



CAMBRIDGE SYSTEMATICS

Please write your Name,
Organization, and Role
in the Teams Chat Box

South Carolina Rail Plan

Rail Advisory Committee Meeting #1

presented to

South Carolina Department of Transportation

South Carolina Rail Advisory Committee

presented by

Cambridge Systematics, Inc.

CDM Smith

April 24, 2024

South Carolina Rail Plan

(in progress)

These slides reflect ongoing analysis for the state rail plan and are not final.

Agenda

- » Introductions
- » Plan Overview
- » Role of Rail Advisory Committee
- » South Carolina Rail System Overview
- » Discussion
- » Next Steps
- » Q&A

Introductions

Project Management Team - SCDOT



South Carolina Department of Transportation

- » David Gray, Project Manager, Multimodal Planner

- » SCDOT Steering Committee
 - Mike Barbee, Right of Way Office
 - Eric Wessinger, Railroad Research Engineer, Traffic Safety Department, Section 130
 - Machael Peterson, Director of the SCDOT Office of Planning
 - Ron Hinson, State Traffic Design Engineer, Traffic Engineering office

Project Management Team - Consultants



BECKY WINGATE
PROJECT MANAGER



MEGAN MOTAMED
**DEPUTY PROJECT
MANAGER**



DAN ANDERSEN
PRINCIPAL



JENNIFER HUMPHREYS
SENIOR PLANNER



LANCE ESTEP
SENIOR PLANNER



VICTORIA WORNOM
ENGAGEMENT LEAD



LIZA JOFFRION
SENIOR PLANNER

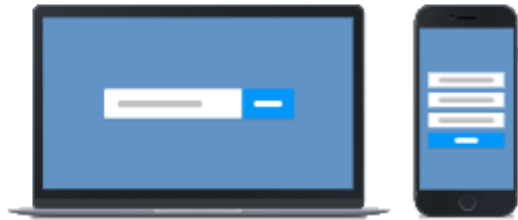
Rail Advisory Committee

- Aiken County Government
- Aiken Railway Company
- Amtrak
- Anderson Area Transportation Study
- Appalachian Council of Governments
- Augusta Regional Transportation Study
- Berkeley Charleston Dorchester Council of Governments
- Carolina Piedmont Railroad
- Catawba Regional Council of Governments
- Central Midlands Council of Governments
- City of Rock Hill
- CSX
- Federal Highway Administration
- Federal Railroad Administration
- Florence Area Transportation Study
- Georgia Department of Transportation
- Greenville Pickens Area Transportation Study
- Lancaster & Chester Lancaster
- Lowcountry Council of Governments
- Lower Savannah Council of Governments
- Norfolk Southern
- NCDOT
- Operation Lifesaver
- Palmetto Railways
- Pee Dee Regional Council of Governments
- Pee Dee River Railroad
- Pickens Railway Company
- R.J. Corman Railroad Group
- Rock Hill-Fort Mill Area Transportation Study
- Santee Lynches Council of Governments
- SC Commission for Minority Affairs
- SC Council on Competitiveness
- SC Department of Agriculture
- SC Department of Commerce
- SC Department of Employment and Workforce
- SC Economic Developers' Association
- SC Port Authority
- SCDOT
- South Carolina Operation Lifesaver
- SC Trucking Association
- South Carolina Association of Railroads
- South Carolina Central Railroad
- Southeast Rail Forum
- Spartanburg Area Transportation Study (SPATS)
- Sumter Area Transportation Study (SUATS)
- TDOT
- Upper Savannah Council of Governments
- Waccamaw Regional Council of Governments

POLLING INSTRUCTIONS

How to join

Web



- 1 Go to **PollEv.com**
- 2 Enter **VICTORIAW889**



What are you hoping to achieve through your participation in the RAC?

Nobody has responded yet.

Hang tight! Responses are coming in.

What are the unique perspectives on rail that your agency will bring to the plan?

Nobody has responded yet.

Hang tight! Responses are coming in.

Plan Overview

Purpose of the Rail Plan

- » Update the South Carolina State Rail Plan. Meet all federal guidelines and support future planning, policies, and investment in South Carolina
- » Gather freight and passenger rail data and assess the existing and future conditions on the rail system, and identify needs and opportunities
- » Conduct a robust stakeholder engagement effort on freight and passenger rail related issues
- » Identify and prioritize projects, policies, and strategies to support South Carolina's rail-related goals
- » Identify grade crossing opportunities such as enhanced coordination between agencies, prioritization of crossings for safety improvements, humped crossing correction/reconstruction, grade separation, or closure. Identify opportunities to coordinate the preservation and revitalization of existing rail corridors and identify sources of funding to facilitate potential reconstruction/closure efforts.
- » Enhance the creation of business/industrial development opportunities in South Carolina by developing implementation strategies for coordination between SCDOT, Class I railroads, short line railroads, and the South Carolina Department of Employment and Workforce, South Carolina Department of Commerce, and other state agencies.

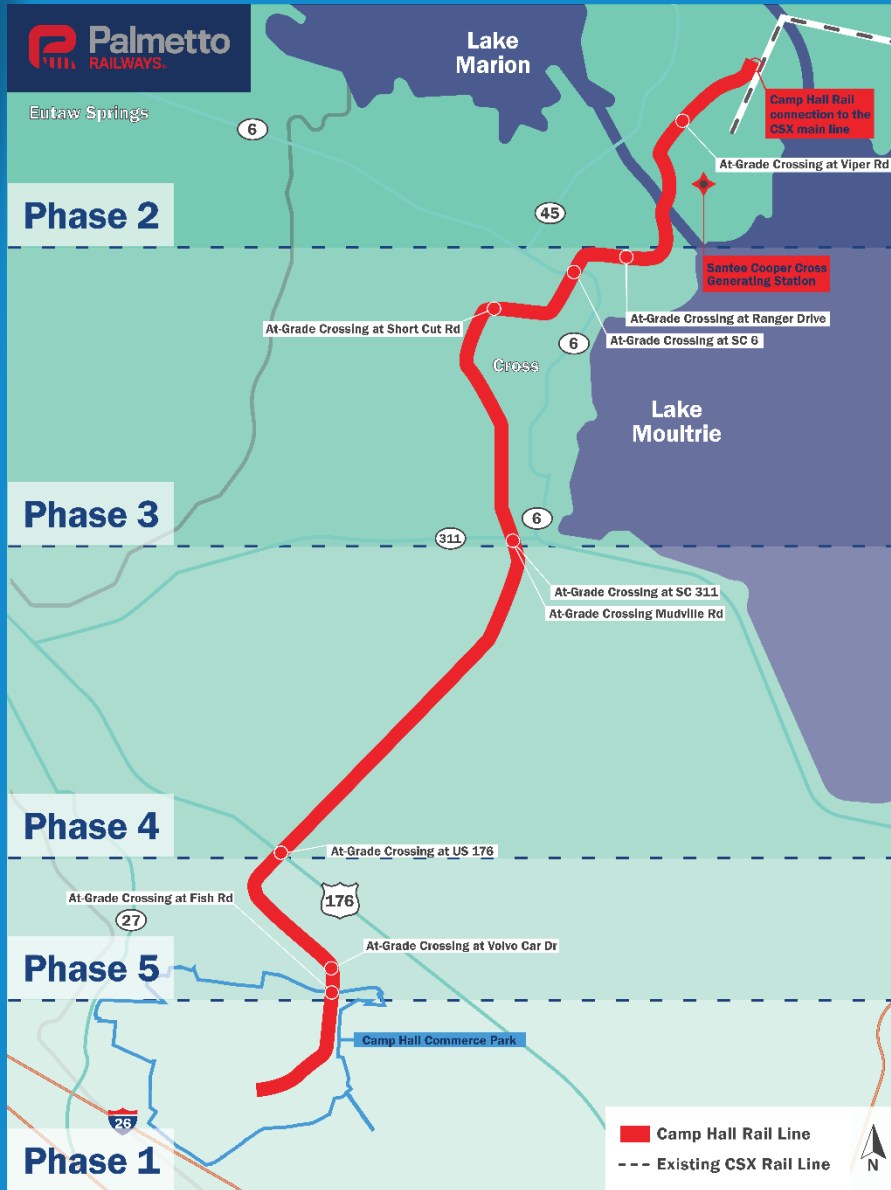


Image source: <https://palmettorailways.com/camphallindustrialcorridor/construction/>

What a Rail Plan can Support and Achieve

- » Projects listed in past rail plans have materialized:
 - Hugh Leatherman Terminal (Charleston Port) – ‘rail on dock’ project for direct access between the coast and inland ports
 - Inland port Greer – footprint expansion and siding extension (received \$25M BUILD grant)
 - Construction of new Palmetto line to Camp Hall Commerce Park to serve customers, i.e. Volvo with future connection to CSX

- » Rails plans can also support a State to:
 - Develop strategies
 - Identify needs
 - Encourage dedicated and competitive funding programs
 - Secure federal funding for rail projects listed in the plan

Federal Infrastructure Investment & Jobs Act (IIJA)

- » Initial estimate of \$6.1 billion dedicated funding over 5 years to South Carolina
- » Multimodal funding
 - Significant increases in rail funding: \$66B over 5 years (all grants, no formula)
- » Existing discretionary programs
 - Significant increases in Local and Regional Project Assistance (f. RAISE), INFRA, CRISI, Port Infrastructure Development Program
- » New programs
 - Railroad Crossing Elimination, National Infrastructure Project Assistance, Charging and Fueling Infrastructure, Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT), Strengthening Mobility and Revolutionizing Transportation (SMART)
- » Establishment of Freight Infrastructure and Policy Office (USDOT)

Role of the Rail Advisory Committee



Support development and **implementation** of the plan



Providing **input** into and **vetting** materials and data



Validate vision and goals



Connect with key **stakeholders** that use the system and with decision makers and implementers



Rail Plan Advisory Committee Proposed Meetings



April 2024

Plan Overview and Objectives
Strategies for Business/Industrial Development Opportunities
Grade Crossing Coordination and Prioritization



June 2024 (tentative)

