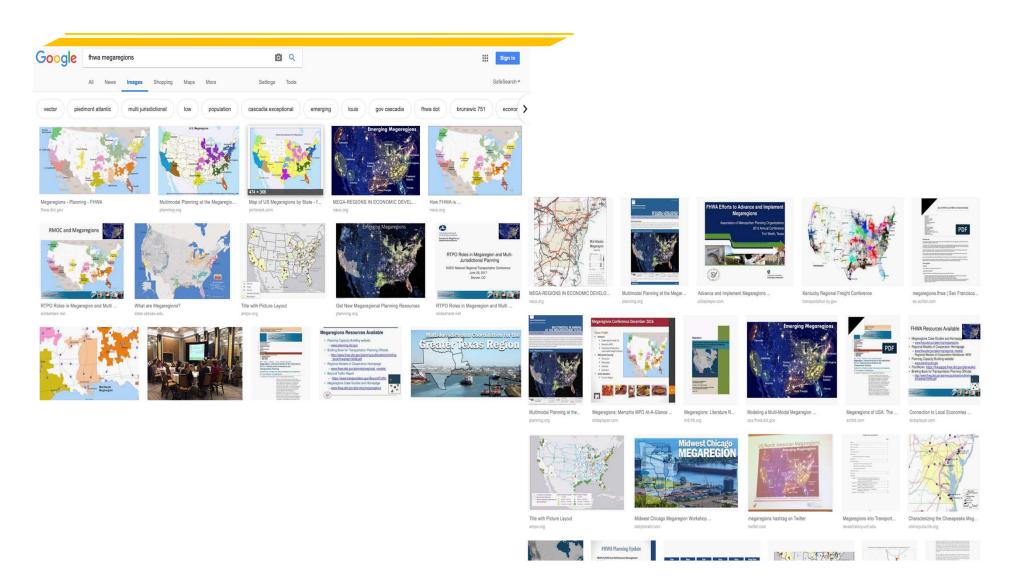
Think Globally, Act Regionally, and Coordinate Locally: Megaregions and the Future

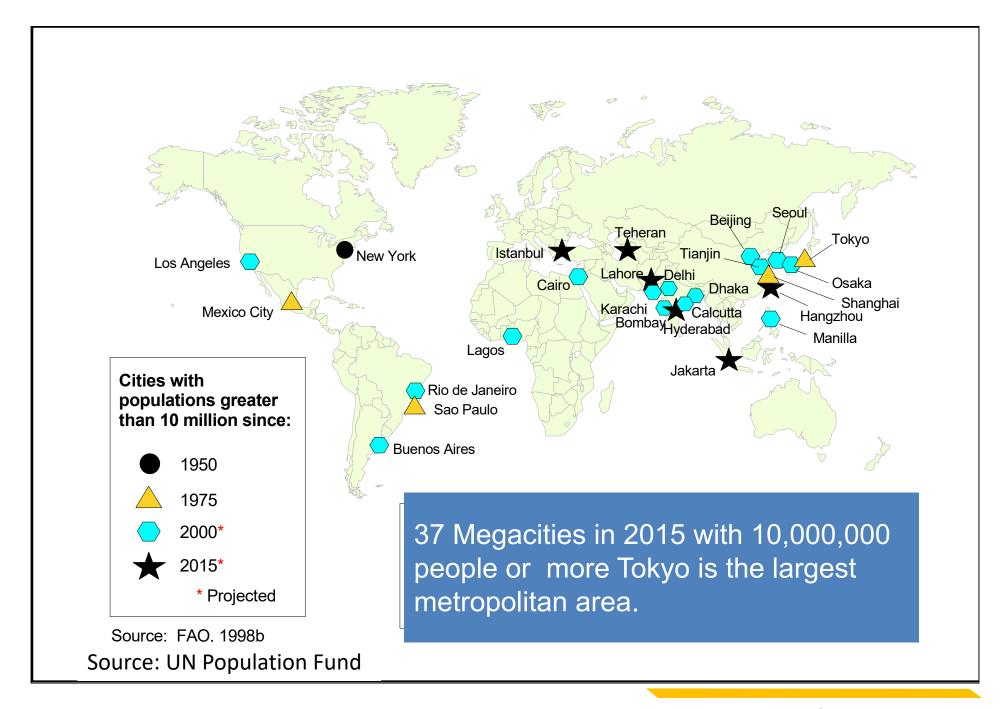
James Garland, FHWA Office of Planning Cooperative Mobility for Competitive Megaregions Summer Forum Houston, TX- June 6, 2019

Today's Discussion

- FHWA's Interest in Megaregions
- Global and National Trends
- Existing Federal Research on Megaregions
- FHWA Megaregions Workshop Series
- Observations, Challenges, and Next Steps

