

# Greater Charlotte Region Freight Mobility Plan

Keeping a Dynamic Economy on the Move



Centralina Council of Governments

<http://www.centralina.org/regional-planning/transportation/freight/>



# **Freight Transportation & Economic Prosperity**

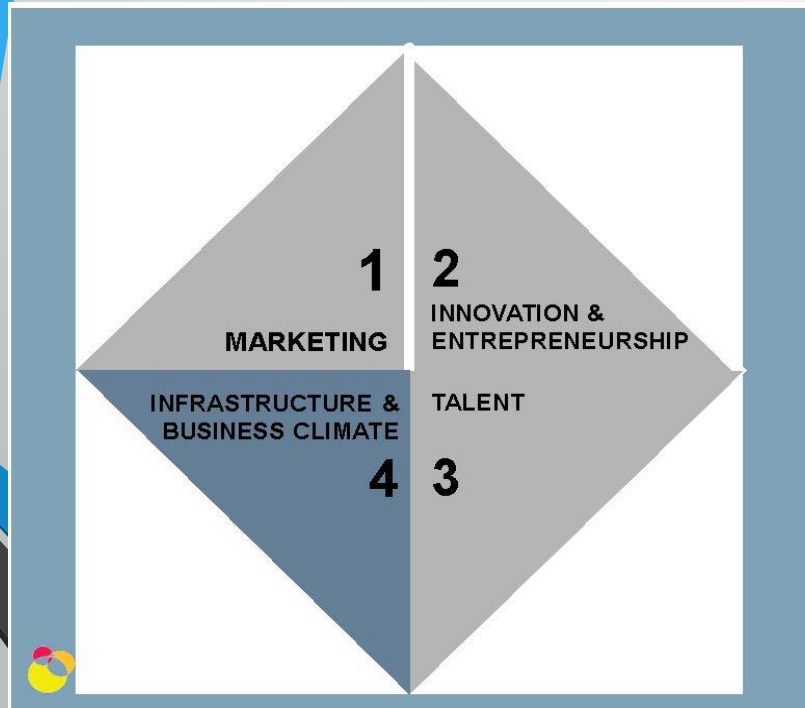
Mike Manis, Economic Development Director Centralina COG



## PROSPERITY FOR GREATER CHARLOTTE “CEDs” - Comprehensive Economic Development Strategy September 2012-2017

**Goal 4 : Ensure the region has a highly connected, efficient multimodal transportation system and an abundant supply of shovel-ready sites**

- The region’s industries must increase integration of new technologies to remain competitive and **leverage new logistics assets and infrastructure to access global markets** (such as new intermodal facility at the airport and regional telecom infrastructure).
- Regional collaboration is strong in economic development but should be strengthened by strategic collaboration in entrepreneurship, **infrastructure planning**, education and workforce development planning.



## CHARLOTTE REGIONAL ECONOMIC DEVELOPMENT STRATEGIC PLAN July 2016

### Strategy 4.3

**Invest in infrastructure and strengthen connections to global markets.**

*All of the region’s target clusters depend on access to viable sites, transportation infrastructure, and utilities. The region’s fast pace of growth requires proactive infrastructure planning and investment that thinks decades ahead.*

- **Support investments in regional transportation infrastructure** that leverage the region’s position as an East coast intermodal hub and the Airport’s potential as an aerotropolis.

# Importance of Freight Mobility to the Region

- **Growing our Economy** - moving products safely, efficiently, and reliability is critical
- **Improving Quality of Life** – A growing population with an increasing demand for goods
- **Supporting Target Industries & Competencies** – Logistics, Automotive, Biomedical, and Advanced Manufacturing
- **Participating in the Global Market** – Charlotte is the 23<sup>rd</sup> largest exporter in the U.S.\*



# Cost of Freight Transportation

- In 2014, the **Cost of Congestion for Trucks** in Charlotte NC-SC region was **\$131 million**
- In 2014, the **Cost of Logistics** as percentage of national **GDP was 8.3%**
- Logistics related cost as a percentage of sales range from 9% -14%
- **Successful freight mobility planning will strengthen the regional economy**

## The U.S. business logistics system cost is the equivalent of 8.3% of GDP in 2014

(\$ billions)

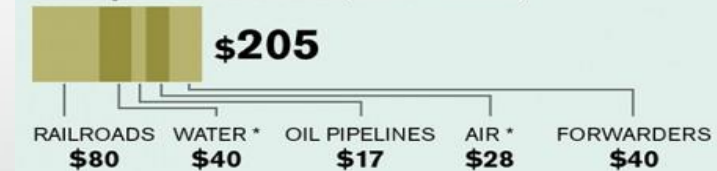
**Carrying costs** (\$2.496 trillion all business inventory)



**Transportation costs (Motor carriers)**



**Transportation costs (Other carriers)**



\* WATER: INTERNATIONAL 31, DOMESTIC 9  
AIR: INTERNATIONAL 12, DOMESTIC 16

**Shipper related costs**

**\$10**

**Logistics administration**

**\$56**

**TOTAL LOGISTICS COST \$1,449**

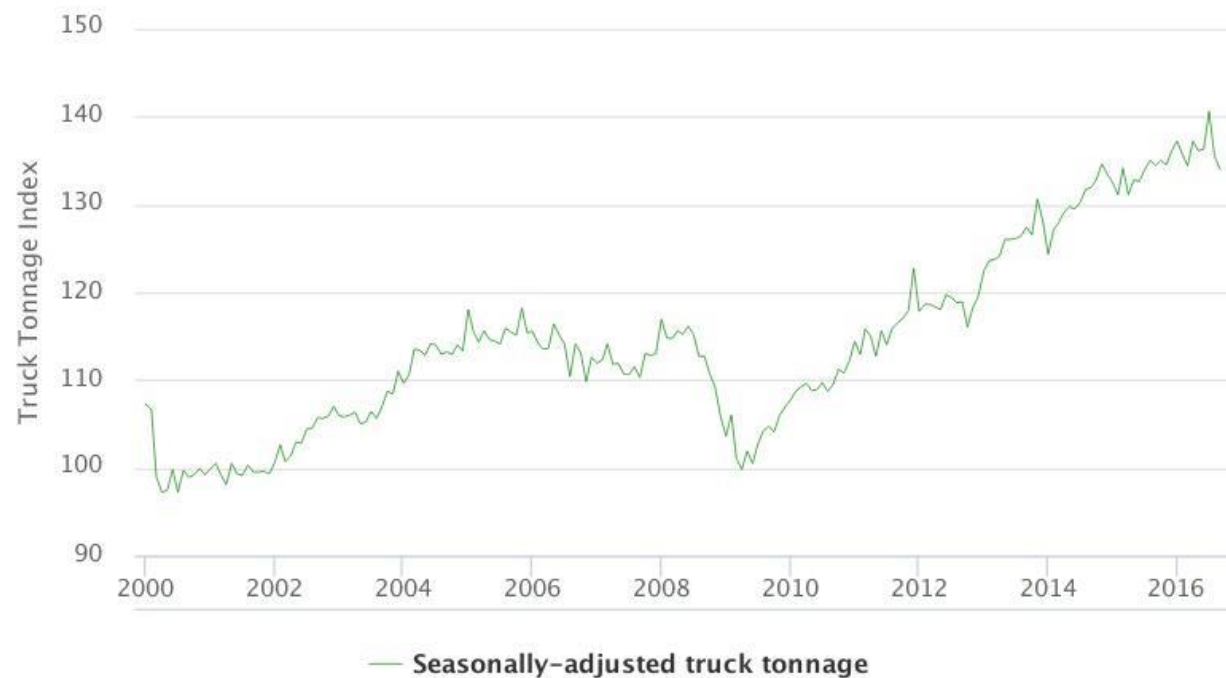
Note: May not sum to total due to rounding