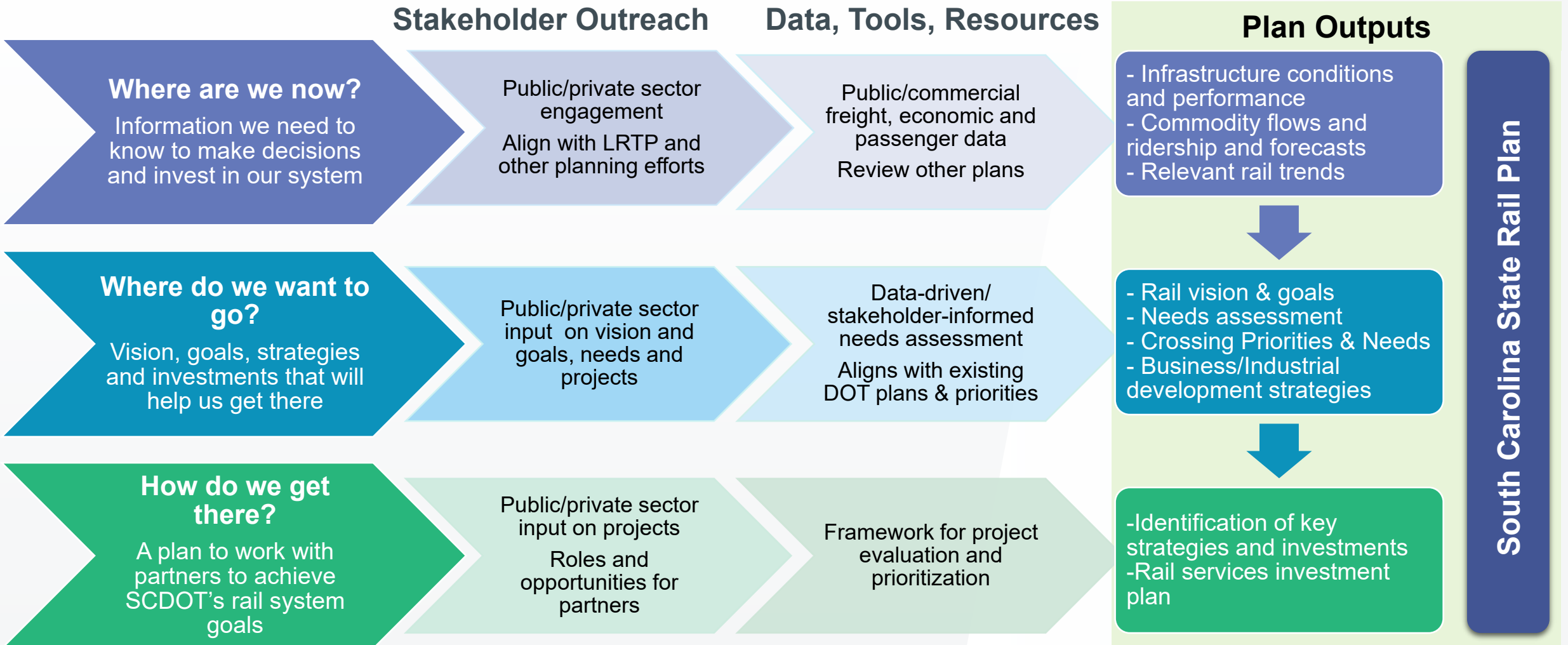
Goals and Objectives
Rail Project Ideas



October 2024 (tentative)

