



**NORTH CAROLINA  
STATEWIDE  
MULTIMODAL  
FREIGHT PLAN**  
*Planning for the Future of Freight Movement*

## EXECUTIVE SUMMARY - FINAL



# NORTH CAROLINA'S STATEWIDE MULTIMODAL FREIGHT PLAN

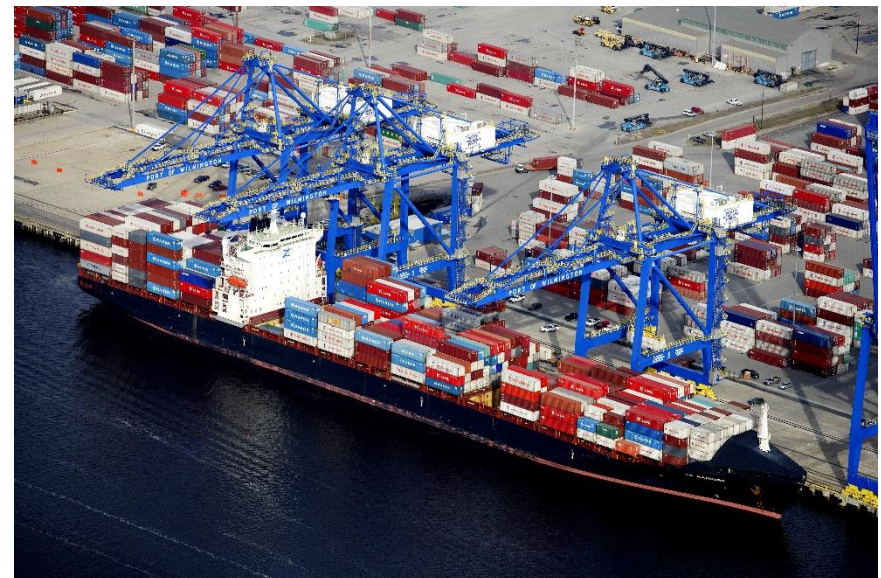
North Carolina's freight system plays a central role in the day-to-day functions for the state's business and residents. The freight system refers to the infrastructure and processes for organizing and executing both the inbound and outbound transportation of goods from manufactures and vendors through the supply chain and to a customer's doorstep. The freight system plays a critical role as a bridge between manufactures and customers to ensure goods/products are delivered, shelves are stocked, medicines are readily available, and food is on the table. As the global marketplace becomes increasingly more competitive, North Carolina will maximize its potential and leverage its well-connected network of highways, rail, ports and airports infrastructure to ensure the efficient, safe and reliable transportation of goods (echoes green box).

This is an update to North Carolina Statewide Multimodal Freight Plan (SMFP) developed in 2017 by NCDOT and the Cambridge Systematics team. It acknowledges the ever-changing nature of freight and the conditions exacerbated by the global pandemic starting in 2020, which impacted supply chains in all areas. The plan was developed to comply with the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21), Fixing America's Surfaces Transportation Act (FAST Act), and the Bipartisan Infrastructure Law (BIL) of 2021, also known as the Infrastructure Investment and Jobs Act (IIJA) and to be referred to as BIL from here on. Meeting the MAP-21, FAST Act, and BIL requirements for state freight plans ensures the state has access to federal funding and competitive grant opportunities.

BIL, at a national level, is a five-year, \$550 billion transportation bill providing funding for the nation's transportation planning and infrastructure investments. The BIL includes several provisions specifically geared to improving the performance of the national freight network and supporting investment in freight-related surface transportation projects. At the national level, this includes the development of a National Multimodal Freight Policy, National Freight Strategic Plan, and designation of a National Multimodal Freight Network. On the funding side, it also includes \$7.2 billion in formula funding for freight projects on the National Highway Freight Network (NHFN) and a \$10.9 billion discretionary, freight-focused grant program for states, metropolitan planning organizations (MPOs), local governments, and other entities.