Source: CSCMP's Annual State of Logistics Report

# 2000-2016 Truck Tonnage to Rail Carloads

Seasonally-Adjusted Truck Tonnage (Truck Tonnage Index)

January 2000 to September 2016



Rail Freight Carloads

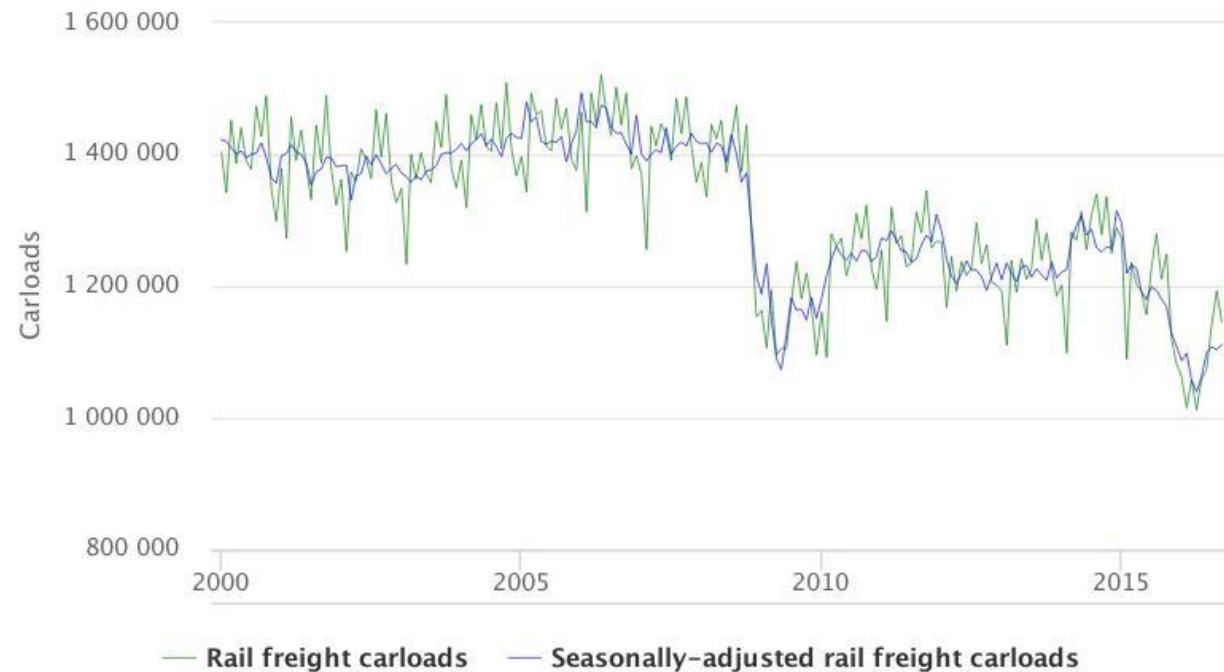
January 2000 to September 2016



# 2000-2016 Rail Carloads & Intermodal Traffic

## Rail Freight Carloads

January 2000 to September 2016



## Rail Freight Intermodal Traffic

January 2000 to September 2016



# Freight, Land Use & Economic Growth

- Freight generating land uses can bring tremendous **positive benefits**
  - Employment, tax benefits, economic output
- But can also bring **negative impacts** if not taken into consideration
  - Safety, air quality, noise, vibrations, local roads

Resolution of conflicts can yield significant benefits



# Purpose of the Regional Freight Mobility Plan:

- Promote **Economic Development**
- Incorporate **Private Sector Needs**
- Provide methods to **Reduce Congestion**
- Identify necessary **Infrastructure Improvements**
- Reduce **Land Use/Transportation Conflicts**
- Provide **Development Predictability**
- Inform **MPO & Statewide Freight Decisions**

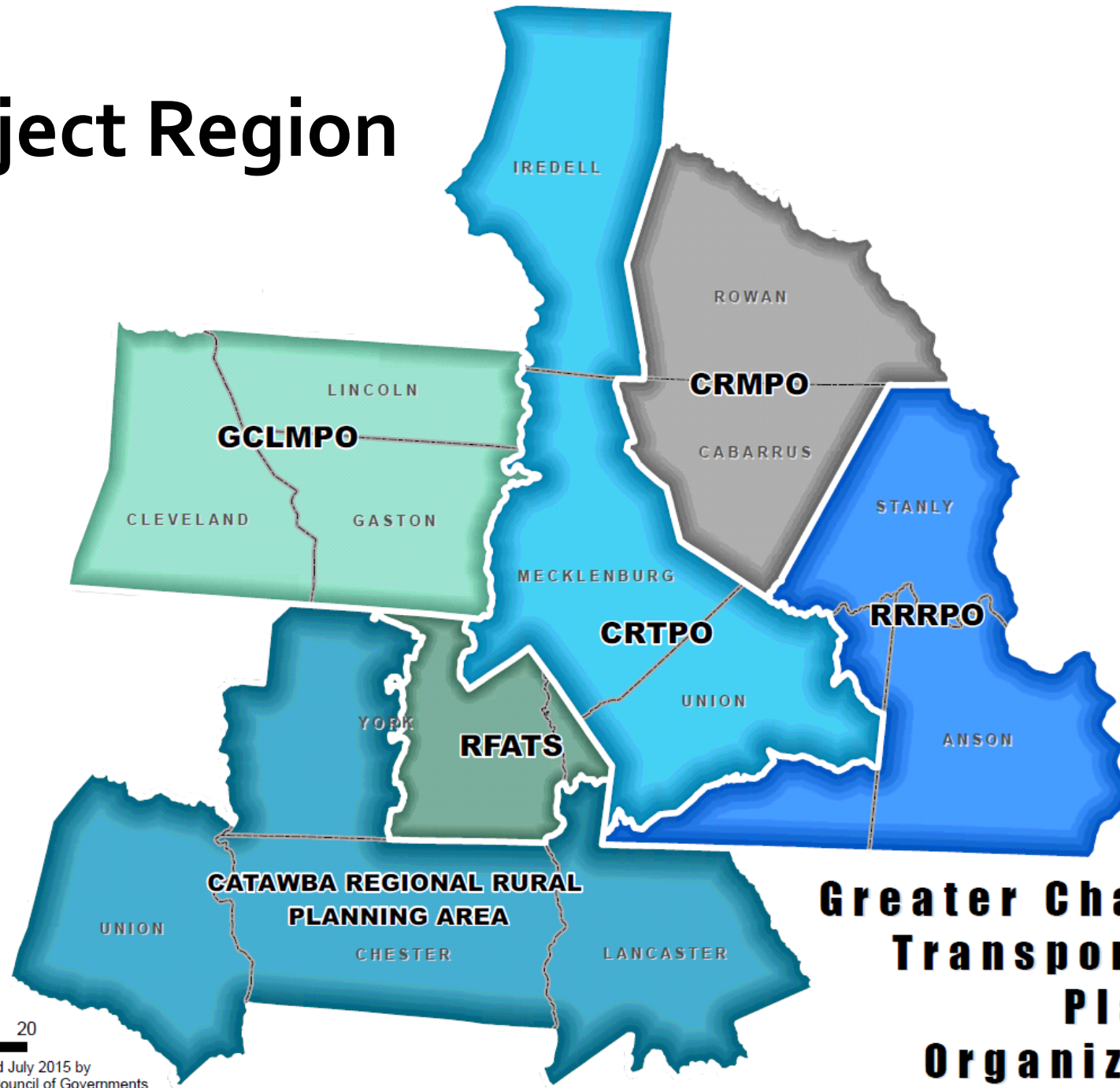




# **Regional Freight Mobility Plan Refresher & Highlights**

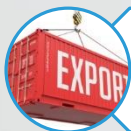
Jessica Hill, Senior Planner Centralina COG