Draft final recommendations

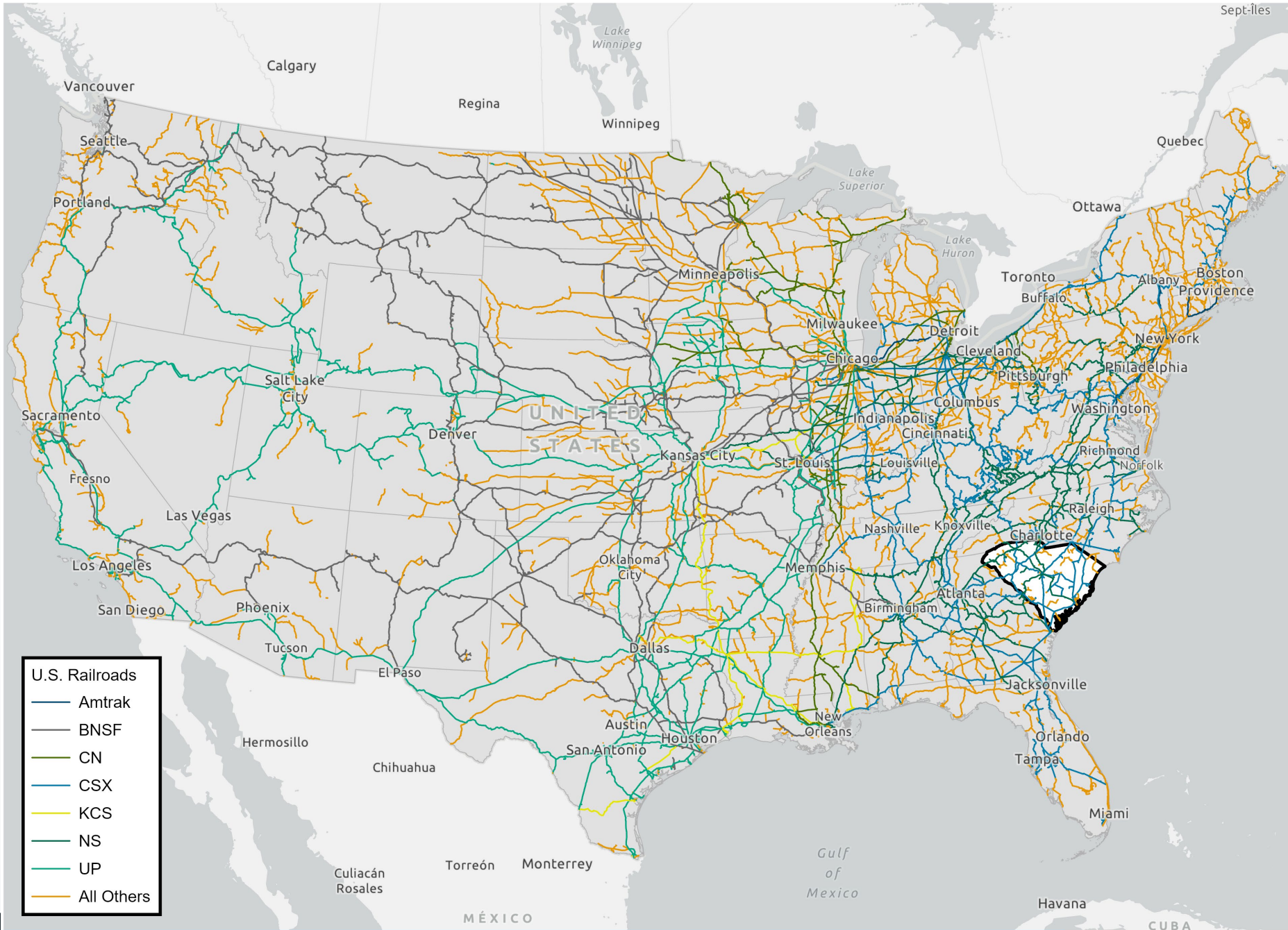
Plan Technical Approach

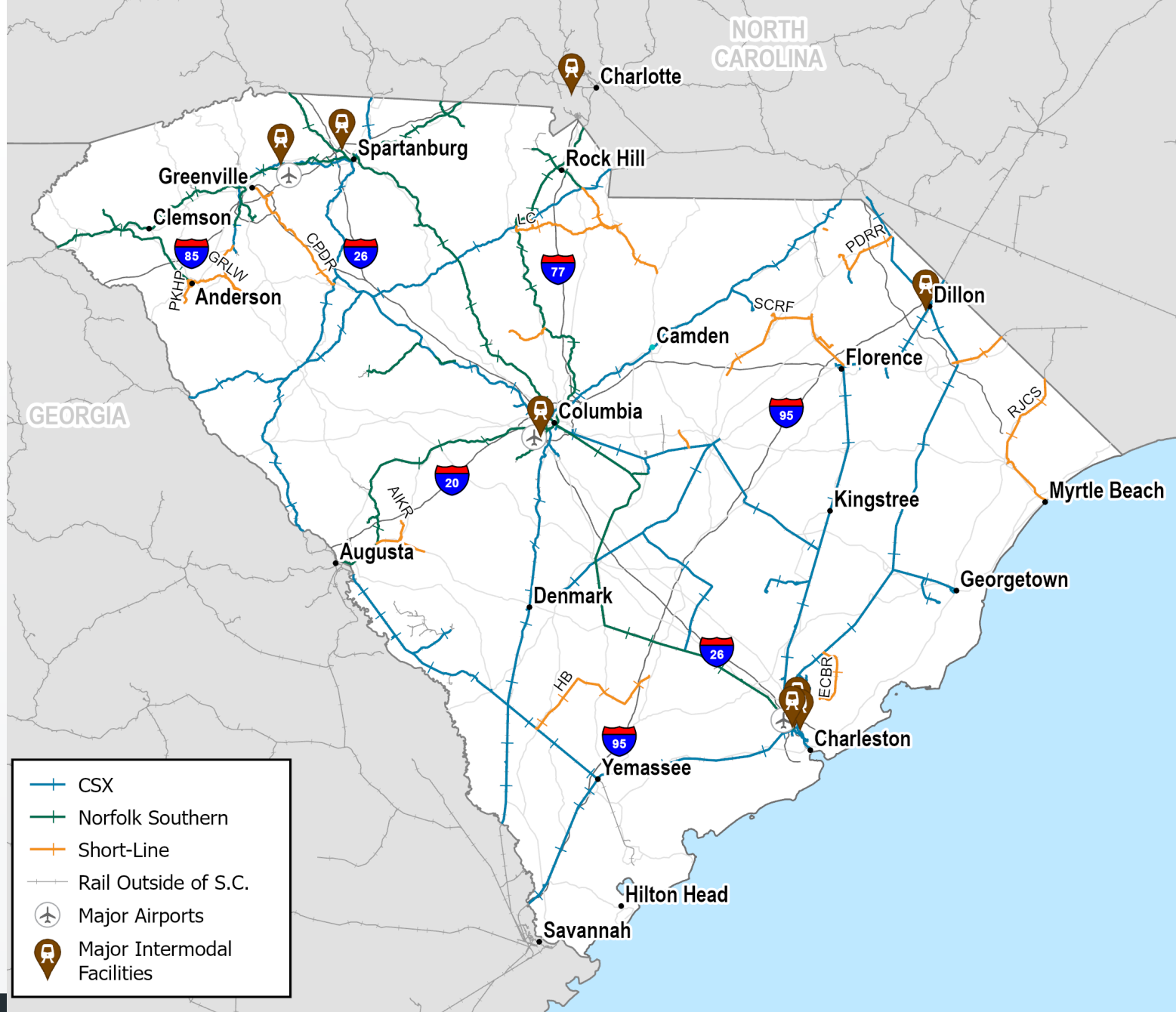








Plan Activities



South Carolina Rail System's Existing Conditions

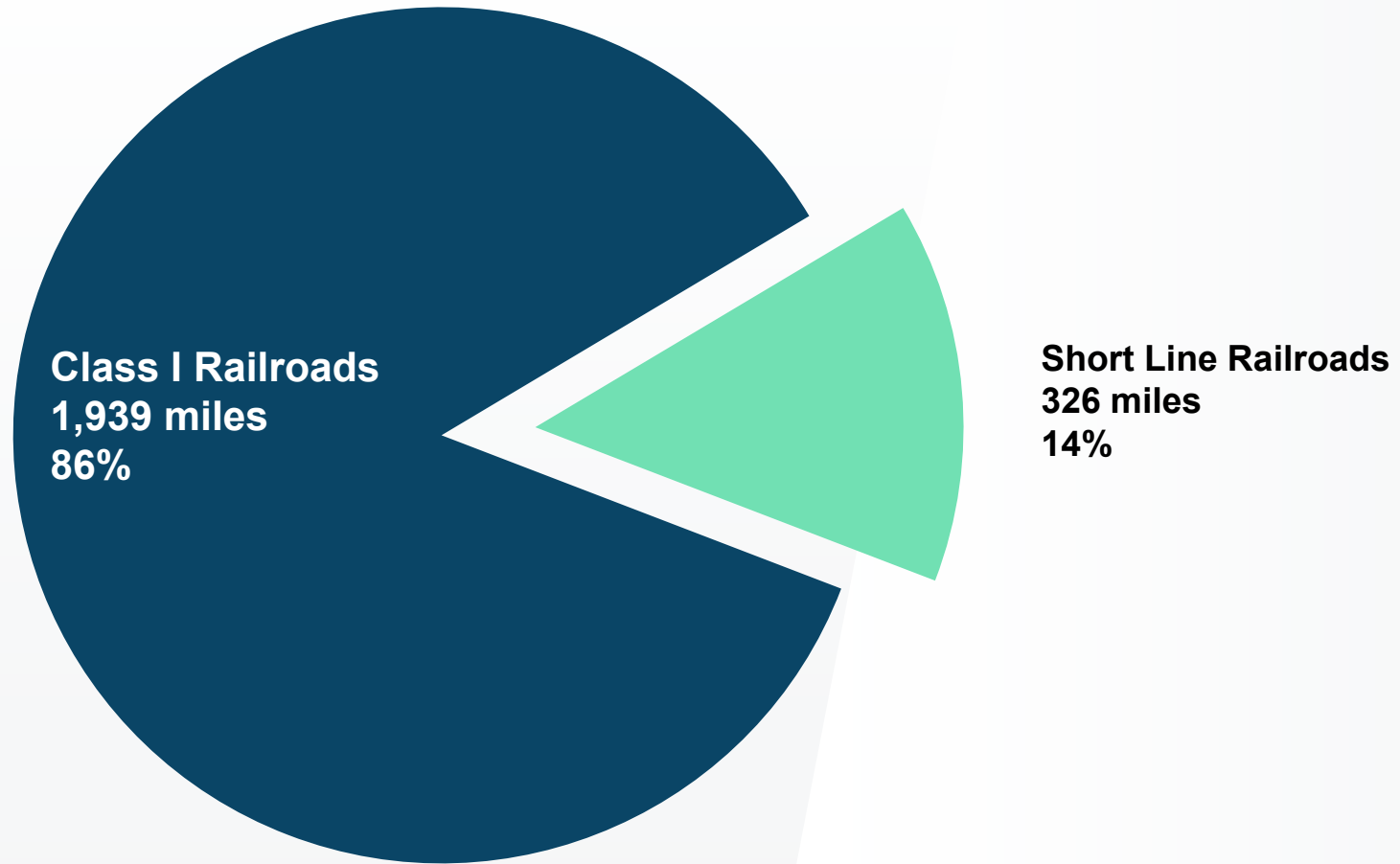




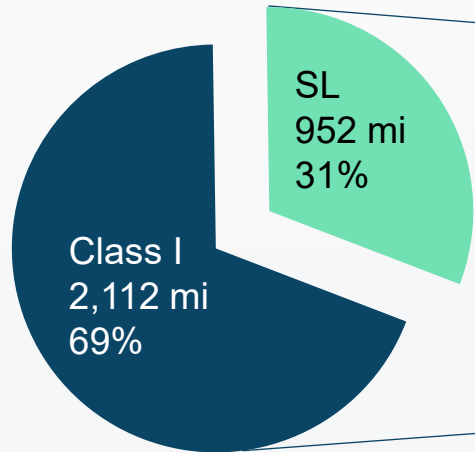
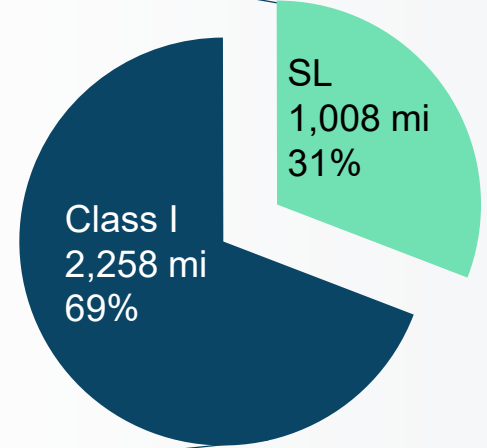
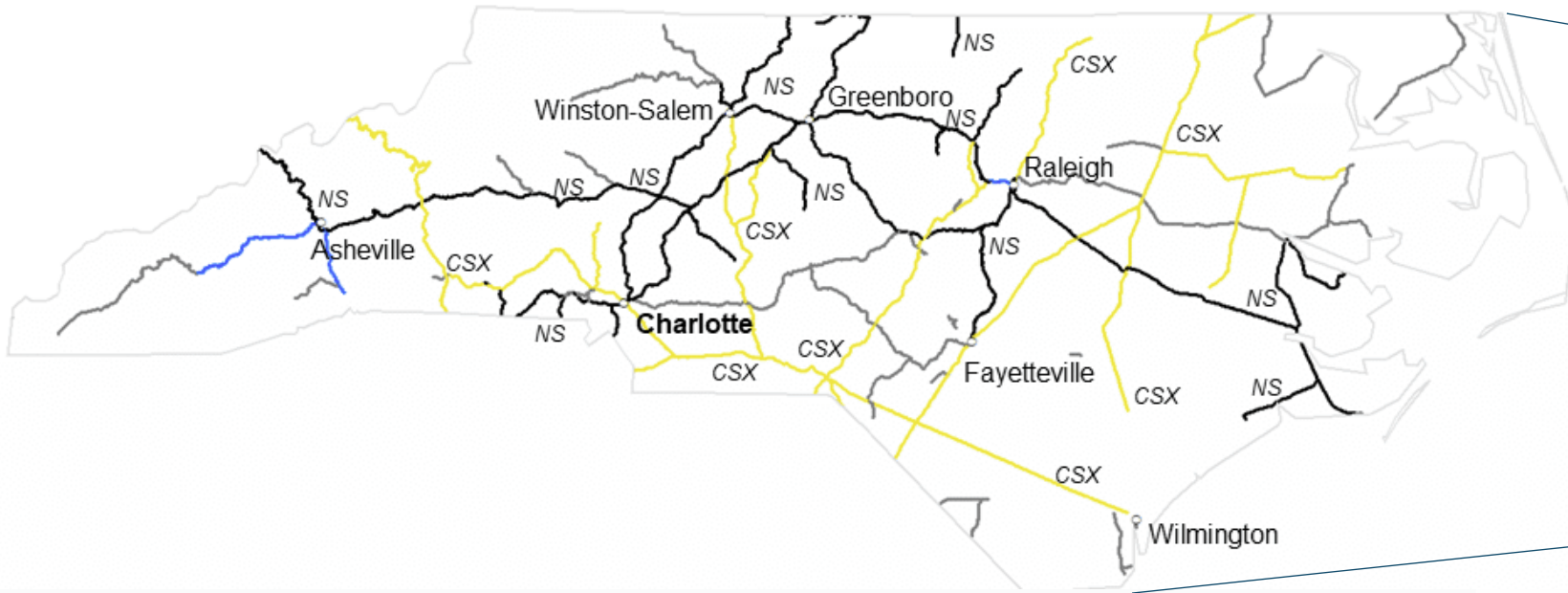
-  CSX
-  Norfolk Southern
-  Short-Line
-  Rail Outside of S.C.
-  Major Airports
-  Major Intermodal Facilities