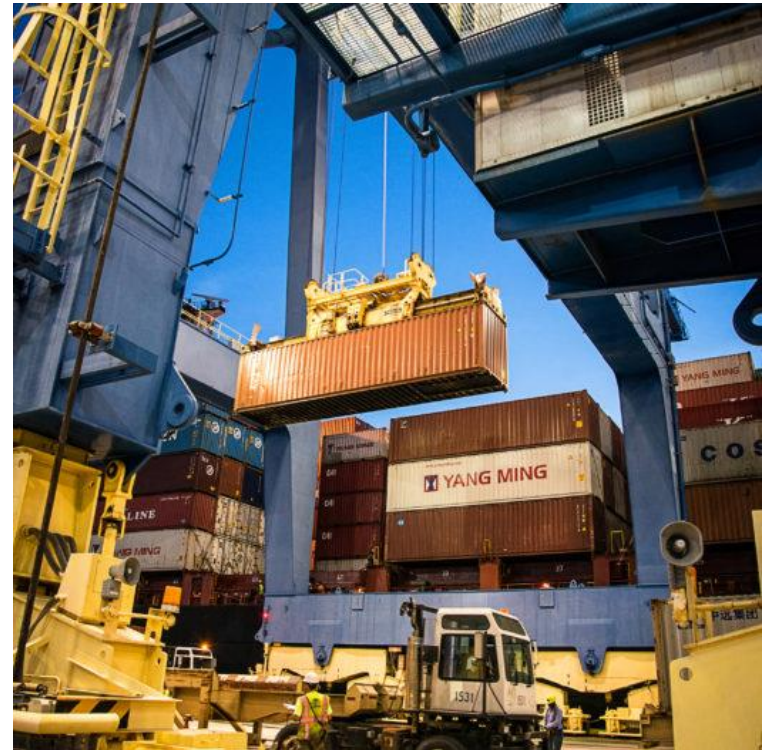
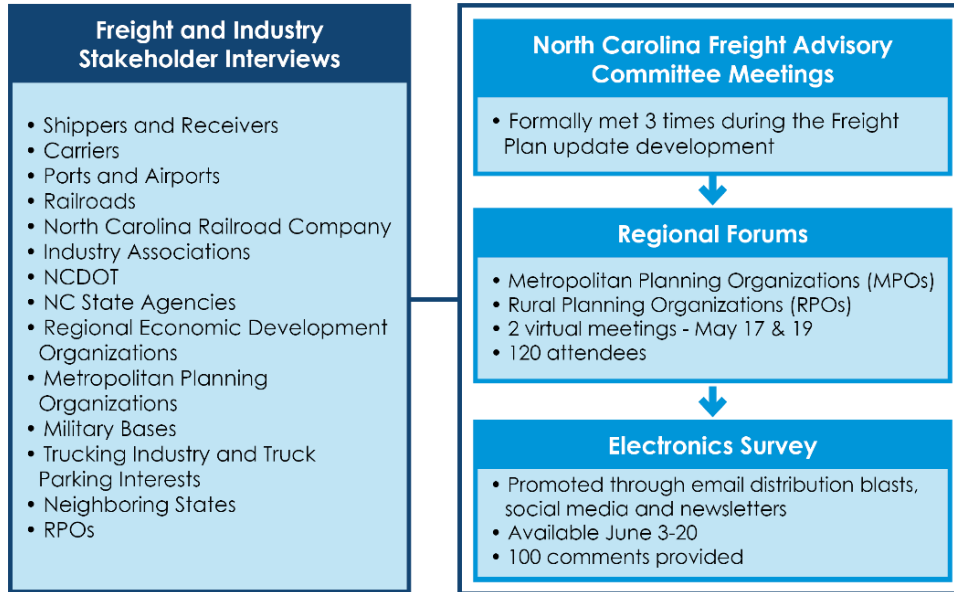
**North Carolina's multimodal freight transportation network is meeting the growing needs of the state to compete globally for quality jobs, provide safe and efficient mobility for people and goods, and build quality, resilient and sustainable communities for today and the future.**

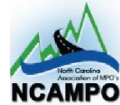
Enhance economic development opportunities competitiveness	Improve freight system efficiency, reliability, and resiliency	Enhance freight transportation safety and security	Support adoption and deployment of new freight technologies
Improve freight infrastructure conditions and preservation	Protect and enhance the natural environment	Foster public-private partnerships and collaboration with freight	Ensure good fiscal management and sustainable funding for the



In developing the SMFP update, key stakeholders supported the state during the plan's development process. Stakeholder input verified the SMFP update is practical and consistent with needs, expectations, and recommendations from the freight industry across the state.

**STAKEHOLDER ENGAGEMENT TO INFORM THE PLAN**





NORTH CAROLINA FREIGHT ADVISORY COMMITTEE

# FUELING NORTH CAROLINA'S ECONOMY

North Carolina moves millions of tons of freight each year making the state's freight transportation system an essential component to attracting and retaining business and supporting jobs. The movement of goods and freight assets is a major contributor to North Carolina's economic vitality.