# Project Region



**Greater Charlotte  
Transportation  
Planning  
Organizations**

# Region's Freight Vision and Goals



GOAL 1: Economic Competitiveness & Efficiency



GOAL 2: Safety & Security



GOAL 3: Infrastructure Preservation & Maintenance



GOAL 4: Environmental Stewardship



GOAL 5: Congestion & Reliability



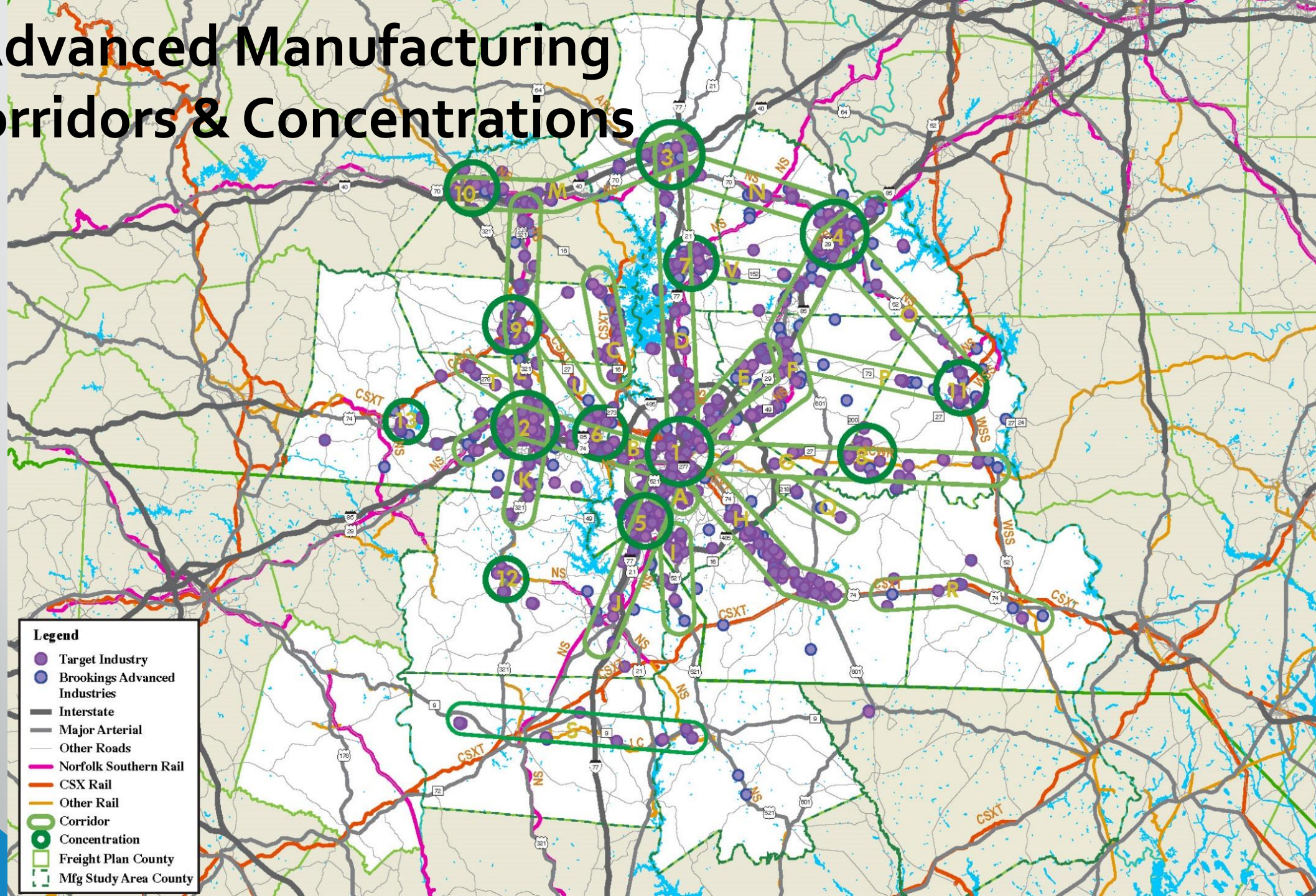