Railroad Owners and Mileage

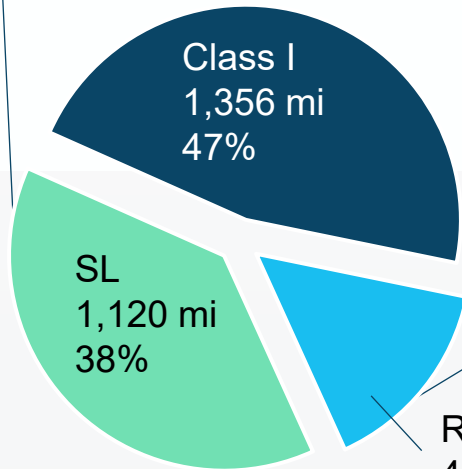


NORTH CAROLINA



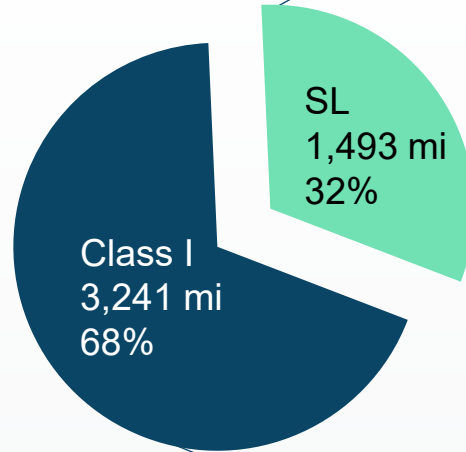
TENNESSEE

FLORIDA



Regional
437 mi
15%

GEORGIA

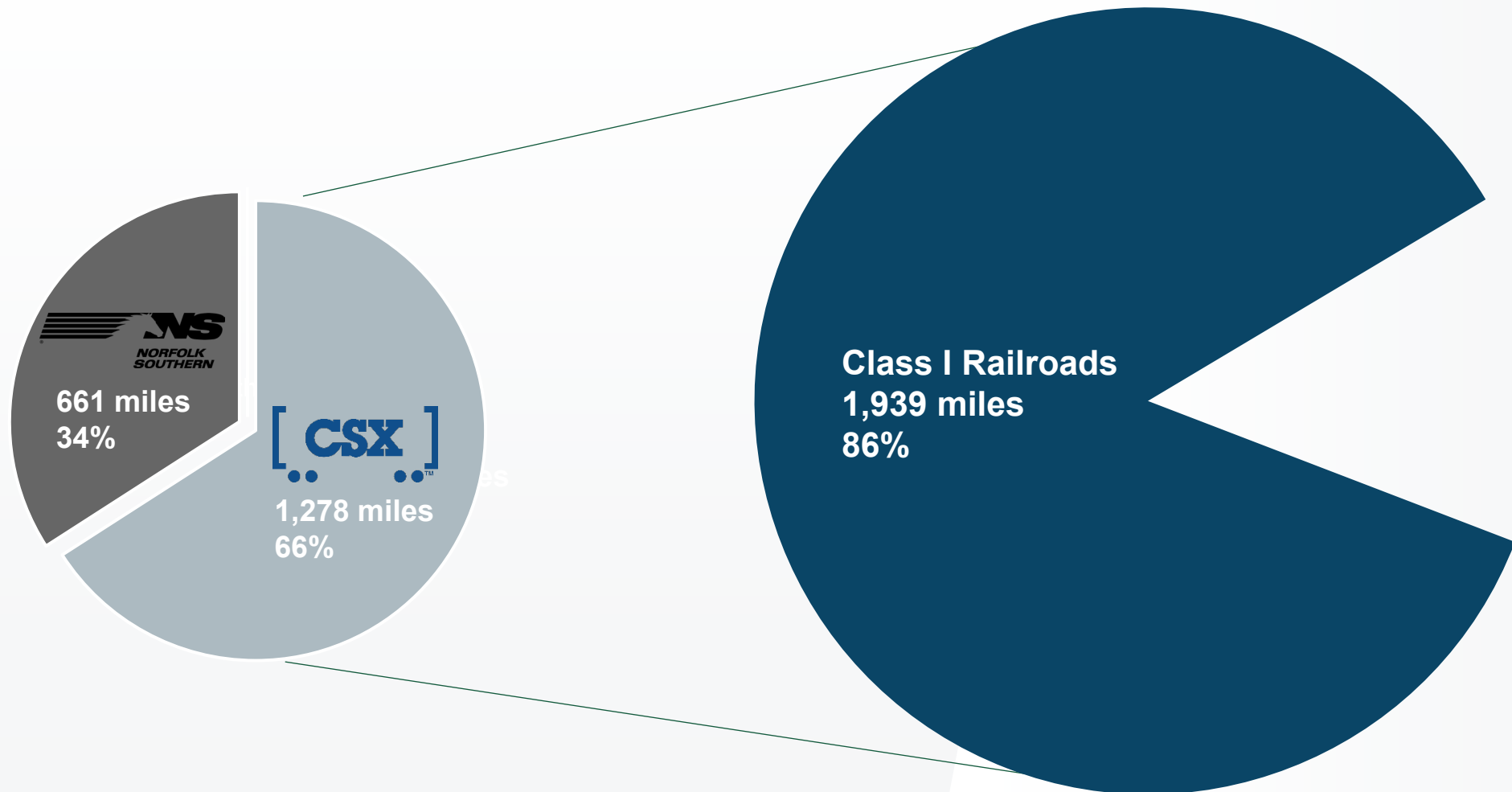


State Ranking by Rail Mileage, 2020

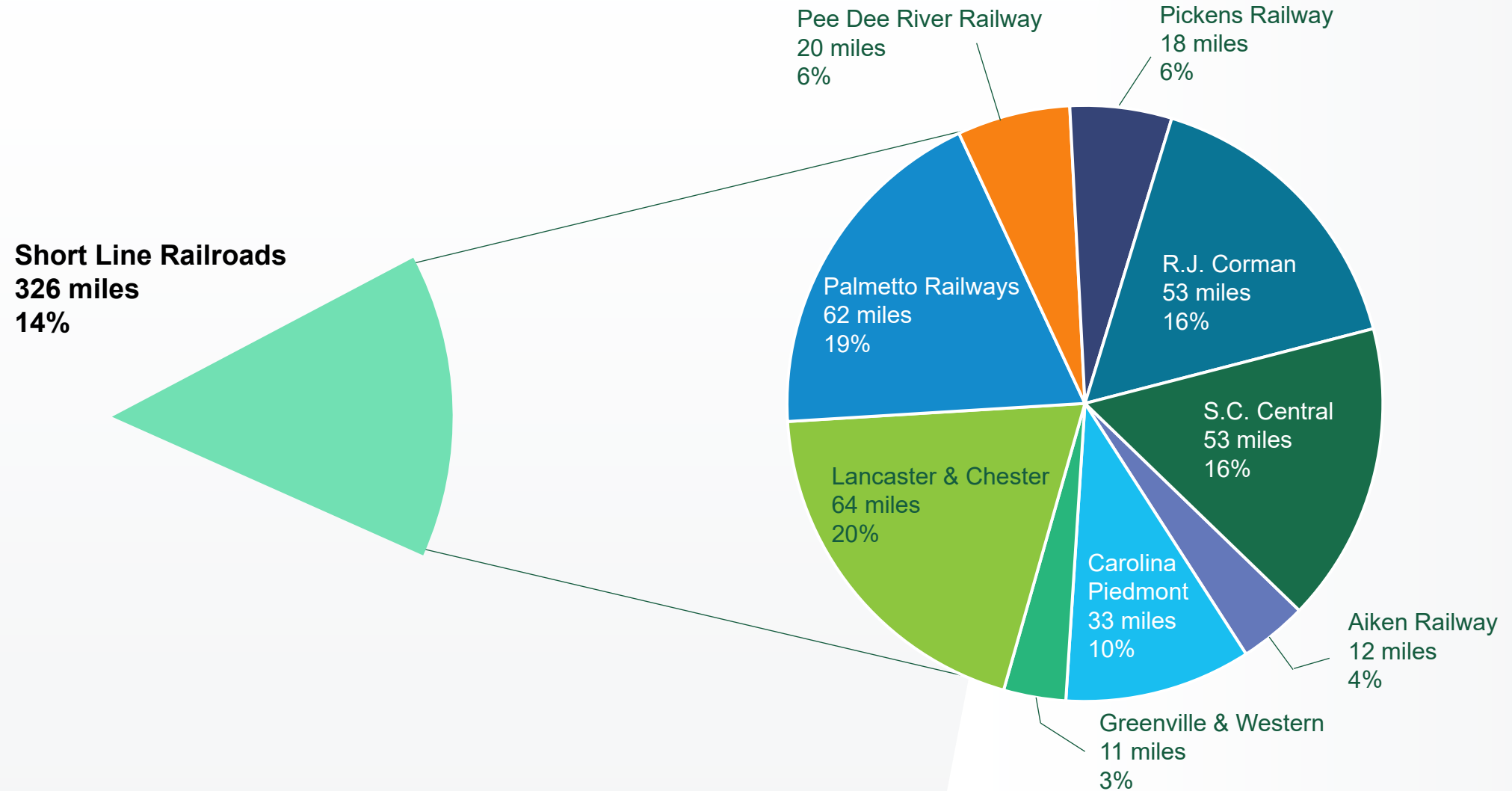
Rk	State	Total Rail Miles (Pct of U.S. total)
1	Texas	10,460 (7.7%)
2	Illinois	6,883 (5.0%)
3	Ohio	5,330 (3.9%)
7	Georgia	4,521 (3.3%)
23	North Carolina	2,847 (2.1%)
24	Florida	2,782 (2.0%)
26	Tennessee	2,604 (1.9%)
31	South Carolina	2,285 (1.7%)
	U.S. Total	136,650 (100%)