In 2019, approximately 313,000 North Carolinians were employed jobs focused on transporting and handling of freight across the state. These jobs range from truck drivers to port workers to warehouse and distribution workers. The freight and logistics sector supports nearly 582,000 jobs including indirect and direct employment. Most of these employees are related to the wholesale trade sector, with 203,000 jobs, or 65% of the total freight-related jobs. The truck transportation sector provides the second largest number of jobs, amounting to approximately 70,800 or 23% of the total freight-related jobs. In the last five years, freight-related jobs have grown, adding nearly 150,000 jobs while gross state product rose 30%. Freight intensive industries critical to North Carolina's economy are shown to the right.

	JOBS	LABOR INCOME	GROSS STATE PRODUCT
Direct	313,449	\$22.2	\$41.8
Indirect + Induced	268,505	\$20.1	\$39.1
Total	581,954	\$42.3	\$80.9

Note: Dollar values in 2019 billions.



**FREIGHT INTENSIVE INDUSTRIES CRITICAL TO NORTH CAROLINA'S ECONOMY**

 Aerospace and Aviation	 Energy/Green Energy
 Agriculture, Food Processing and Distribution	 Forestry and Wood Products
 Automotive, Truck, and Heavy Equipment	 Furniture
 Biotechnology, Pharmaceuticals, and Life Sciences	 Military/Defense
 Chemicals, Plastics and Rubber	 Textiles, Apparel, and Textile Machinery
 Distribution/Logistics for Consumer Goods	

**Impact Strategies**

**Climate Change**

Implement the strategies within the 2020 Resilience Strategy Report

Support strategies to increase infrastructure resilience along NCDOT coastal highways.

**Emissions**

Continue to foster partnerships like the Port Initiative's and implement environmentally sustainable port strategies through partnerships between USEPA and ports.

Support development of actionable strategies to aid in the NC Clean Transportation Plan, one of the five workgroups focusing on developing actionable strategies to address emissions from medium- and heavy-duty vehicles.

**Equity**

Develop a deployment strategy for ZEV charging stations.

Create effective infrastructure deployment strategies.

**Habitat Fragmentation**

Identify opportunities to improve habitat fragmentation such as trenches used to provide safe passage underneath railroad tracks for wildlife.

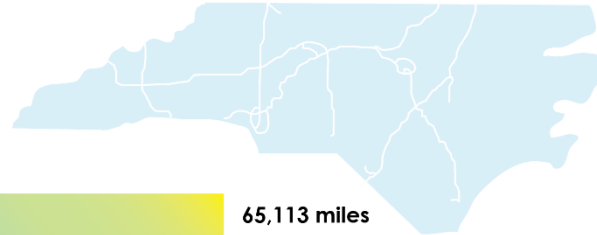
**Stormwater**

Implement Executive Order 80 through the Department of Environmental Quality (DEQ), with support of other agencies and stakeholders, to prepare the North Carolina Climate Risk Assessment and Resilience Plan (2020 Resilience Plan).

# TAKING STOCK OF OUR FREIGHT RESOURCES

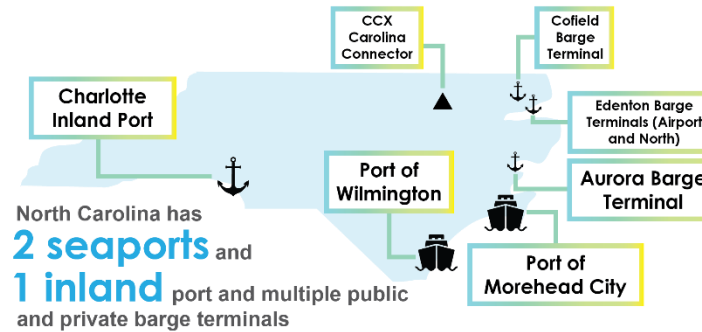
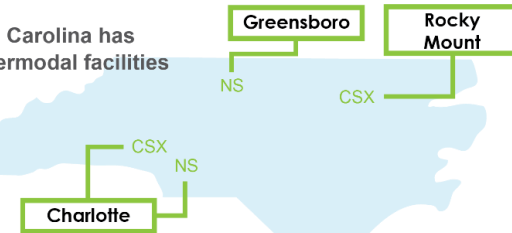
North Carolina has an extensive multimodal freight transportation network...