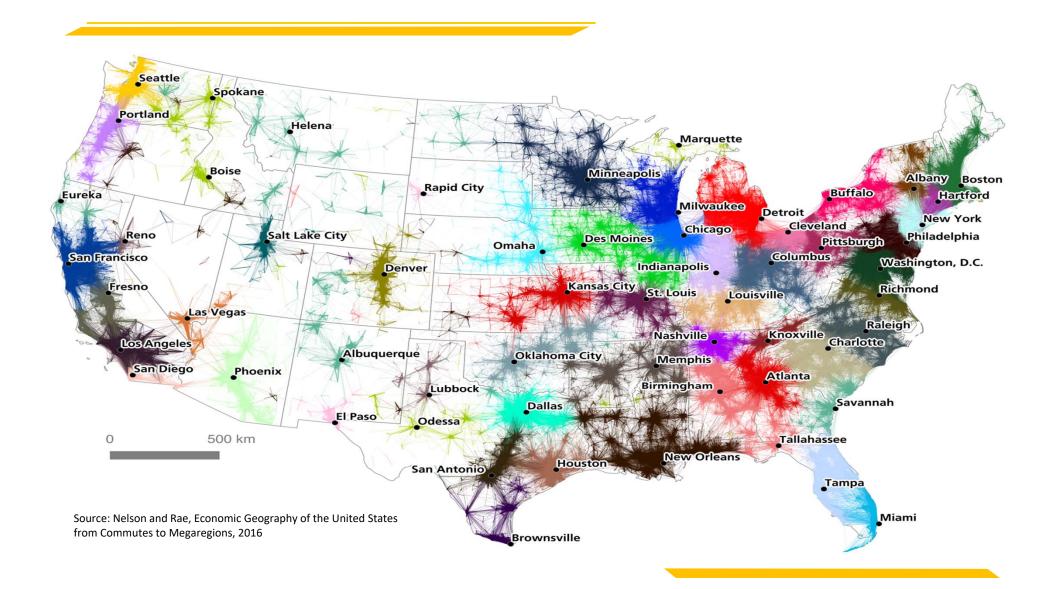
Megaregions- a household name?