Railroad Owners and Mileage

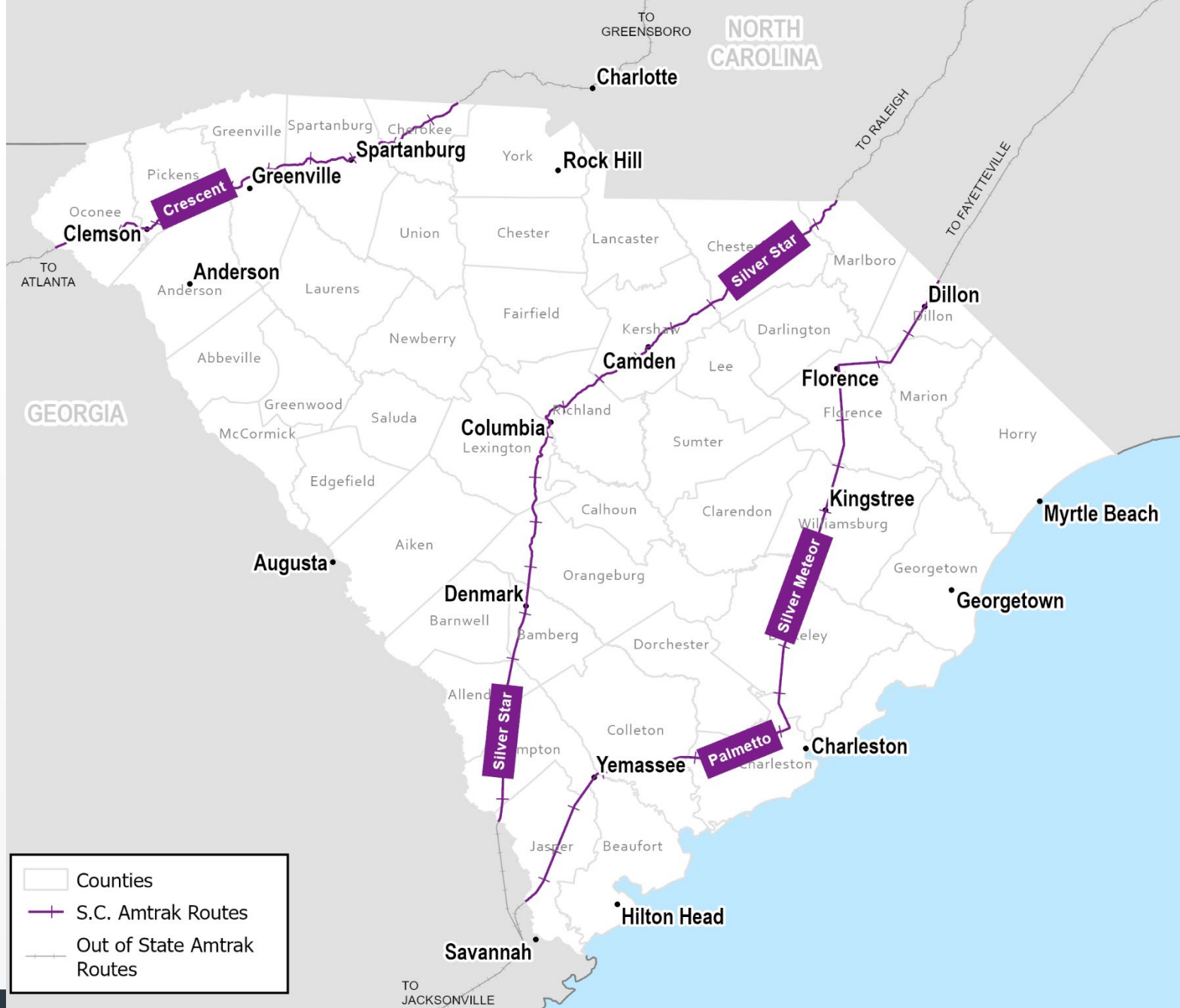


Railroad Owners and Mileage





Amtrak Service	SC Stops	Schedule	
		SB	NB
Crescent	Spartanburg	4:24A	3:04A
	Greenville	5:31A	2:23A
	Clemson	6:09A	1:41A
Silver Star	Camden	12:56A	4:50A
	Columbia	1:49A	4:09A
	Denmark	2:46A	2:53A
Silver Meteor	Florence	3:18A	11:32P
	Kingstree	3:56A	10:28P
	Charleston	4:56A	9:34P
	Yemassee	5:48A	8:34P
Palmetto	Dillon	5:09P	11:29P
	Florence	5:57P	10:54A
	Kingstree	6:33P	10:10A
	Charleston	7:37P	9:15A
	Yemassee	8:26P	8:23A



Counties
+ S.C. Amtrak Routes
 Out of State Amtrak Routes



Amtrak On-Time Performance and Delays, Feb 2024

Crescent (daily New York-New Orleans) Upstate

Feb 2024: 55.6% **YTD: 53.5%**
Delays from Freight Trains, Signal Delays

Palmetto (daily New York-Savannah) Lowcountry

Feb 2024: 67.4% **YTD: 66.0%**
Delays from Freight Trains, Passenger Train Interference

Silver Star (daily New York-Miami) Midlands

Feb 2024: 42.3% **YTD: 50.5%**
Delays from Freight Trains, Slow Order Delays

Silver Meteor (daily New York-Miami) Lowcountry

Feb 2024: 53.9% **YTD: 56.4%**
Delays from Freight Trains, Slow Order Delays

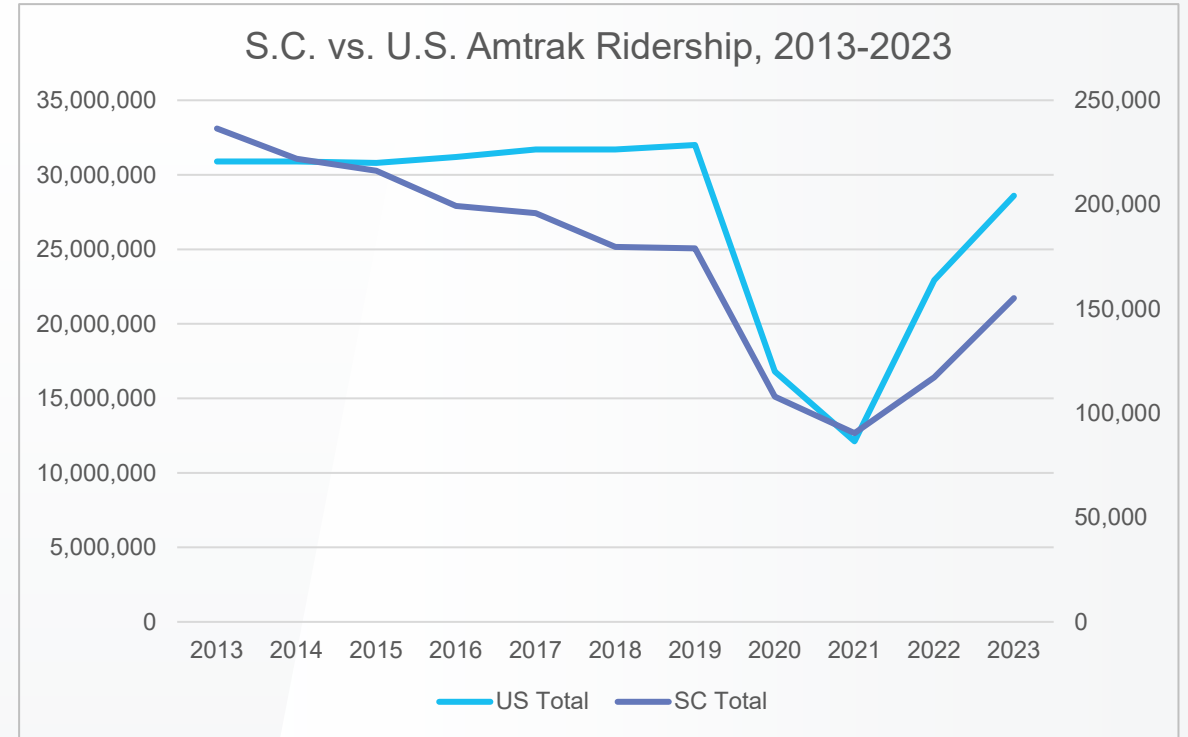
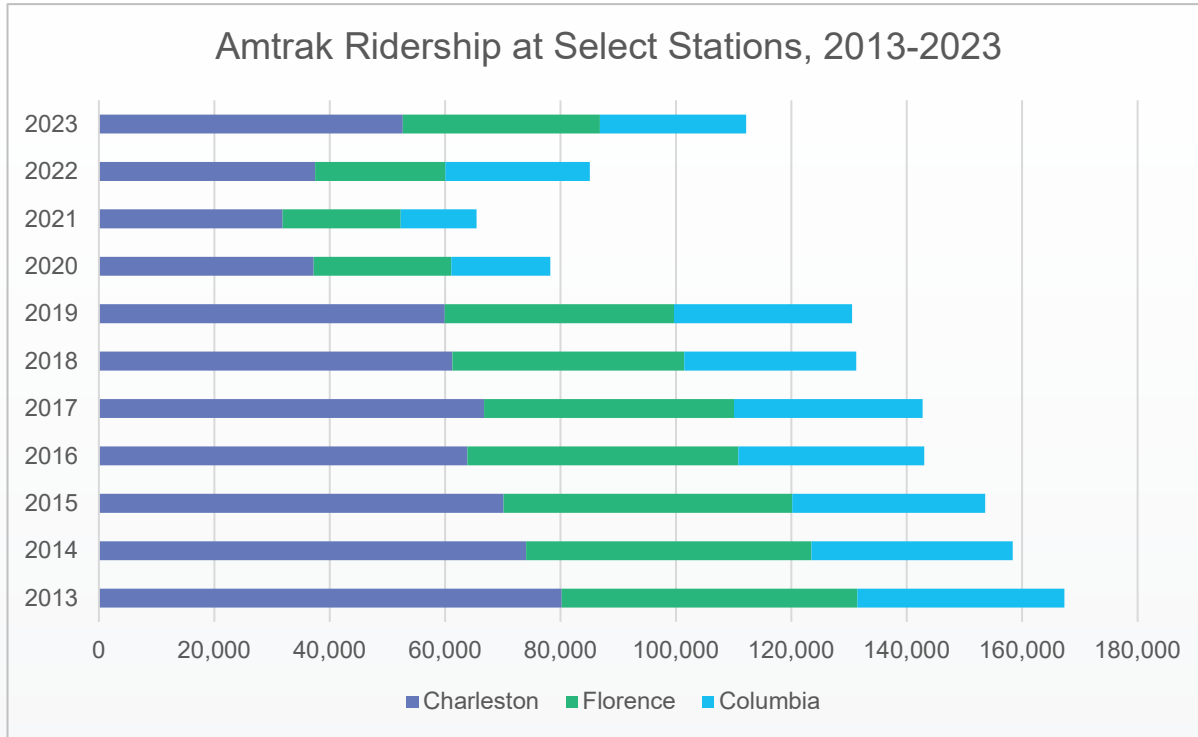


Nationwide Amtrak

Feb 2024: 79.1% **YTD: 75.3%**
Delays from Freight Trains, Slow Order Delays

A train is considered "late" if it arrives at its endpoint terminal more than 10 minutes after its scheduled arrival time for trips up to 250 miles; 15 minutes for trips 251-350 miles; 20 minutes for trips 351-450 miles; 25 minutes for trips 451-550 miles; and 30 minutes for trips of 551 or more miles.

Amtrak



- Steady decrease in Amtrak ridership in South Carolina since 2013.
- U.S. Amtrak ridership has increased, and is rebounding faster after COVID than S.C.