GOAL 6: Performance & Accountability



GOAL 7: Regional Coordination



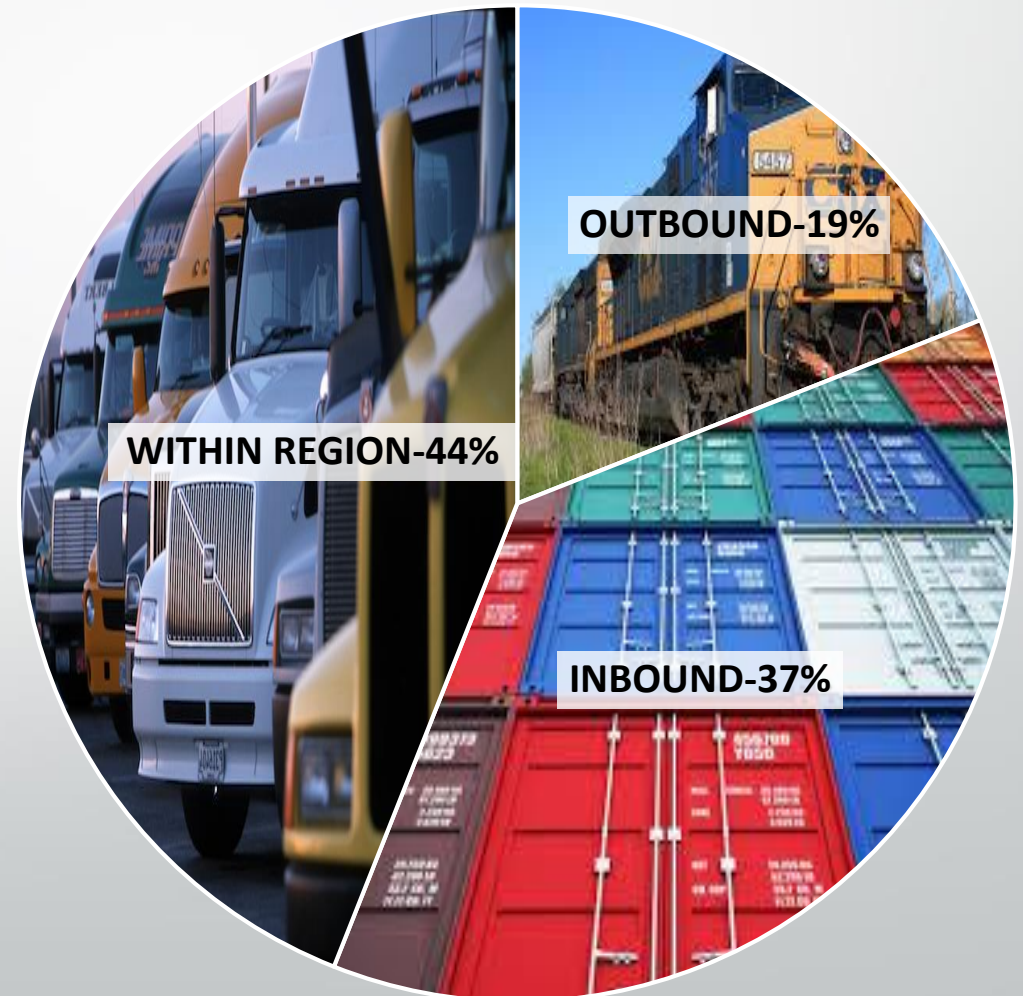
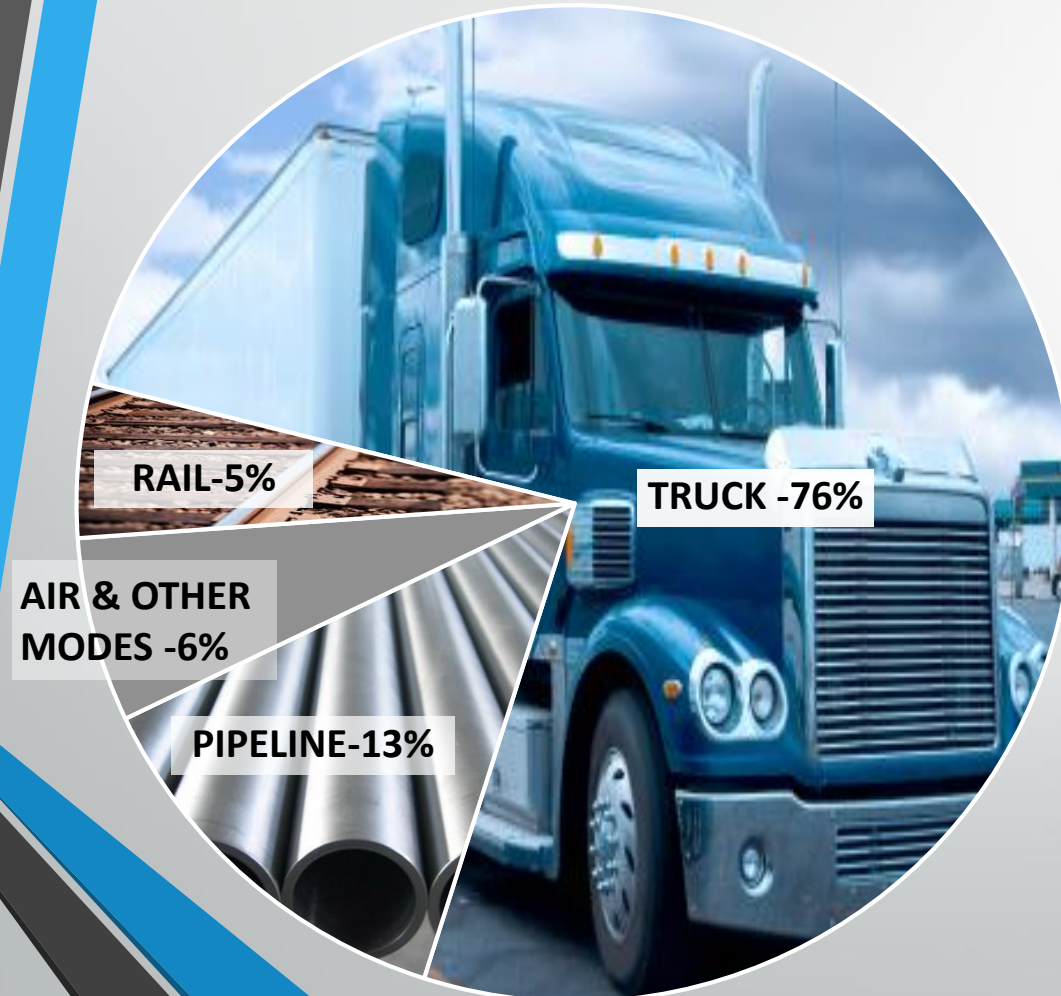
# Advanced Manufacturing Corridors & Concentrations



# Existing Region's Freight Tonnage

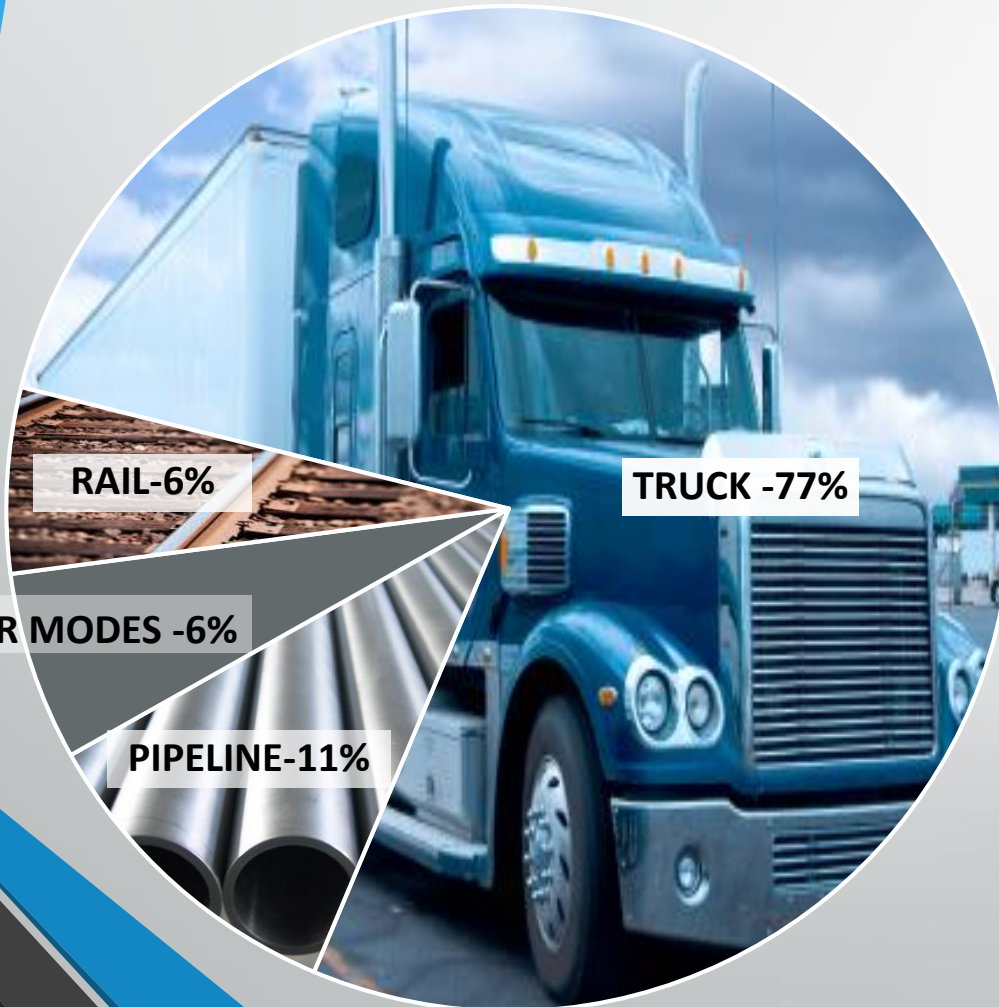
BY MODE (2012)

BY DIRECTION (2012)



# Region's Freight Tonnage Forecast

BY MODE (2045)