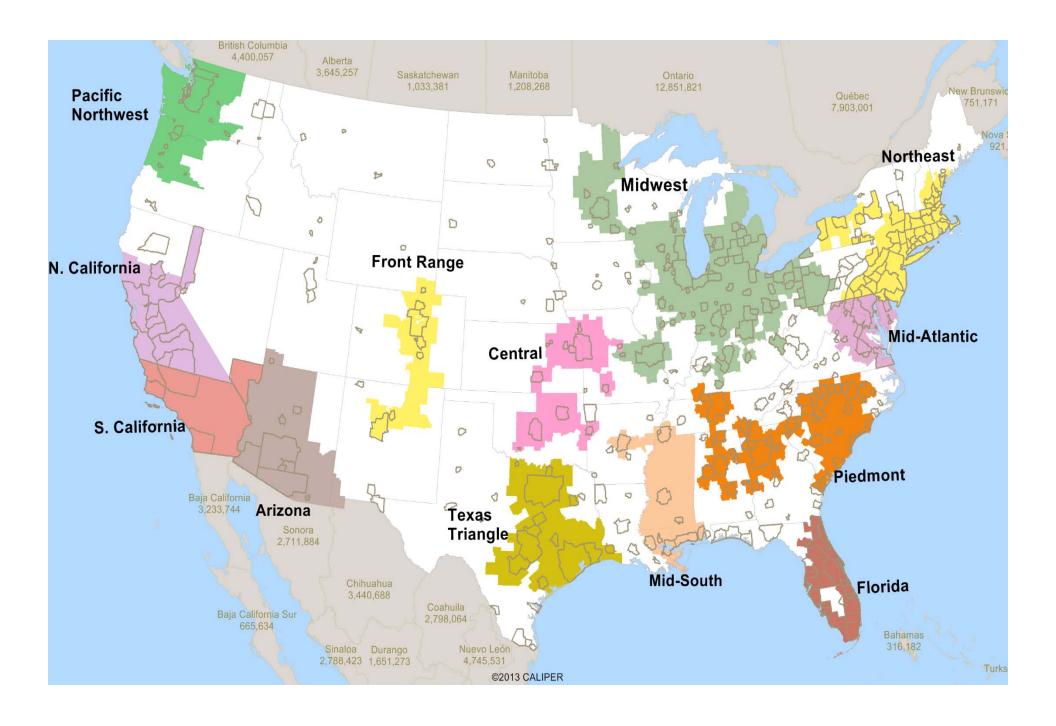
From: Steve Esrey

Megaregional Clusters

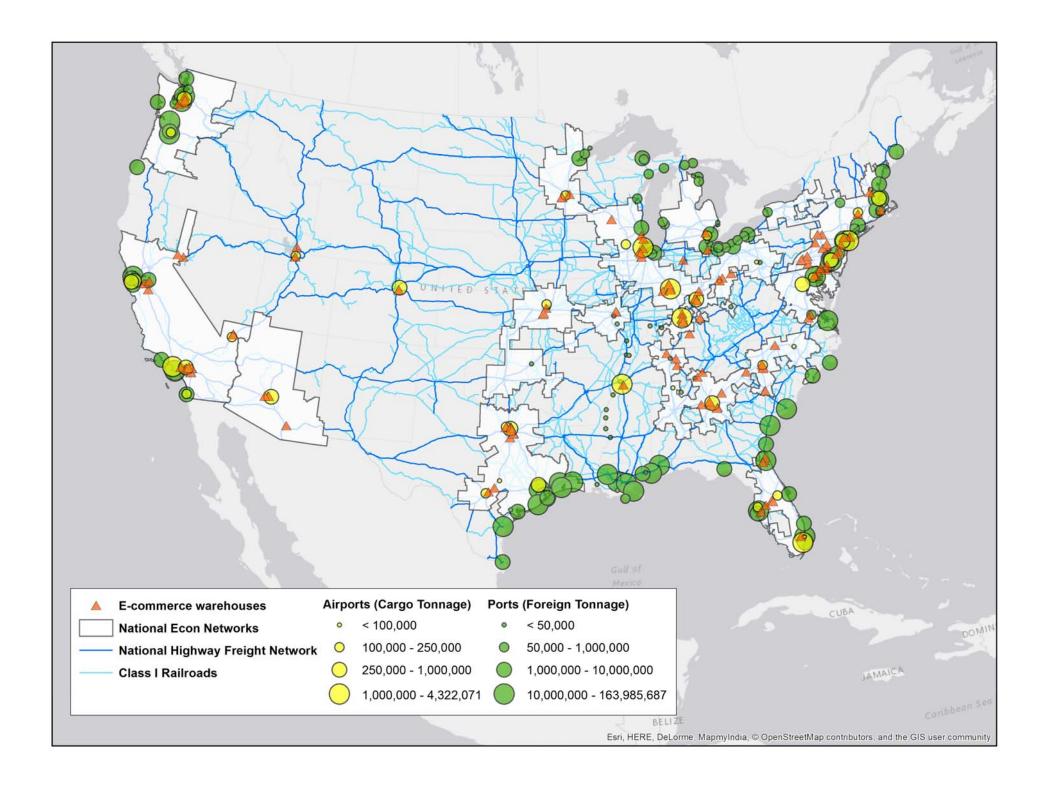


Additional Megaregional Clusters

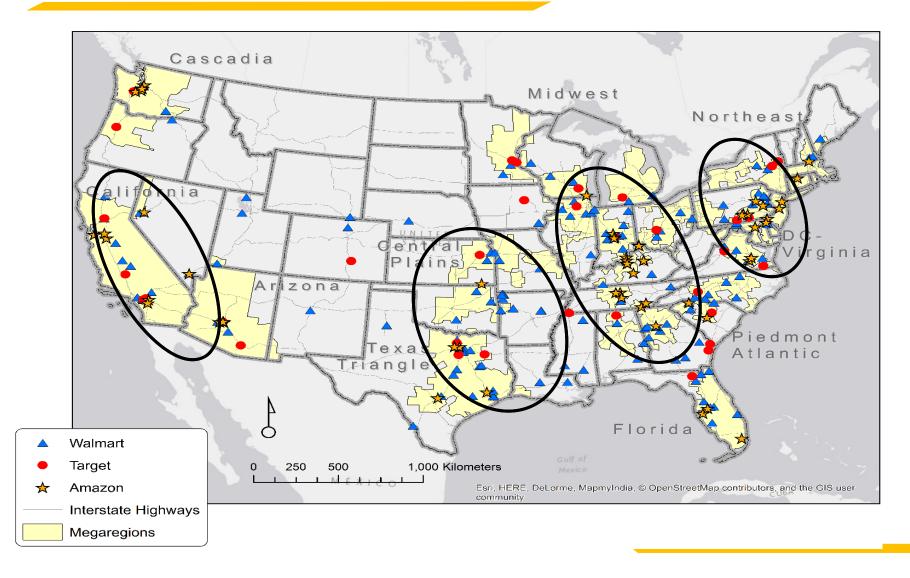




FHWA Research on Megaregions 2008-Ongoing



Fast Growth of E-Commerce



Source: Ross and Hylton

FHWA Research- Megaregions Publications

ROLE OF REGIONAL PLANNING ORGANIZATIONS IN TRANSPORTATION PLANNING ACROSS BOUNDARIES







June 2014

METROPOLITAN PLANNING ORGANIZATIONS AND TRANSPORTATION PLANNING **FOR MEGAREGIONS**







December 2014

U.S. Department of Transportation Office of Planning, Environment, and Realty Federal Highway Administration