The majority of **roadway miles** in North Carolina are secondary routes

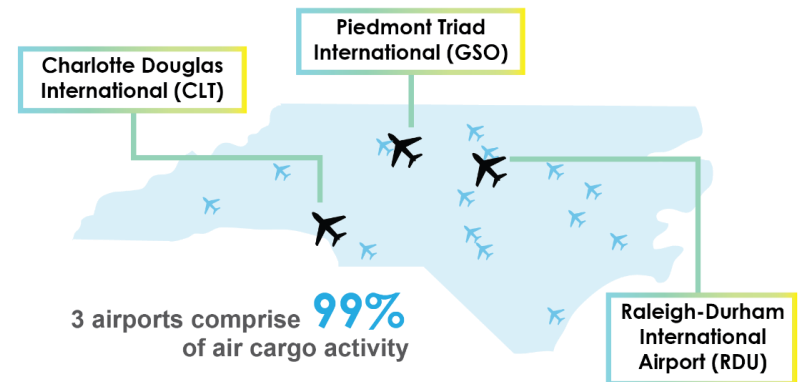
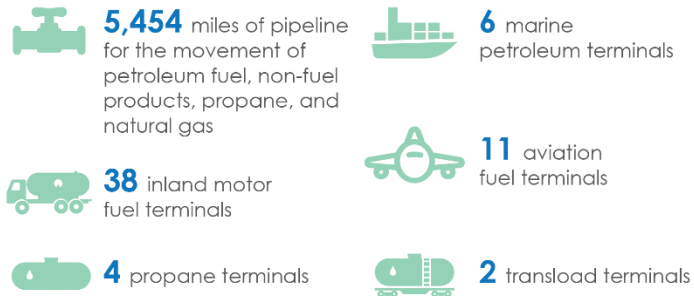


North Carolina has **2** Class 1 railroads with **2,300** route miles

North Carolina has **4** intermodal facilities



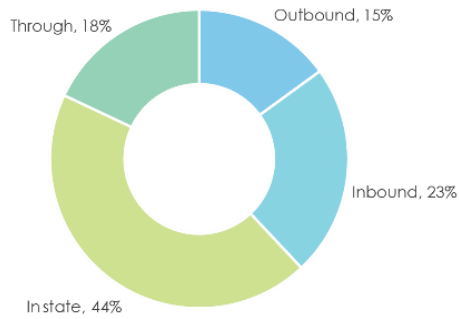
North Carolina's pipeline and fuel network includes:



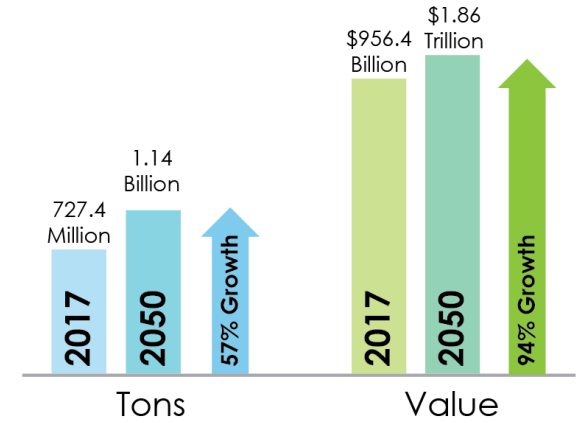
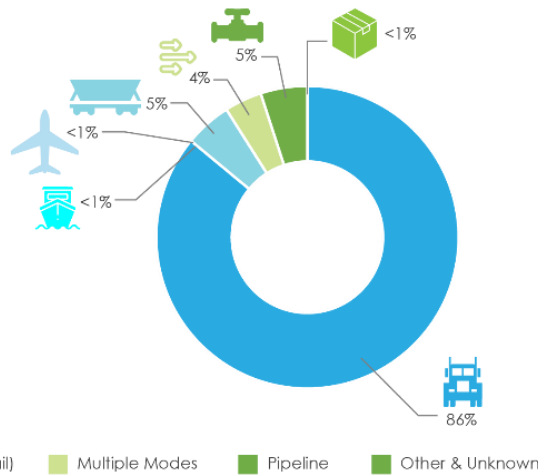
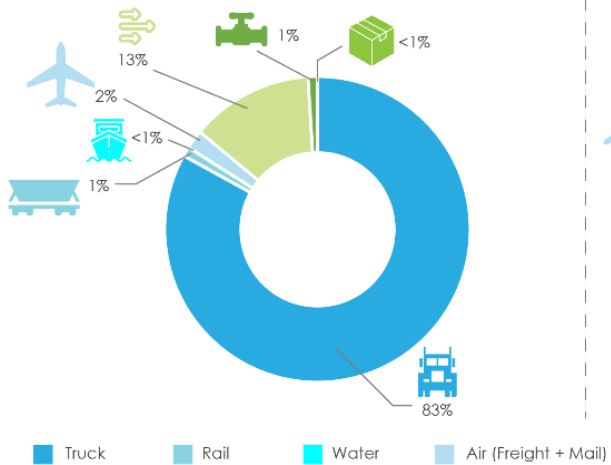
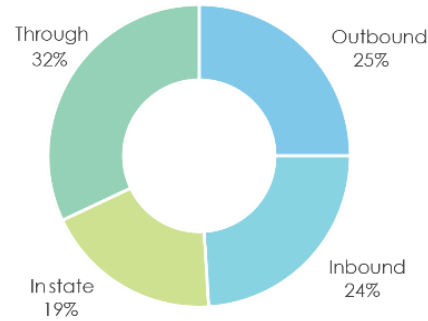
Note: A transload terminal is where goods are transported between multiple modes but the goods do not stay in the same container.