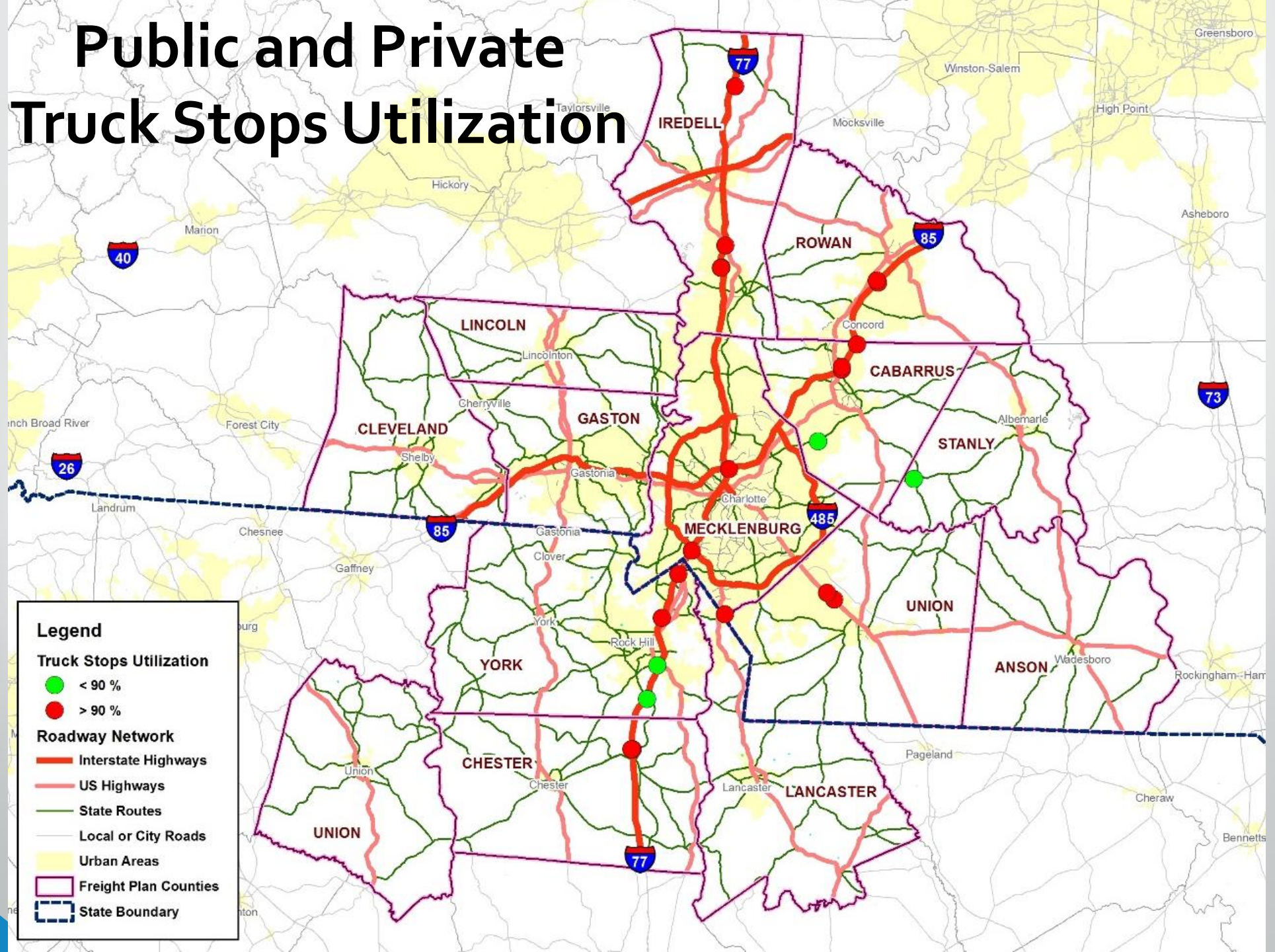
BY DIRECTION (2045)



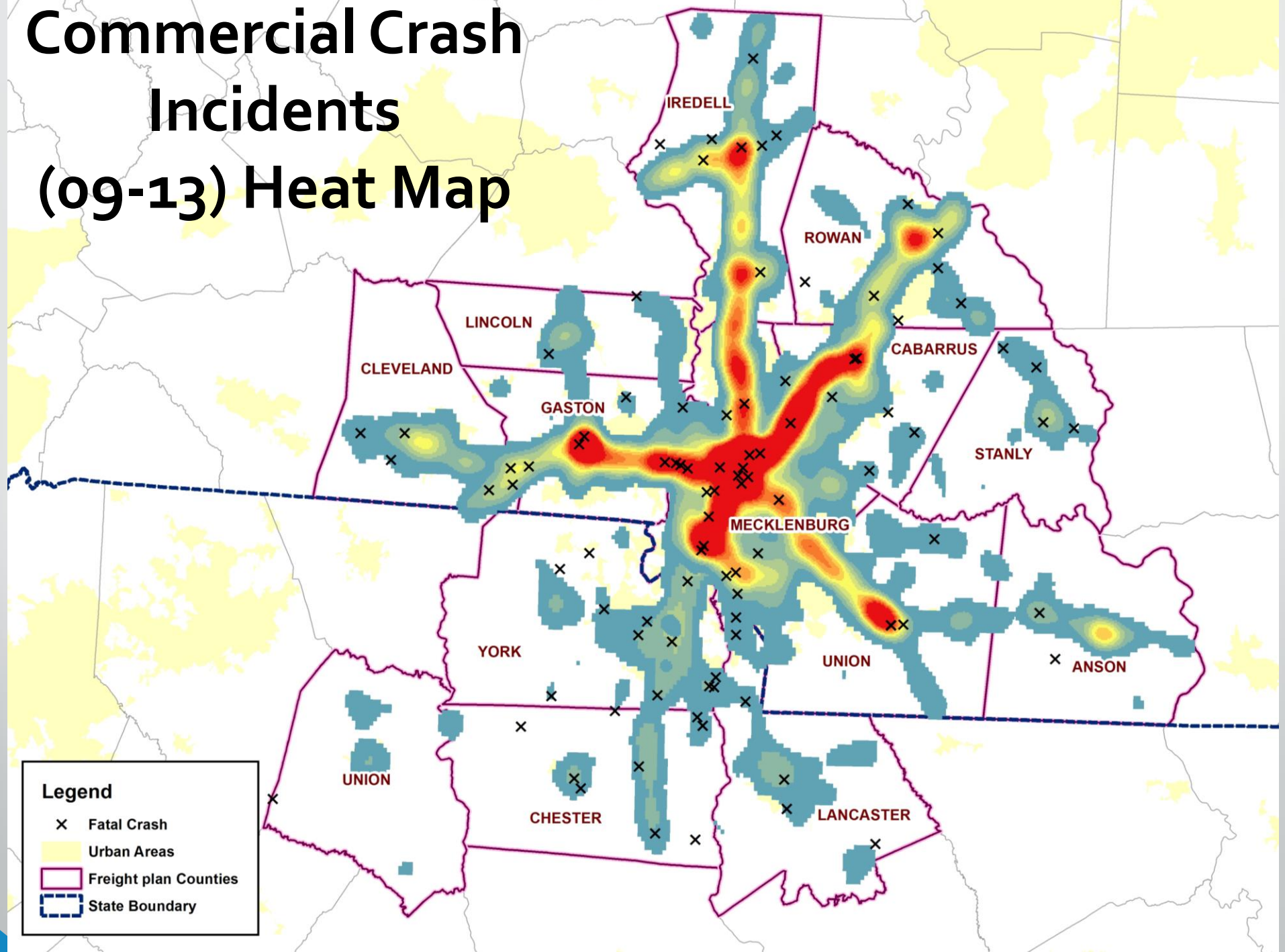
# Highest Value Commodities by Mode

	2012		2045	
Mode	Top 3 Commodities	\$ in Millions	Top 3 Commodities	\$ in Millions
Truck	Textiles & Leather	\$9,789	Machinery	\$31,040
	Mixed Freight	\$9,219	Mixed Freight	\$29,274
	Machinery	\$8,280	Pharmaceuticals	\$20,820
Multiple modes & mail	Machinery	\$2,743	Machinery	\$10,928
	Electronics	\$2,049	Electronics	\$7,625
	Pharmaceuticals	\$2,006	Pharmaceuticals	\$6,122
Rail	Basic Chemicals	\$717	Basic Chemicals	\$1,973
	Plastics/rubber	\$348	Plastics/rubber	\$1,244
	Cereal Grains	\$277	Cereal Grains	\$797
Air	Precision Instruments	\$205	Electronics	\$8,118
	Machinery	\$157	Machinery	\$6,466
	Electronics	\$151	Pharmaceuticals	\$4,466