U.S Department of Transportation Office of the Assistant Secretary for Research and John A. Volpe National Transportation Systems Center



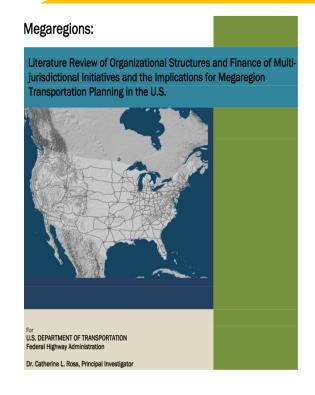


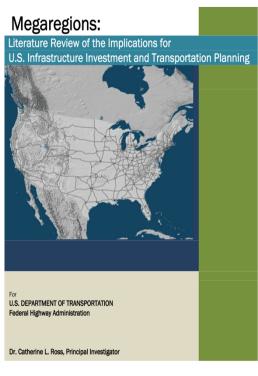


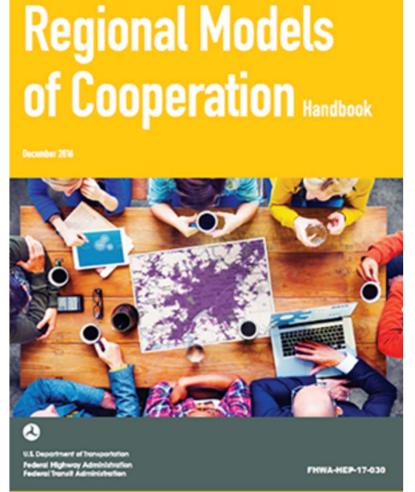
MULTIMODAL PLANNING AT THE **MEGAREGIONAL SCALE**



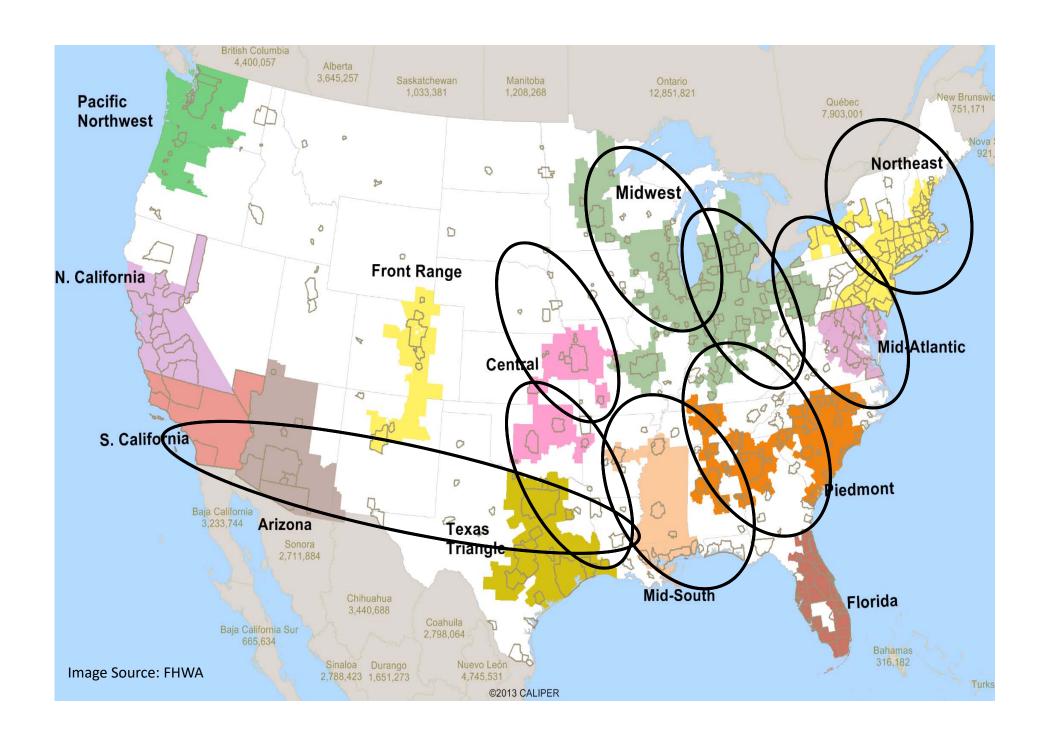
FHWA Research- Megaregions Publications







FHWA Megaregions Workshop Series 2016-2018



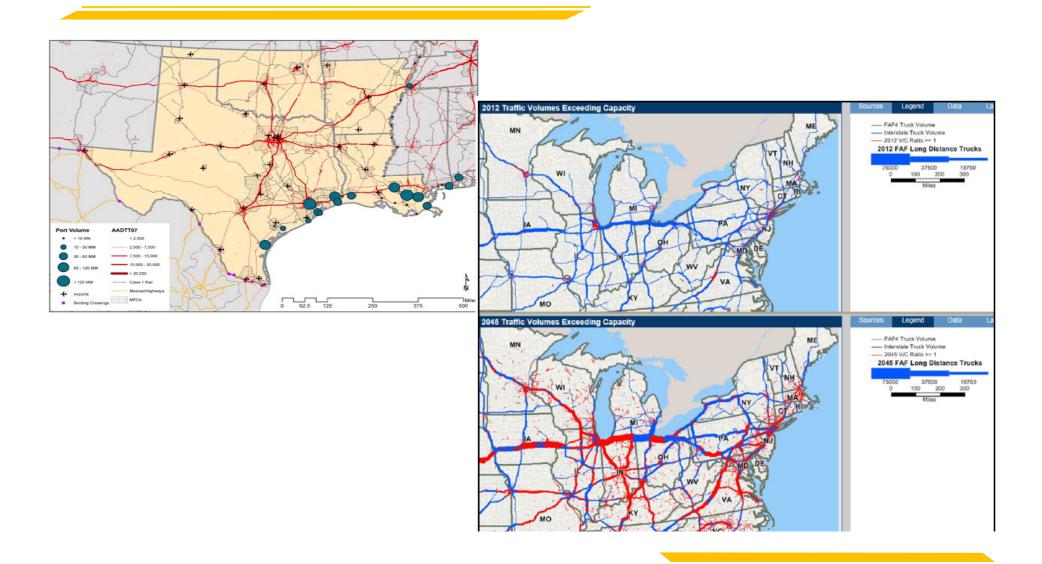
Workshop Series Purpose

- To advance the concept of megaregions (National Economic Partnerships)
- To connect and collaborate across public and private sectors
- To address common transportation and economic issues and opportunities in various Megaregions
- To identify next steps for FHWA to implement the concept of megaregions

Workshop Framework

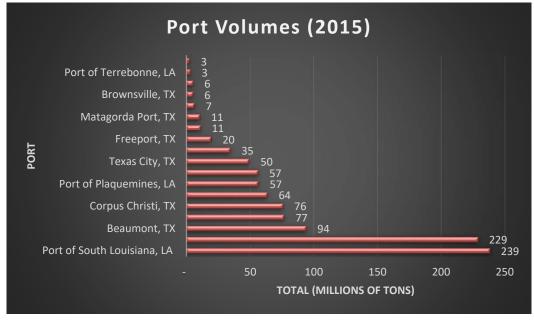
- Challenges Spanning Traditional Planning Boundaries
 - Freight, ITS, Ports, Airports,
- Opportunities to Enhance Megaregional Planning
 - Data sharing, 4Cs of Megaregions, Private Sector Involvement
- Next Steps and Opportunities
- Ongoing Communication