...that transports a significant volume of freight for the state's businesses and residents and the amount is growing every year.

**2017 Total Weight:  
727.4 million tons**



**2017 Total Value:  
\$956.4 billion**



**69.3** tons per North Carolinian

**25,560** tons per business establishment

# THE NORTH CAROLINA PRIORITY FREIGHT NETWORK

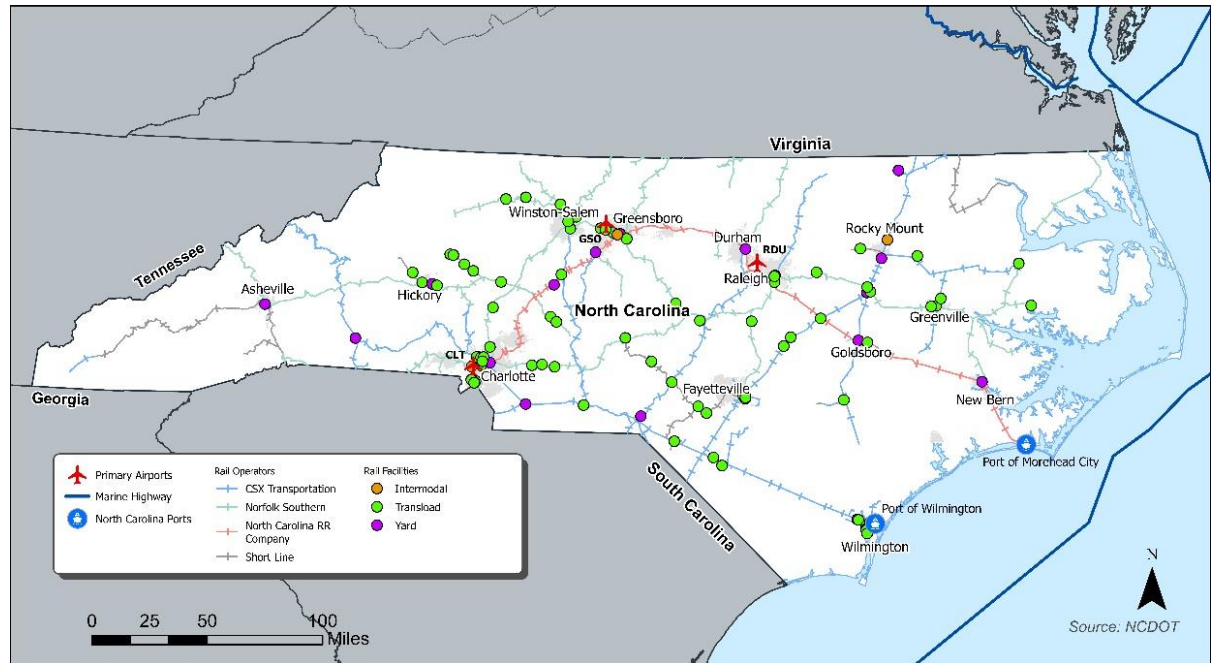
The North Carolina Priority Freight Network (NCPFN) is comprised of the highway, rail, port and airport facilities responsible for moving the majority of freight in North Carolina and serving the state's key businesses. The designation of the NCPFN has two motives:

- Designation of a subsystem that is responsible for carrying the majority of freight allows NCDOT to focus limited resources on the portion of the system that impacts the greatest number of users and the majority of the tonnage being moved.
- The FAST Act established the National Highway Freight Network and required states to designate additional critical freight corridors. This program has continued under BIL.