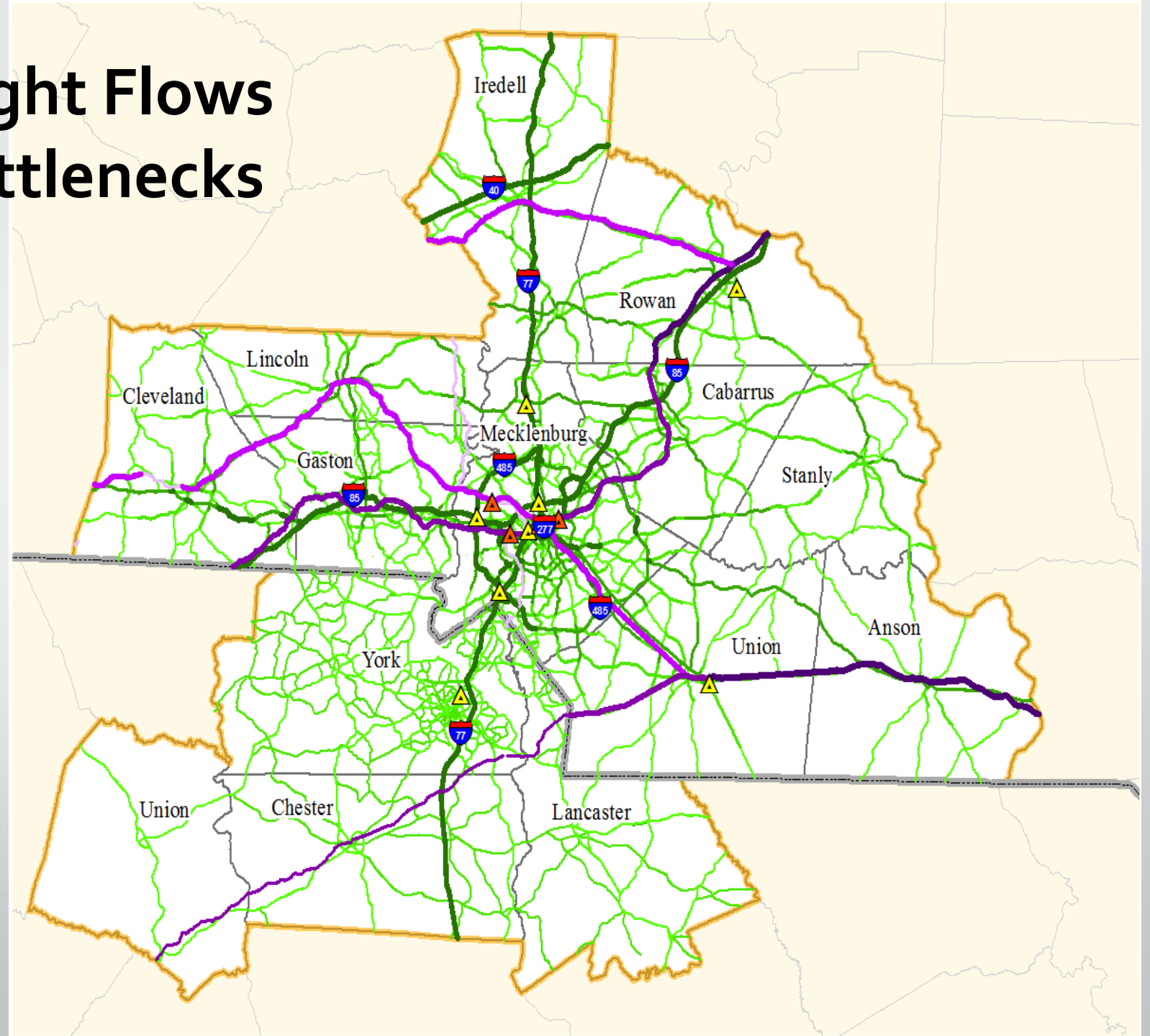
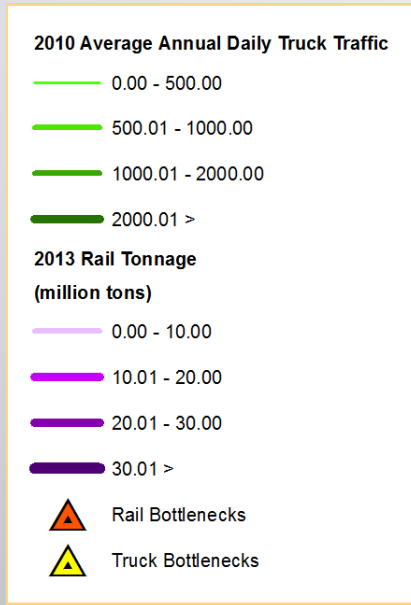
# Public and Private Truck Stops Utilization



# Commercial Crash Incidents (09-13) Heat Map




# Regional Freight Flows Volume & Bottlenecks



# Region's Challenges

- Interstates carry the bulk of the region's daily truck traffic.
- Incident management is increasingly problematic along major corridors
- Limited truck parking and highway bottlenecks impact efficiency.
- Roadway maintenance and improvement needs far outweigh funding.
- Land use & transportation decision don't always align



**5%**  
Of freight  
tonnage moved by rail



**77%**  
Of tonnage moved by Truck



**42%**  
Of all NC air cargo handled  
by CLT

# Best Practices @ the Nation

- In the areas of:
  - Land use **Planning & Regional Coordination**
  - Reduce **Environmental Impacts**
  - Increase **Safety & Security**
  - **Technology** advances



# Regional Freight Plan Recommendations



**INFRASTRUCTURE PROJECTS** to improve the freight truck, rail and air networks



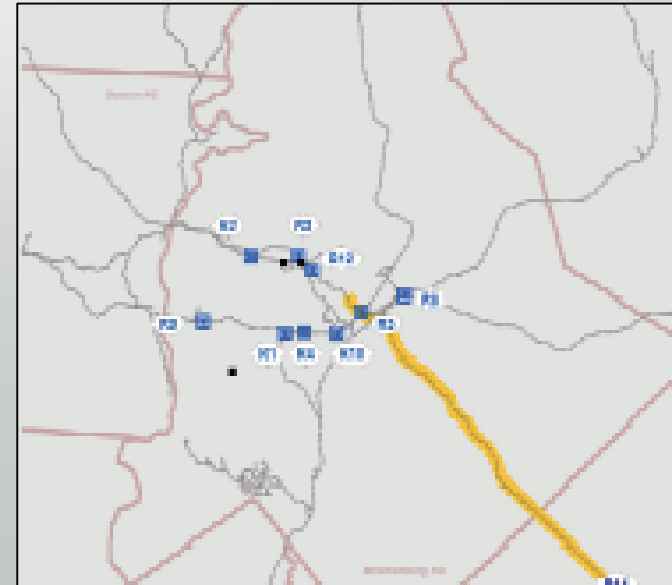
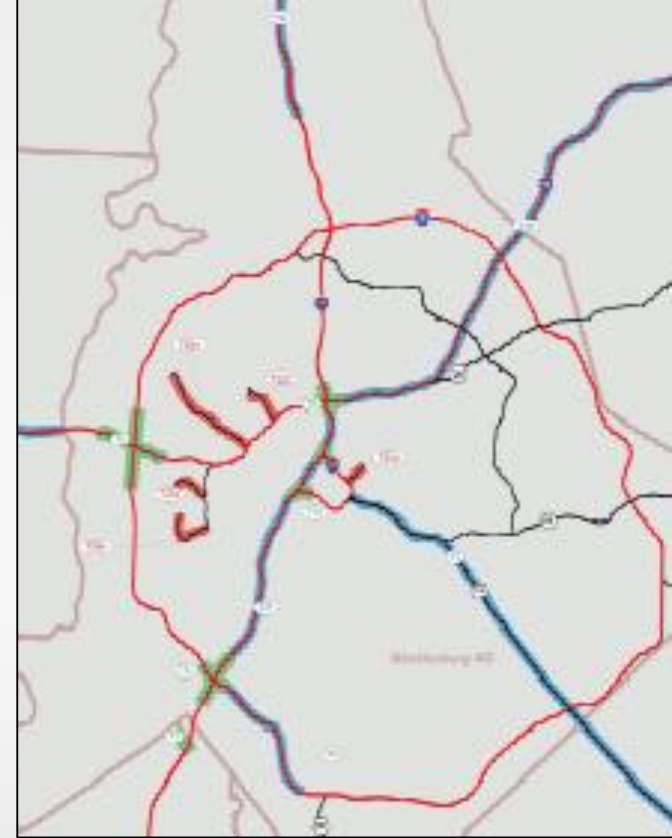
**REGIONAL PROGRAMS** to improve how freight systems operate