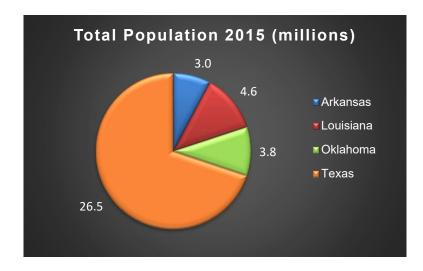
Tailoring Megaregions



Tailoring Megaregions

State	2015 GMP (million \$)	US Share	MSA	2015 GMP (million \$)	US Share
Arkansas	118,677	0.66%	Little Rock-North Little Rock-Conway, AR	37,213	0.21%
Louisiana	220 075	4 220/	Lake Charles, LA	15,353	0.09%
LOUISIANA	238,075 1.33%	New Orleans-Metairie, LA	78,478	0.44%	
Oklahoma	188,011	1.05%	Lawton, OK	4,957	0.03%
Texas	1,611,189 8.99	8.99%	Houston-The Woodlands-Sugar Land, TX	503,311	2.81%
			Dallas-Fort Worth-Arlington, TX	485,683	2.71%
			Austin-Round Rock, TX	119,949	0.67%
			San Antonio-New Braunfels, TX	108,879	0.61%
US Total	17,925,143	100.00%	US Total	17,925,143	100.00%





Corridor Based Approaches to Megaregions

I-10 Corridor Western Region

National Economic Network



Commerce flowing on Interstate 10 across California, Arizona, New Mexico and Texas is the engine of a powerful economic region. I-10 is the primary trucking route to and from the Ports of Los Angeles and Long Beach and connects the trilliondollar markets of Southern California and central Texas. Working together, this region combined would have the 10th largest economy in the world.