The North Carolina Priority Highway Freight Network (NCPHFN) is made up of the state's portion of the National Highway Freight Network (NHFN) and other state corridors that scored high in the freight system designation process, including:

**Critical Urban Freight Corridors (CUFCs)** are defined as freight highways located within urbanized areas. They are part of the NHFN and are eligible for the National Highway Freight Program (NHFP) funding. North Carolina may designate a maximum of **150 miles** as CUFCs.

**Critical Rural Freight Corridors (CRFCs)** are defined as freight highways located outside of urbanized areas. They are part of the NHFN and are eligible for the NHFP funding. North Carolina may designate a maximum of **300 miles** as CRFCs.



## North Carolina's Priority Freight Network includes:





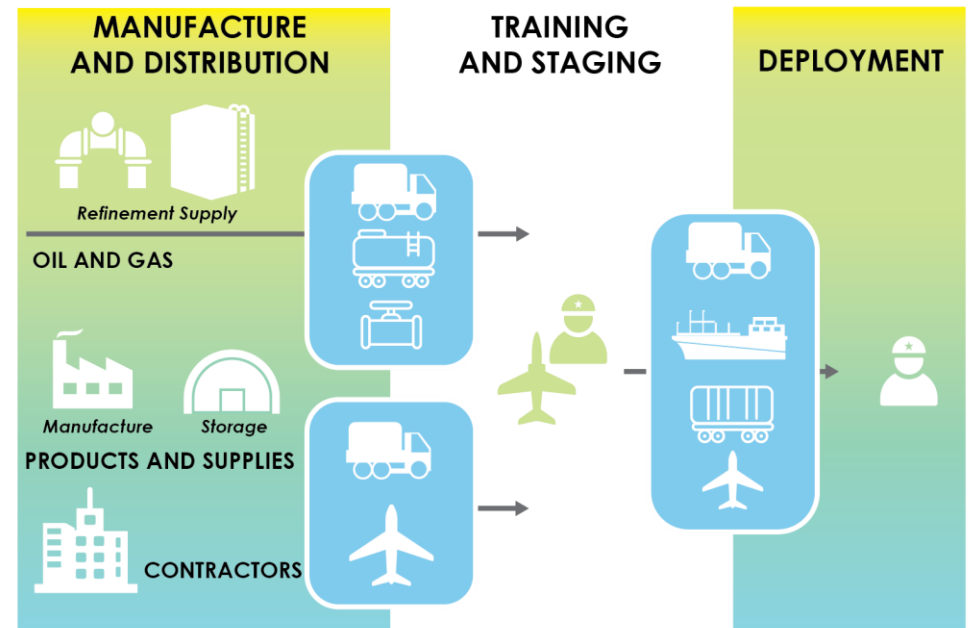
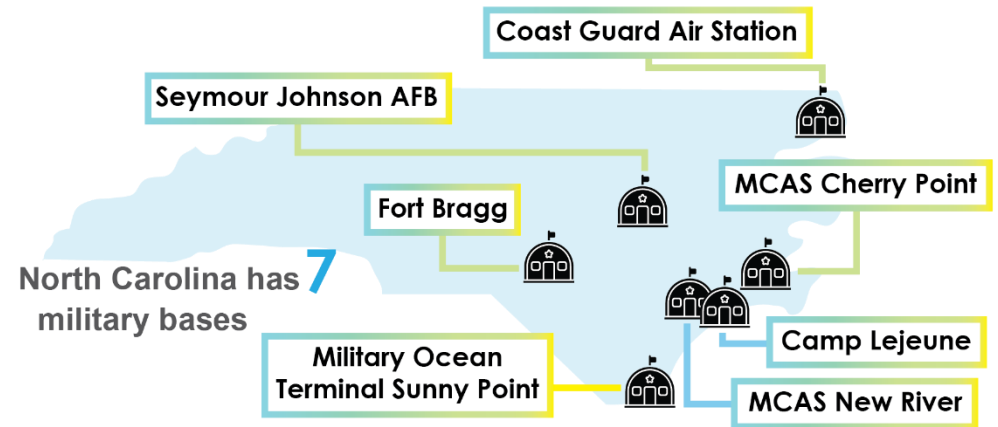
# SPOTLIGHT ON THE MILITARY

## Supply Chain Focus Military Freight

The military plays a pivotal role in North Carolina's economy and the state's multimodal freight system is critical to the military facilities in the State. The military generates freight and cargo movements including movement of military machinery, supplies and equipment regionally, nationally, and globally.