**LOCAL POLICIES** to encourage location efficiencies and promote region's assets

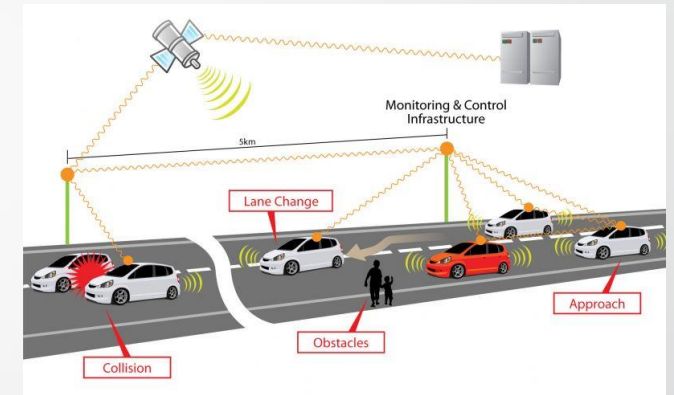
# Infrastructure Project Recommendations

- **Trucking Needs**
  - Reduce congestion & bottlenecks
  - Improved connections to intermodal facilities
- **Rail Needs**
  - Reduce congestion & bottlenecks
  - Safety improvements
- **Air Cargo Needs**
  - Facility improvements
  - Runway length to handle Heavy Cargo operations



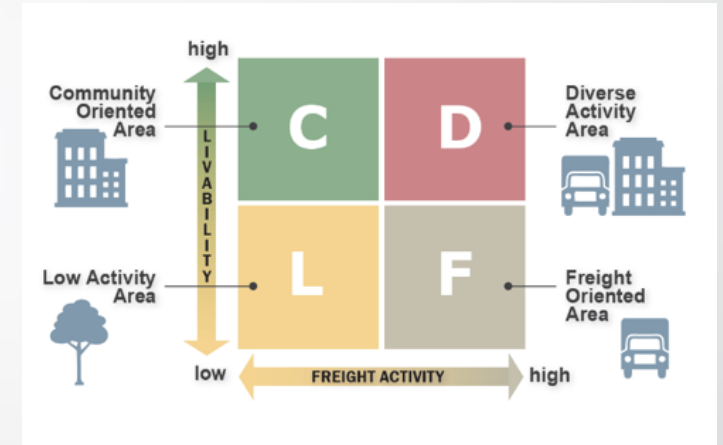
# Regional Program Recommendations

- **Intelligent Transportation System (ITS)**
  - Improves safety & mobility
  - Enhance productivity & reliability
- **Traffic Incident Management System (TIM)**
  - Planned, coordinated process to detect, respond to & clear traffic incidents
  - Reduces duration & impact of traffic incidents
- **Public Education Campaign**
  - Educate public on the importance of freight



# Local Policy Recommendations

- **Freight Mobility and Livability Considerations**
  - Conflicts with residential and dense urban locations
  - Pedestrian and cyclist safety
  - Environmental Justice Issues
- **Zoning and Site Design Considerations**
  - Proximity to freight transportation system network
  - Requirements to site design
  - Requirements to infrastructure design (turning radius)
- **Funding Program Requirements**
  - Rail funding allocation in STI process





# Implementation of the Freight Mobility Plan

Michelle Nance, Planning Director Centralina COG

# Centralina COG's Role in Implementation

- **Coordination**

- Between multiple organizations at the local, regional and state levels, and
- Across jurisdictional boundaries

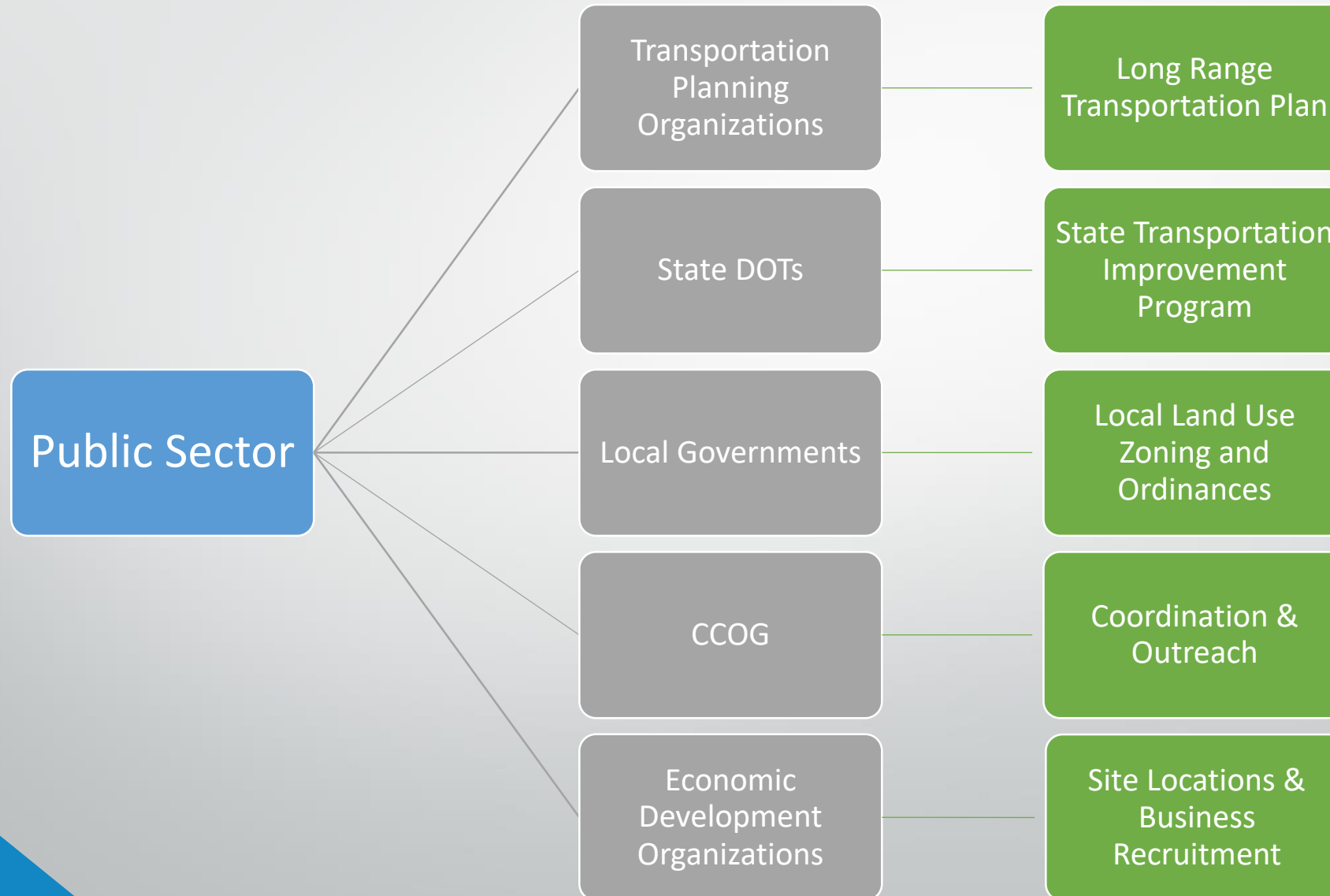
- **Outreach and Education**

- Value to region for safe, efficient, reliable & sustainable freight movements.