Discussion - Passenger Rail

- » Objective: Reactions to passenger rail existing conditions
 - Do these passenger rail trends align with your experiences with passenger rail over the past several years?

South Carolina Freight Traffic Trends

Freight Traffic Trends Outline

Trends by Direction

- » Trend Overview
- » Direction

Trends by Commodities

- » Coal
- » Inbound Commodities
- » Outbound Commodities

Trends by Trading Partners

- » Inbound Trading Partners
- » Outbound Trading Partners



Inbound > Outbound



Coal Products



Chemicals

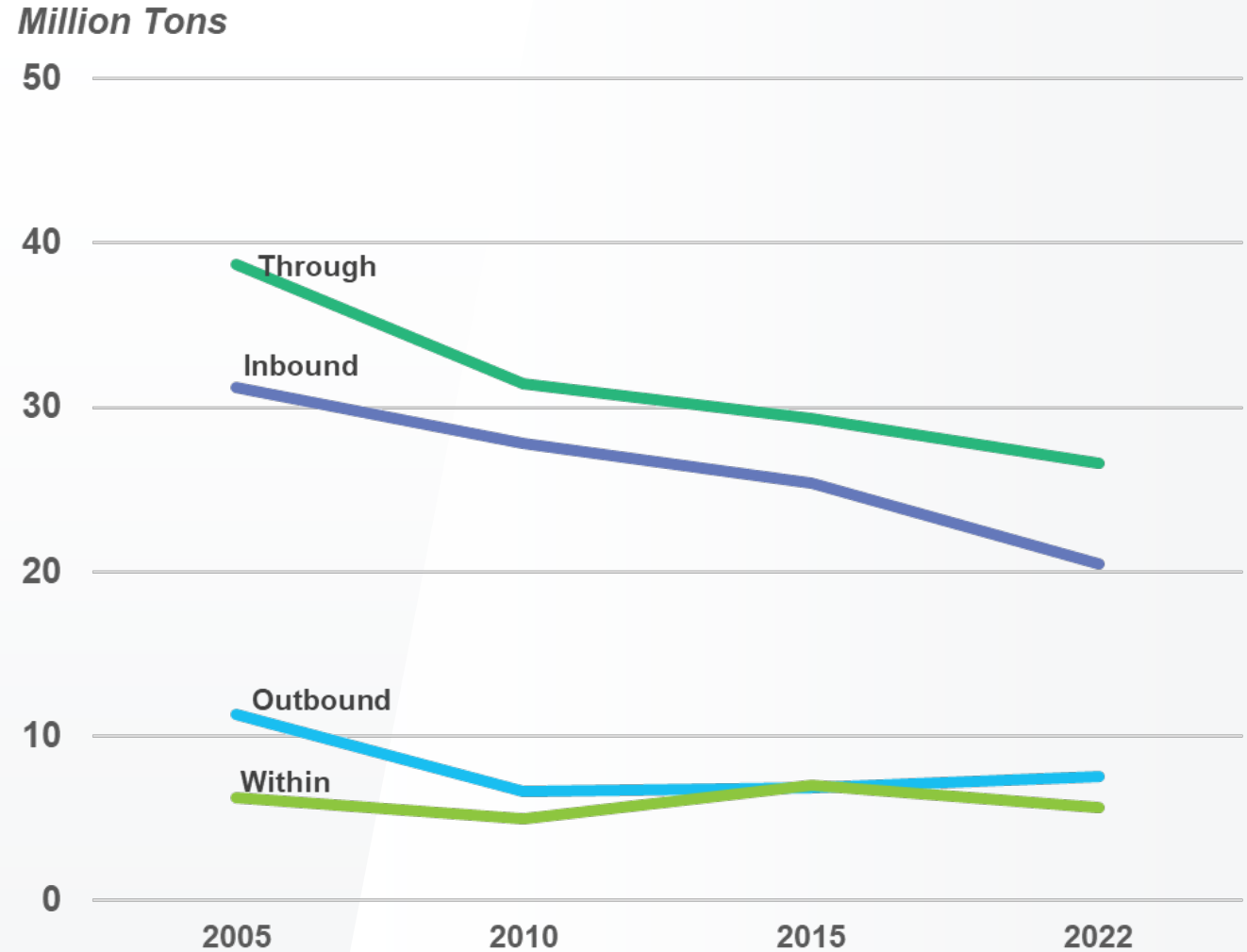


Rail Traffic Overview

More commodities are shipped to SC than leaving SC.

For each year, inbound tonnage was 2-3 times higher than outbound tonnage

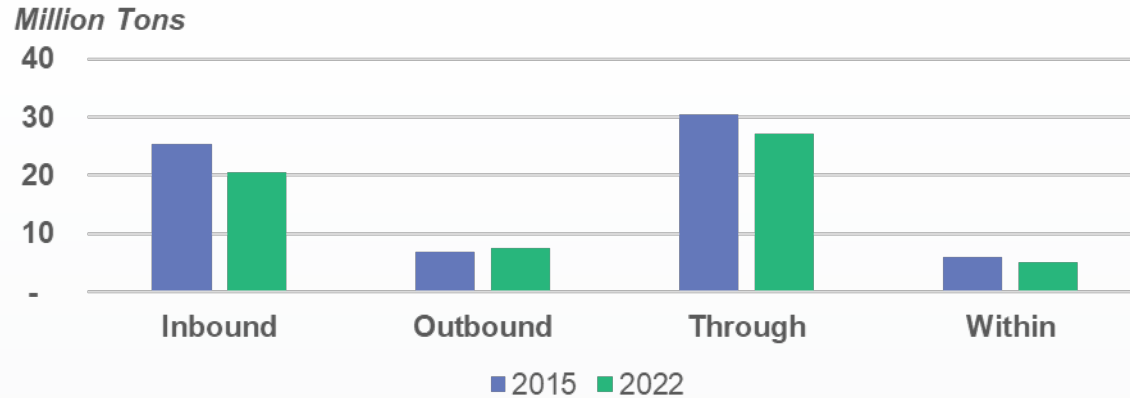
RAIL TRAFFIC GROWTH



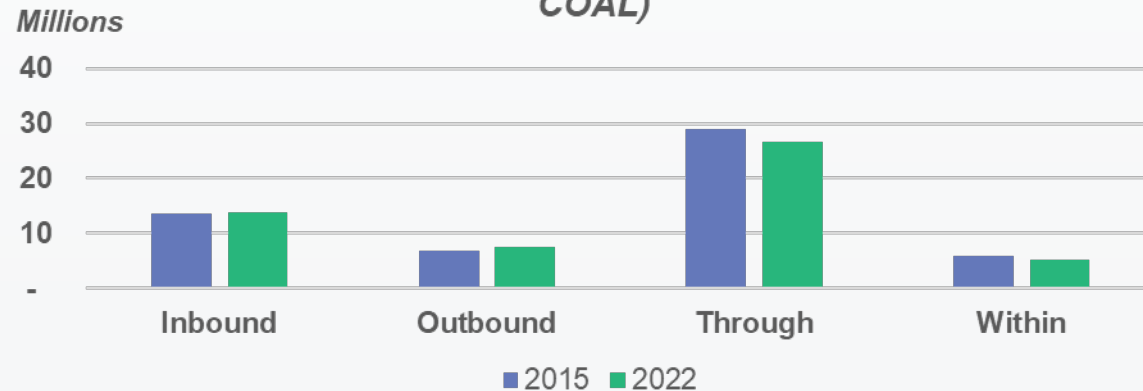
Source: Waybill.

Rail Flows by Direction 2015 & 2022

RAIL FLOW DIRECTIONAL TRENDS



RAIL FLOW DIRECTIONAL TRENDS (EXCLUDES COAL)



Source: Waybill.

Coal is the key commodity behind the continuing declining inbound trends.

Without coal, more goods were transported to SC from other states in 2022 compared to 2015.

Coal has minor to no impacts on outbound, through, and within flows.

Inbound Coal Decline 2015 & 2022

20%
In 2015



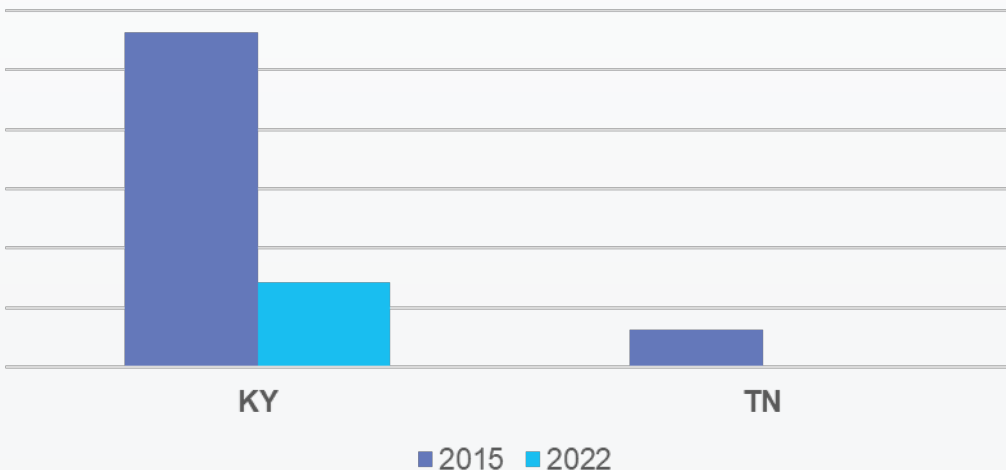
12%
In 2022

South Carolina does not produce coal but uses it to generate electricity and produce steel.

The supply of coal decreases: Coal from Kentucky and Tennessee showed the fastest decrease from 2015 to 2022 due to coal mine closures in the source states.