Each military facility noted freight transportation assets are needed for base expansion and realignments. Key challenges and bottlenecks identified include:

- Bridge conditions and highway infrastructure can restrict movements of some of the large military equipment, resulting in the need to make the moves by rail, which significantly increases the cost.
- Not all military bases are served directly by rail and even those with direct rail service, service requirements sometimes rule out the use of rail as an option.



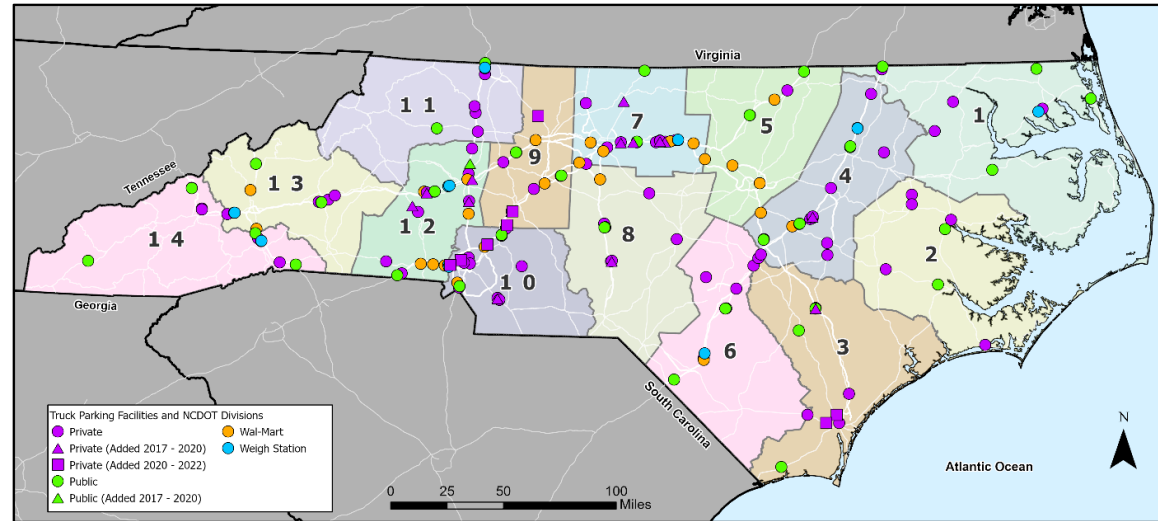
# SPOTLIGHT ON TRUCK PARKING

Truck parking continues to be a major concern for truck drivers, motor carriers, truck facility operators and public officials throughout the U.S. Lack of available truck parking negatively impacts the safety of truck drivers and the traveling public and often result in trucks parking in unauthorized areas such as highway shoulders and ramps.

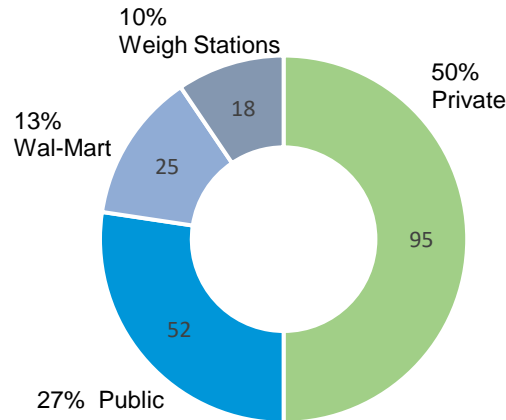
- North Carolina has 190 truck parking facilities supplying over 6,600 authorized truck parking spaces. About 87% of the parking spaces in the state are privately owned.
- Since 2017, 23 new truck parking facilities have opened across the state.
- 4% of truck parking facilities are full most nights.
- The demand for truck parking in North Carolina will likely persist for the next 5-10 years given future freight flows projected by the U.S. Department of Transportation (USDOT).

Improving truck parking in strategic locations will help to make conditions safer for truck drivers and other travelers, reduce unnecessary fuel consumption, and improve the efficiency of commercial vehicle operations. Potential truck parking improvement strategies include:

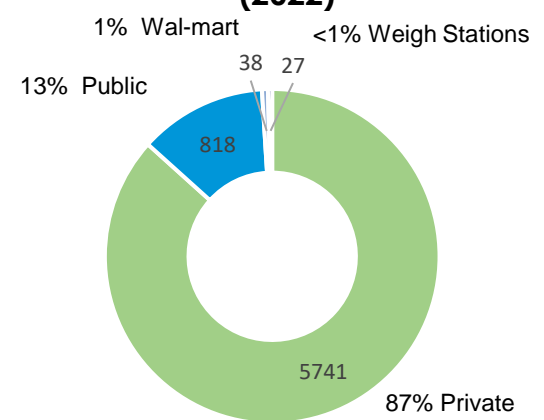
- Increasing funding Increasing the number of truck parking spaces at all rest areas and weigh stations.
- Building lots at abandoned rest areas.
- Pursuing public-private arrangements.