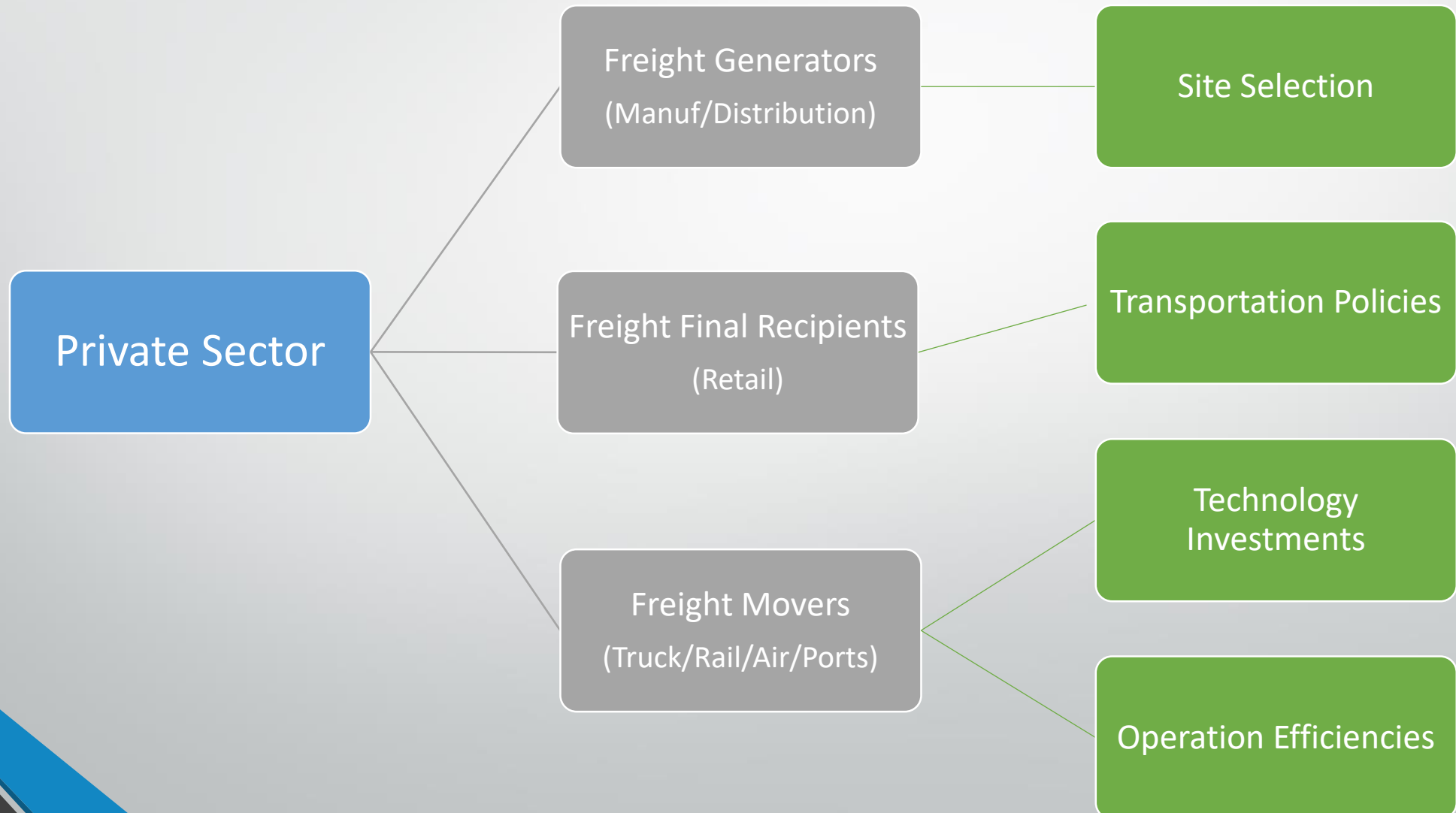
- **Creating Systems**

- Regional initiatives
- Freight Advisory Committee

# Implementation of Recommendations



# Implementation of Recommendations



Coordination with NC & SC Department's of Transportation

Champion Groups

Public and Stakeholder Awareness

MPO/RPO Boards



RFATS  
CRTPO  
CRMPO  
GCLMPO  
RRRPO

Regional Freight Summit



Freight Advisory Committee

Managers, Planners, Economic Development Organizations



January

April






July











# Expectations Check of the Plan

Jim Prosser, Centralina COG

# April Comments

What We Heard You Say...	Section 1: Introduction	Section 2: Freight Vision	Section 3: Improvements
Address the long-term vision and identify where the region going to go.			
How to increase the use of rail as well as ports for imports and exports			
Reduce choke points and to work with CSX and NS to stay engaged on improving rail systems			
Identify the right solution to minimize congestion and relieve some of the road and rail pressure			
Recognize that rural highways are arteries for much of the region, particularly in the smaller counties and necessitate improvements			

What we heard you say...	Section 4: Implementation	Section 5: Stakeholder Engagement & Research
Identify strategies to increase rail competition so that manufacturers can avoid monopolistic transportation and lower operating costs		
Produce practical steps that can be implemented in the short-term as well as the long-term vision		
Conduct a survey of drivers to get “boots on the ground” perspective and bringing that information to the top level		
Lay out a framework for vertical and horizontal communication so that everyone understands what the plan is and how we want to move forward as a region.		
Get information from key stakeholders about the market and trends		
Identify needed infrastructure for long term growth		
Develop company profiles on freight related industries and get their feedback		
Engage and incorporate who would be involved (connections) in the implementation of recommendations		



# Discussion

Moderators: Michelle Nance and Mike Manis

# Advisory Committee's Role in Implementation - Proposed -

- **Communicate the value** of the Freight Mobility Plan to peers
- **Participate in outreach & education presentations** to the region's implementers
- **Develop strategies for your organization/agency** to implement applicable plan recommendations
- **Represent the freight community on the Freight Advisory Committee** to inform and guide the region's transportation planning organizations in the implementation of recommendations

# Discussion Question-Feedback on Your Role in Implementation

- As ambassadors of the freight mobility project **are you willing to continue to serve on the Freight Advisory Committee?** Who is missing?
- **How would you like to receive updates** from the transportation planning organizations on upcoming or prioritized freight projects?
- We envision the **FAC as a forum to share emerging trends and technologies** related to freight and progress reports on regional systems (ITS, TIM). **What else would you like to hear?**
- **And how else do you think you can help?**

# Thank You!

**Be sure to fill out the feedback form! Question 9 is important**

**For more information, contact:**

Jessica Hill, Centralina Council of Governments Senior Planner, at  
704-348-2731 or [jhill@centralina.org](mailto:jhill@centralina.org)

Or visit: <http://www.centralina.org/regional-planning/transportation/freight/>