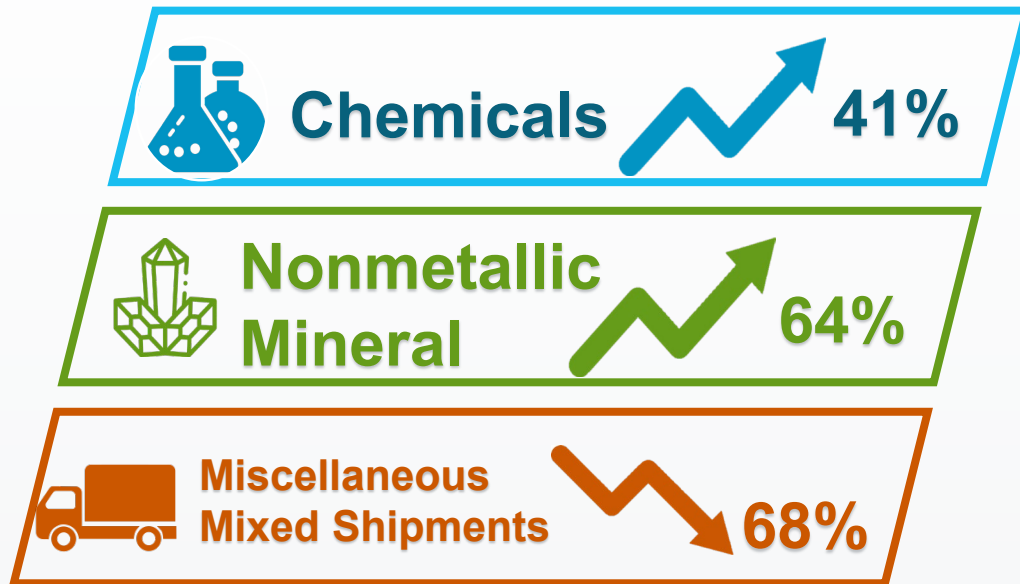
The demand for coal decreases: In South Carolina, coal-fired power plants are the major coal consumers. Most coal-fired power plants are scheduled to shut down by 2030.

2015 - 2022 INBOUND BITUMINOUS COAL TONNAGE CHANGE



Source: Waybill. Tonnage hidden for confidentiality consideration.

Top Inbound Commodities 2015 & 2022



Inbound rail freight decreased 19% between 2015 – 2022, mainly resulting from coal declination.

Chemicals are critical to the state’s manufacturing industries, especially the automobile industry.

Nonmetallic minerals increase may be driven by the population and housing demand increase.

Besides coal, miscellaneous mixed shipments saw the largest tonnage drop. Port improvements and increased goods arriving at the Port of Charleston and traveling by rail to South Carolina destinations explains this shift in rail traffic points of entry.

Source: Waybill

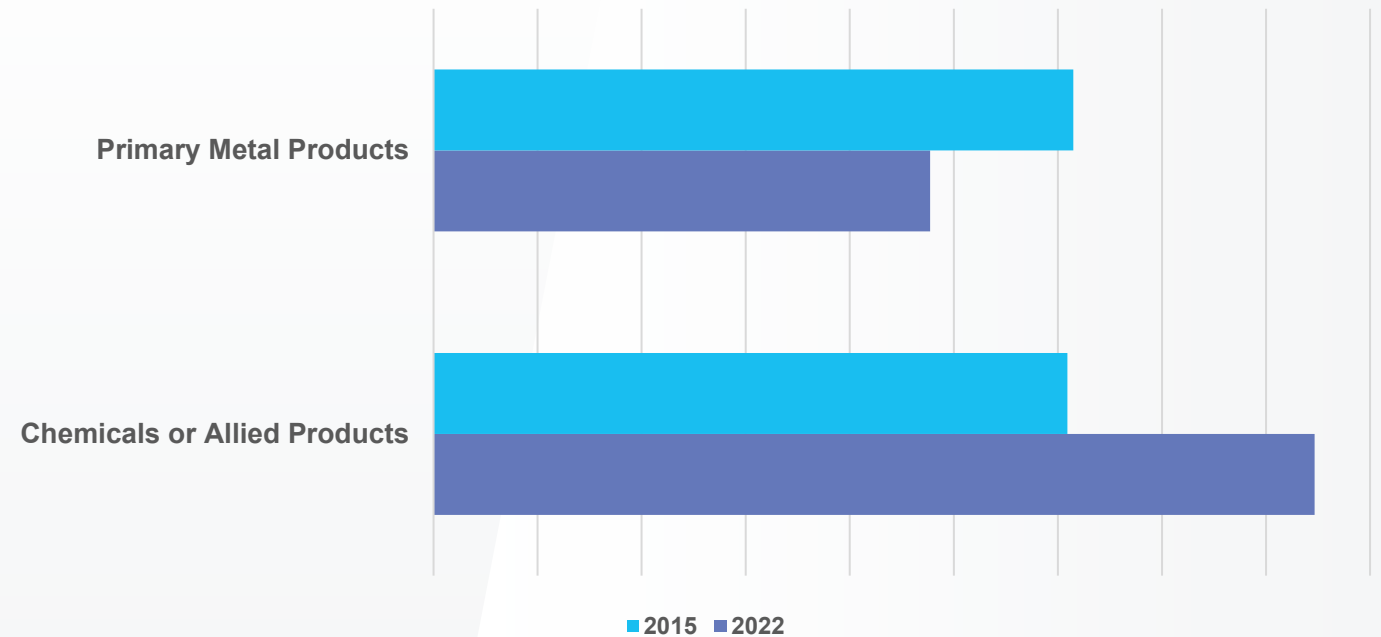
Top Outbound Commodities 2015 & 2022

During 2015 – 2022, **the overall outbound** rail flow increased by 11%.

Chemicals products showed the fastest growth over time, grew by 39%.

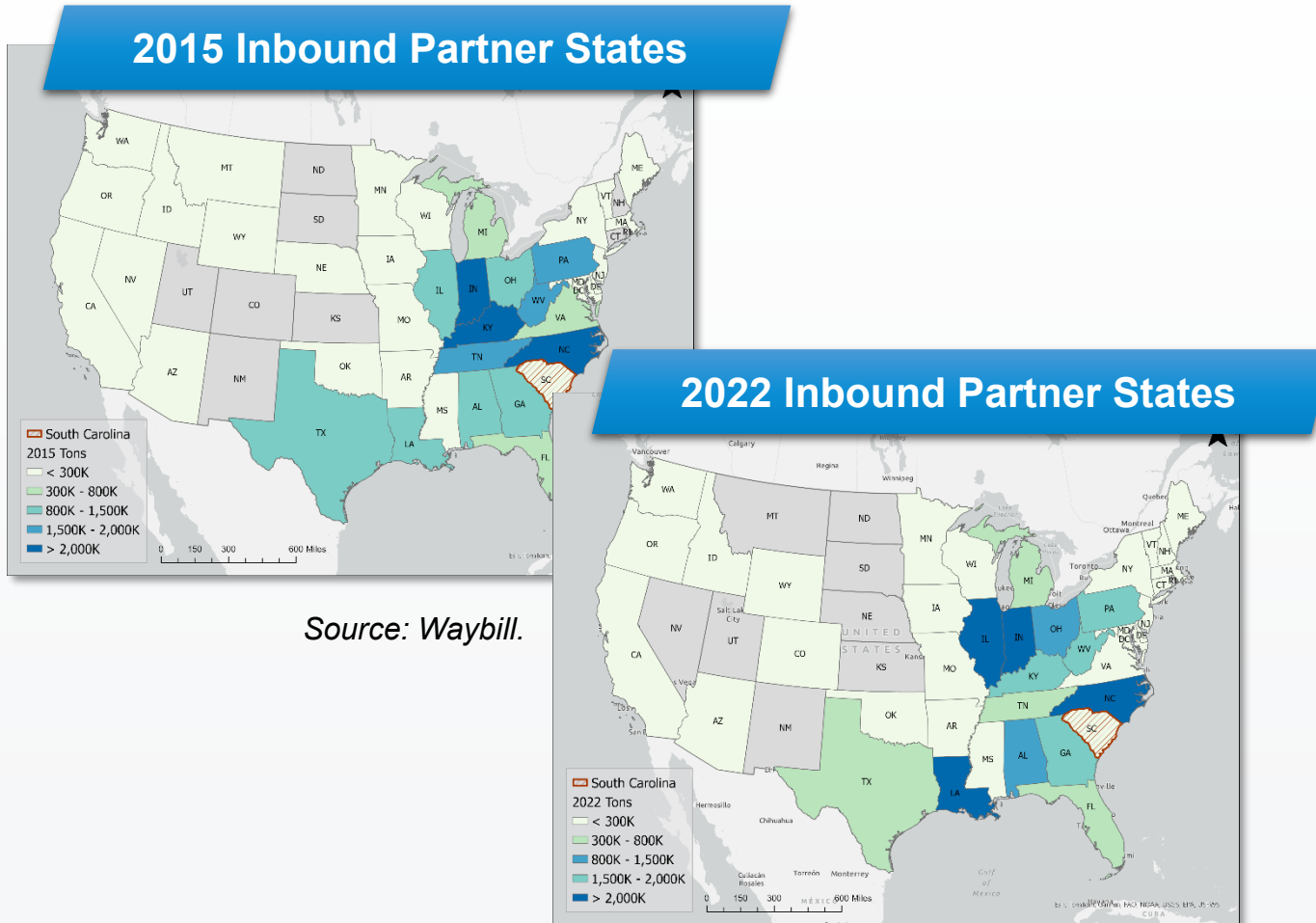
Primary metal products declined by 22%. The change may relate to the coal industry declination.

TOP OUTBOUND COMMODITY TRENDS BY TONNAGE



Source: Waybill. Tonnage hidden for confidentiality consideration.