Population

Current and Projected Population for the U.S. and I-10 Western Corridor Region States: 2010-2040

Geography	Total Population			
Name	2010	2020	2030	2040
United States	308,745,538	333,544,648	360,828,810	383,082,556
Arizona	6,392,017	7,248,162	8,210,714	9,103,179
California	37,253,956	40,938,164	44,941,488	48,286,484
New Mexico	2,059,179	2,108,851	2,157,549	2,160,402
Texas	25,145,561	29,755,854	35,176,014	40,698,640
I-10 West Region	70,850,713	80,051,030	90,485,766	100,248,705

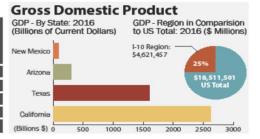
Urban and Pural Population by State: 2010

orban and Rural Population by State. 2010										
	Tota	al		Ru	ral		-	Url	oan	
	State's Total Population	Area in Sq Miles	Rural Population	Percent Rura Population		Percent of Total Area That is Rural	Urban Population	Percent Urban Population	Urban Area in Sq Miles	Percent of Total Area That is Urban
Arizona	6,392,017	113,594	651,358	10.2	111,407	98.1	5,740,659	89.81	2,187	1.9
California	37,253,956	155,779	1,880,350	5.1	147,560	94.7	35,373,606	94.95	8,219	5.3
New Mexico	2,059,179	121,298	464,818	22.6	120,471	99.3	1,594,361	77.43	827	0.7
Texas	25,145,561	261,232	3,847,522	15.3	252,486	96.7	21,298,039	84.70	8,746	3.4
I-10 West Region	70,850,713	651,903	6,844,048	13.3	631,924	97.12	64,006,665	86.72	19,978	2.8



Overview of the I-10 Western Corridor

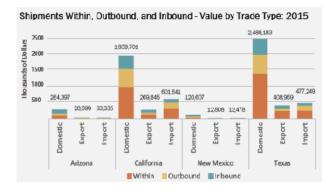




I-10 Corridor West Region

National Economic Network

In 2016, the four states signed a charter to create the I-10 Corridor Coalition. The goal of the partnership is to make travel on I-10 safer and more efficient, in part by removing what transportation officials refer to as "friction" – the variety of commercial vehicle permitting and inspection practices in each state that makes movement of goods less efficient than it could be. The partnership employs the transportation expertise of the states collectively to enable resource sharing, joint testing and economies of scale. By working together, the region can better apply best practices to improve safety and efficiency, improve freight movement, expand and coordinate the use of technology, and promote cooperative planning throughout the corridor.



Freight Shipments by State of Origin: 2012

State	Value (\$ Millions)	Tons (Thousands)	Ton-miles (Millions)
United States (total)	13,852,143	11,299,409	2,969,506
Arizona	147,147	117,119	16,298
California	1,476,407	718,345	171,432
New Mexico	48,793	48,681	7,472
Texas	1,897,658	1,686,264	243,743
I-10 West Region	3,570,005	2,570,409	438,945

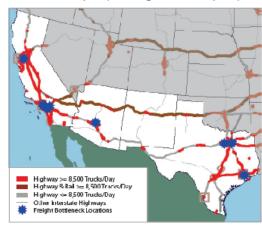




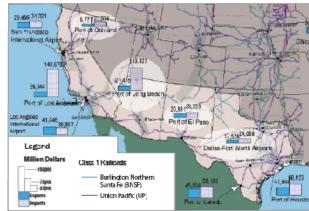


Freight

Volume on Roads (2013) and Freight Bottlenecks (2015)



Scaport Value (2008) and Class 1 Railroad Network (2010)



Top 100 Freight Bottlenecks in Western I-10 Corridor Region: 2015

Congestion Ranking	Location Description	State	Avg Speed	Peak Avg Speed	Non-Peak Avg Speed
6	Los Angeles, SR 60 at SR 57	CA	43	35	46
8	Houston, I-45 at US 59	TX	36	26	40
11	Houston, I-10 at I-45	TX	42	33	46
12	Dallas, I-10 at I-30	TX	38	31	43
13	Houston, I-10 at US 59	тх	42	27	48
17	Los Angeles, I-710 atl-105	CA	43	31	48
22	Houston, F610 at US 290	TX	42	32	46
25	Houston, I-45 at I-610	TX	46	32	50
26	San Bernadino, I-10 at I-15	CA	47	35	50
28	Austin, I-35	TX	31	40	37
33	Houston, I-710 at I-610	TX	46	18	50
39	Corona, I-15 at SR 91	CA	40	29	45
40	Phoenix, I-17 at I-10	AZ	49	39	53
46	Oakland, -880 at -238	CA	44	35	48
49	Ft. Worth, I-35 W at I-30	TX	45	37	49
52	Oakland, I-80 at I-580/I-880	CA	33	23	39
53	Los Angeles, I-110 at I-105	CA	41	32	46
59	Houston, I-610 at US 59	TX	40	30	45
60	Dallas, US 75 at I-635	TX	48	36	53
65	Houston, I-45 at S.H.Tollway	тх	49	39	54
82	Houston, I-45 at I-610	TX	46	36	51
8.8	Houston, I-10 at I-610	TX	53	48	55

Megaregions Trends and Feedback from Workshops

Challenges

- Congestion
- Harmonizing Freight Plans
- Truck Parking
- Maintenance and State of Good Repair
- Governance and Decision-making
- Data and Funding





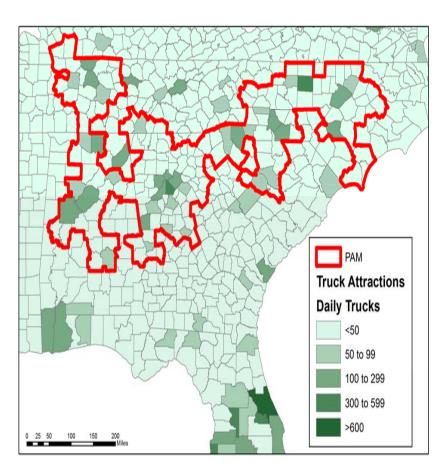
Opportunities to Grow Megaregions

- Existing Partnerships and Coordination
 - Great Lakes Regional Transportation
 Operations Coalition
 - Truck Parking Information and Management System (TPIMS) Project
 - Mid-America Freight Coalition (MAFC)
 - I-95 Corridor Coalition
 - "Planning on the Edges" Consortium
 - Northern California/Bay Area Economic Council





Think Globally, Coordinate Regionally, and Act Locally



Source: Georgia Tech CQGRD

By the Numbers:

- 467 Counties Across 5 States
 - 3000 in the United States
- 3 Seaports
 - Savannah, Charleston, Wilmington
- 2 Large, World Class Airports
 - Atlanta + Charlotte
- Major Class I Railroads and Inland Ports
- 18 Major Interstate Corridors
 - I-10, I-16, I-20, I-22, I-24, I-26, I-40,
 I-55, I-59, I-65, I-69 I-73, I-74, I-75,
 I-77, I-81, I-85, I-95

Megaregion Workshops: Actions and Outcomes

Megaregion Name	Planned Action	Anticipated Outcomes
I-10 Corridor Coalition	I-10 Freight Corridor Plan (Western States) I-10 Freight Corridor Plan (all 8 states) Corridor-Based Operational and Goods Movement Study	Harmonize State Freight Plans Across Jurisdictional Borders Improve Operational Flows from Ports of LA/Long Beach to Houston and beyond
Mid-Atlantic	Freight Plan Connected and Automated Vehicles Plan	Harmonize State Freight Plans Across Jurisdictional Boundaries Plan for Impacts of C/AV on Fed Aid Highway System
Mid-South	Improve Jurisdictional Coordination through engaged dialogue/forums	Harmonize State Freight Plans Across Jurisdictional Boundaries Resolve Cross-Jurisdictional Communications through regular forums and dialogue