Top Inbound Trading Partners 2015 & 2022

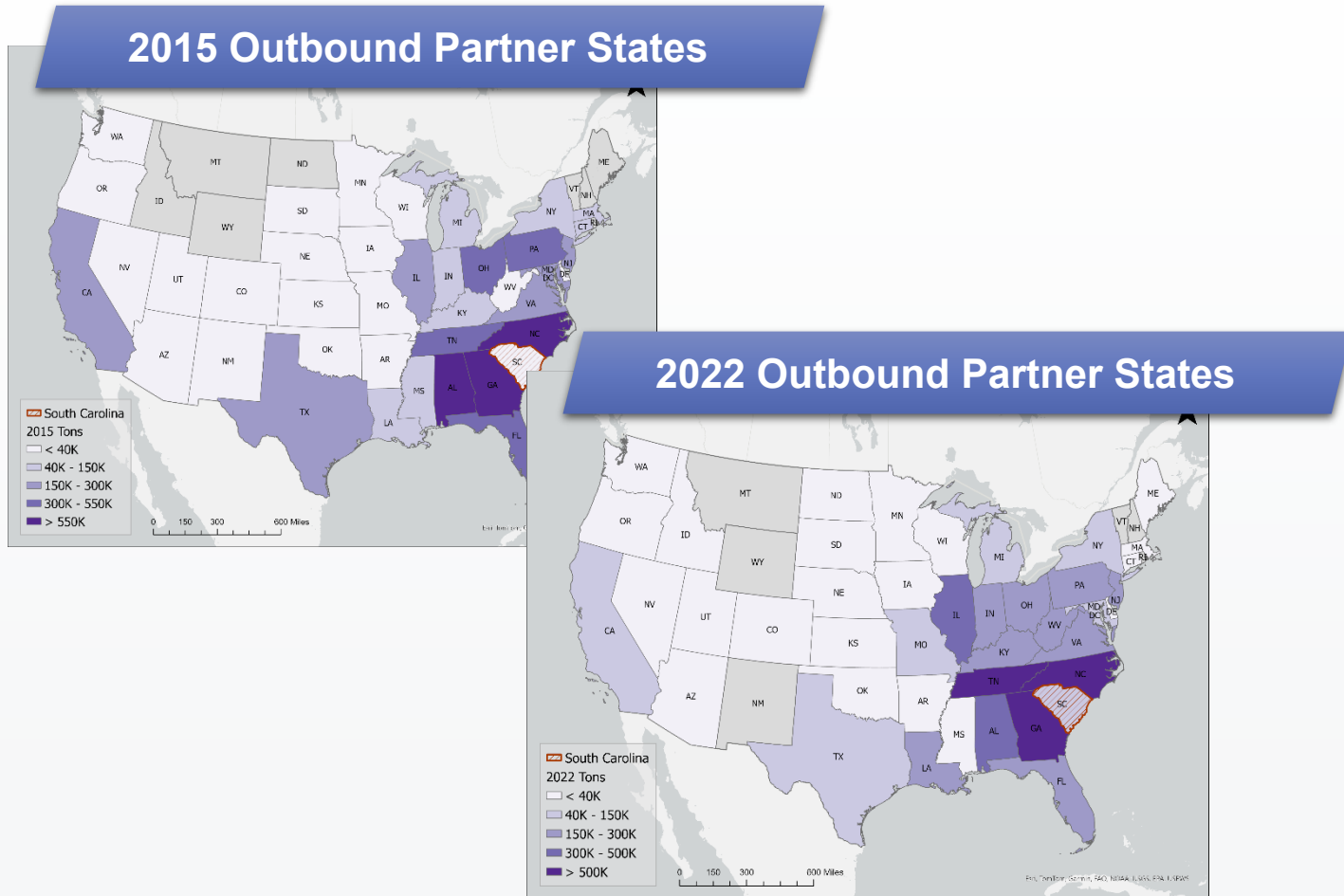


Source: Waybill.

Illinois shipped the most goods to SC in 2022. Increased by 61% from 2015 to 2022. SC received 132% more Chemicals from Illinois.

Kentucky used to be the top inbound trading partner in 2015, however, the tonnage decreased by 73% in 2022 due to coal declination.

Top Outbound Trading Partners 2015 & 2022



The overall outbound flow showed 11% increase from 2015 – 2022.

SC sent 59% more goods to Tennessee. Mainly due to an increase in **Miscellaneous mixed shipments** and **Chemicals products**. Most of the Miscellaneous mixed shipments ended up in Shelby County, which is home to the Port of Memphis.

Source: Waybill.

Main Takeaways



More goods are transported to SC than leaving from SC. Compared to 2015, 19% fewer tons of commodities will be shipped to SC by rail in 2022, mainly due to the declining coal industry. Without coal, the inbound flow shows a slight increase.



Coal, which ranked first in terms of tonnage for commodities in 2015, is essential to the SC rail industry. But over time, the supply and demand for coal fell rapidly because of tighter environmental regulations and cheaper alternatives.

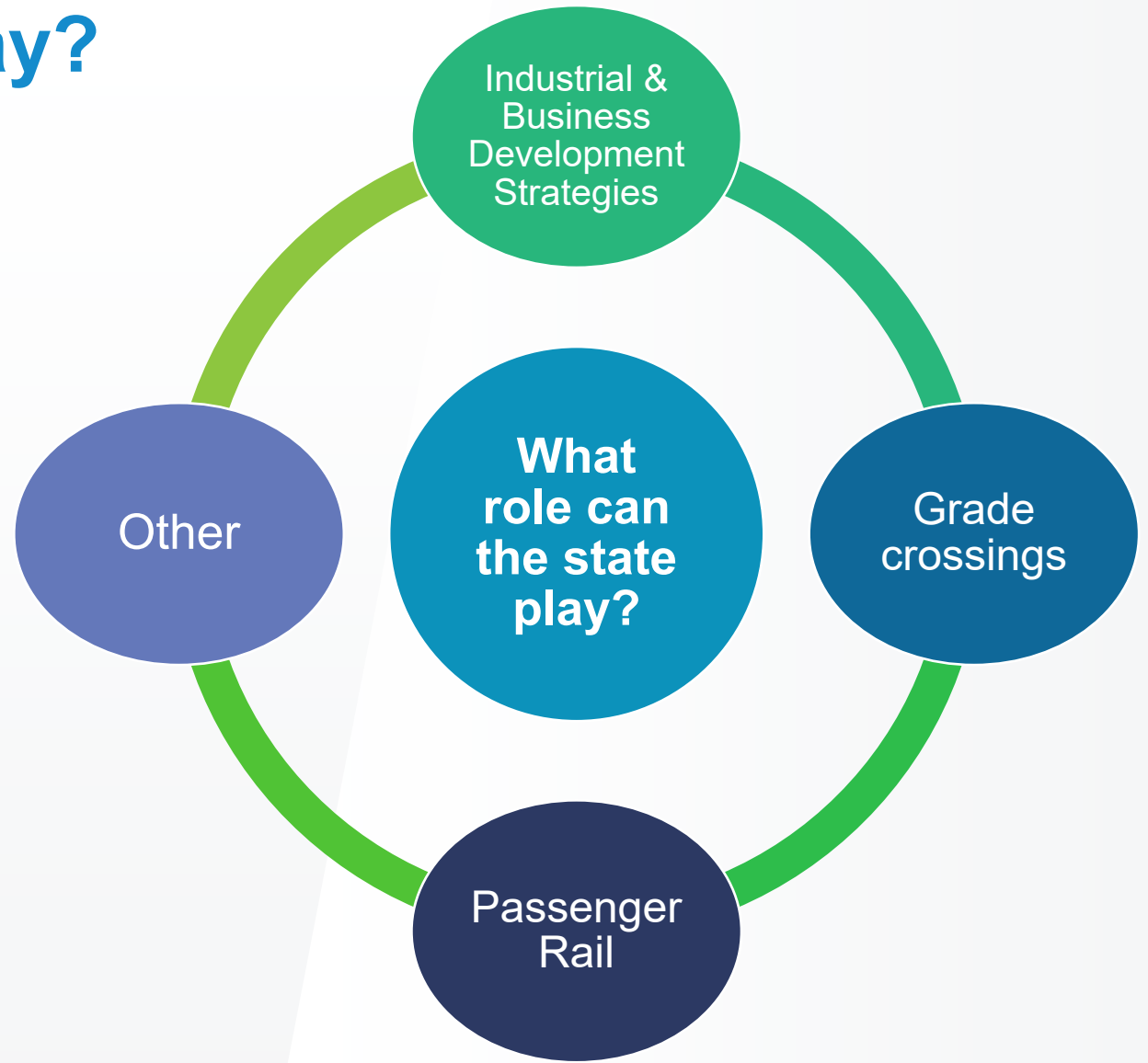


The robust manufacturing industry makes SC a strong consumer as well as supplier of chemical products. The increased chemical demand is strongly related to the local manufacturing industries, especially automotive manufacturing.

Discussion - Freight Rail Existing Conditions

- » Objective: Reactions to freight rail existing conditions and traffic trends.
 - Do these main takeaways align with your experiences with freight rail over the past several years?

What Role Can the State Play?



Thinking about the next 20 years, what would you like to see in South Carolina related to rail?

 0

Nobody has responded yet.

Hang tight! Responses are coming in.

Business & Industrial Development

- » Objective: Identify RAC vision for business and industrial growth and coordination
 - What does South Carolina already do well to support freight rail?
 - What could South Carolina do better to support freight rail?
 - Or what is South Carolina doing for freight rail that is not effective?
 - Are there best practices or programs for rail in other States that South Carolina should consider?
 - How do the RAC members see rail and business working together?
 - Do you know of any examples of a business or industry that has closed or relocated due to poor rail access or service in South Carolina? i.e. shortline shutdown and so business or industry closed down or relocated?
 - Do you know of any examples of businesses that have come into an area because of good rail access or service?

What opportunities are there to improve issues related to grade crossings?

 0

Nobody has responded yet.

Hang tight! Responses are coming in.

Grade Crossings

- » Objective: Discuss grade crossing needs both broadly and specifically.
 - Are there any needs or opportunities to improve coordination between organizations to address issues at grade crossings?
 - Are there any additional factors that could be included when prioritizing and addressing issues at troublesome crossings?

What are some opportunities and next steps that could be taken to improve passenger rail in South Carolina?

Nobody has responded yet.

Hang tight! Responses are coming in.

Passenger Rail

- » Objective: Discuss passenger rail related strategies and coordination needs
 - What does South Carolina already do well to support passenger rail?
 - What opportunities do you see in South Carolina for improving passenger rail?
 - What are other states doing to coordinate with passenger rail service providers?
 - What are some current passenger rail activities in other States? How did those activities get started?

Immediate Next Steps (Next 3 Months)

Immediate Next Steps (Next 3 Months)

- » Plan content
- » Commodity flow forecasting
- » Identification of future rail projects
- » Drafting plan goals, objectives, and strategies
- » Developing strategies for industrial and business development
- » Strategies for and the prioritization of grade crossings
- » Rail company interviews
- » Preparation for public meeting

Q&A

Thank You! Comments/ Questions

Rail Plan website coming soon!
<https://scdot.org/xx>

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