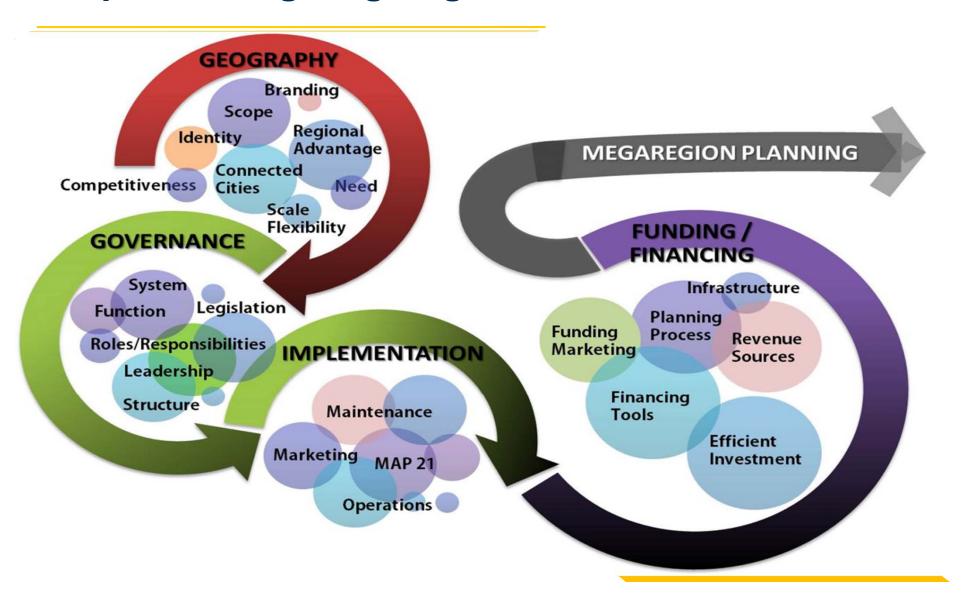
Megaregion Workshops: Actions and Outcomes

Megaregion Name	Planned Action	Anticipated Outcomes
Northeast	Enhancing Economic Development through Addressing Congested Bottlenecks	Harmonize State Freight Plans Across Jurisdictional Borders Improve Passenger (NEC Futures) and Freight Flows by addressing key bottlenecks across the region
Midwest Chicago	Freight Plan Governance Structure for Consolidating Funding for Major Initiatives (similar to CREATE)	Harmonize State Freight Plans Across Jurisdictional Boundaries Incentivize States to Plan Across Jurisdictional Boundaries
Piedmont	Improve Jurisdictional Coordination through engaged dialogue/forumswith lead MPO (Atlanta Regional Commission) Scenario Planning for Megaregion	Harmonize State Freight Plans Across Jurisdictional Boundaries Resolve Cross-Jurisdictional Communications through regular forums and dialogue Consolidated view of tradeoffs and future impact scenarios

Megaregion Workshops: Actions and Outcomes

Megaregion Name	Planned Action	Anticipated Outcomes
Great Lakes/Columbus	Freight Plan Truck Parking Concerns Prepare for Emerging Technologies (Hyperloop, etc.)	Harmonize Planning Efforts More Effectively Across Jurisdictional Borders Improve Passenger and Freight Flow by addressing key bottlenecks across the region
Greater Texas and Beyond	Freight Plan Governance Structure for Consolidating Funding for Major Initiatives (similar to CREATE)	Harmonize State Freight Plans Across Jurisdictional Boundaries Incentivize States to Plan Across Jurisdictional Boundaries
Central Plains/Heartland	Improve Jurisdictional Coordination through engaged dialogue/forums-with lead MPO (Atlanta Regional Commission) Scenario Planning for Region	Harmonize State Freight Plans Across Jurisdictional Boundaries Resolve Cross-Jurisdictional Communications through regular forums and dialogue Consolidated view of tradeoffs and future impact scenarios

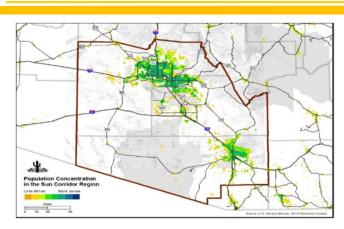
Implementing Megaregions



Challenges, Observations, and Next Steps

- Tailored Messaging
 - One size DOES NOT fit all
- Politics
- Myths and Assumptions
- International Trends
- Engaging the Private Sector
- National Economic Partnerships Implementation Projects
 - Launched in May 2018
 - Awards Made in March 2019
 - Work Begins in June 2019

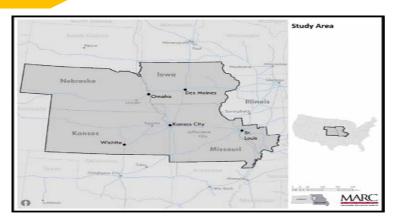
National Economic Partnerships Awards



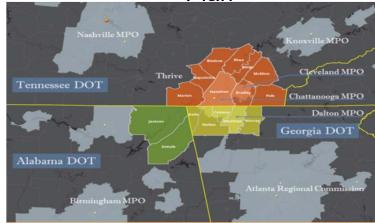
Sun Corridor Value Impact Analysis



I-15 Freight Mobility Enhancement Plan



Central Plains Heartland Freight Technology
Plan



Future Freight Movement along Freight Alley - Greater Chattanooga Region

Thank You!

James Garland

Team Leader for Transportation Planning Capacity
Building

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www.planning.dot.gov

www.fhwa.dot.gov/planning/megaregions