**Total Truck Facilities (2022)**



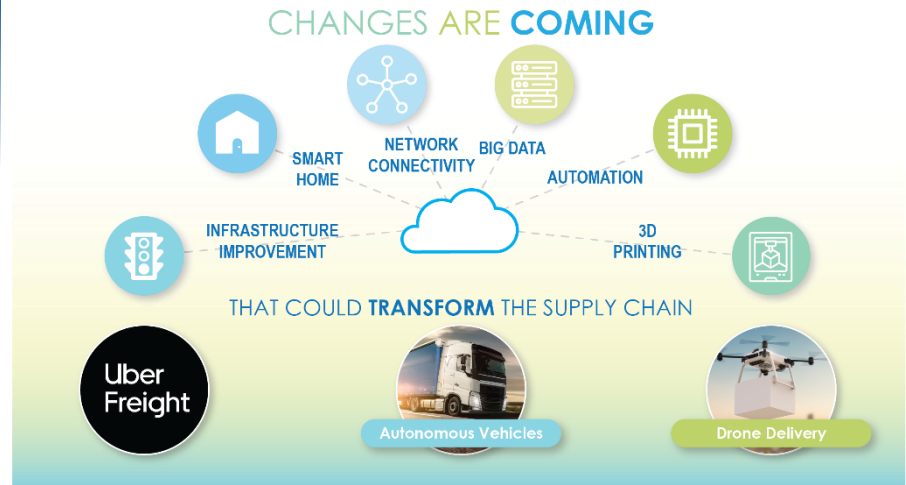
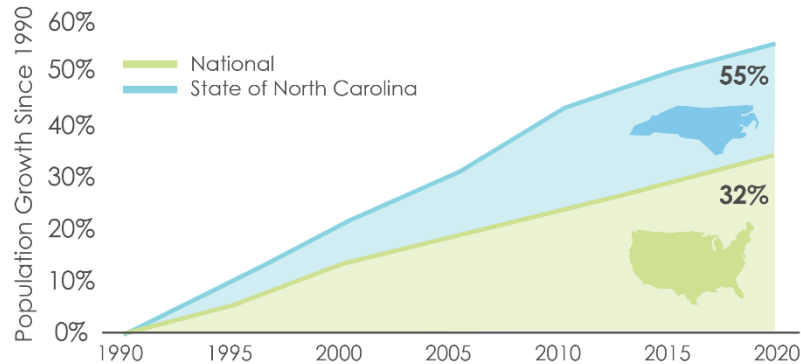
**Total Truck Parking Spaces (2022)**



# TRENDS SHAPING OUR FUTURE

## Trends shaping the future of freight transportation

There are several notable global, national, and statewide trends that will continue to drive the demand for and performance of North Carolina's freight transportation system.



US Manufacturing Jobs/Year 2021			
	2016	2021	~% Change
<b>New Offshoring</b>	~50,000*	NA ****	~80%
<b>New Reshoring and FDI</b>	77,000*	~261,000**	~70%
<b>Net Jobs Gained</b>	~+25,000	~+261,000***	N/A

Source: Reshorennow.org

\*Estimated

\*\* From 'Reshoring Initiative 2021 Data Report'

\*\*\* Calculated from previous plan

\*\*\*\* The 'Reshoring Initiative 2021 Data Report' indicates there is no measure of offshoring announcements or implementation.

# DELIVERING THE GOODS: STRATEGIES AND RECOMMENDATIONS FOR ENHANCING GOODS MOBILITY

Improving freight transportation efficiency, safety and resiliency requires a multi-prong approach that includes policies, programs and projects. These three solution types ( as discussed in Chapter 7 *Investing in the Priority Freight Network*, combine to create NCDOT's Freight Improvement Plan, a strategy based on the freight plan's goals, stakeholder-identified needs and solutions, and analysis of the North Carolina Priority Freight Network.



The process for identifying the freight plan's projects leveraged a variety of stakeholder outreach tactics to gather comprehensive data and diverse perspectives. Stakeholder input combined with the assessment of needs, project identification and gap analysis, and a project prioritization process helped develop a strategic and cost-effective approach to freight investment in North Carolina.

## SUMMARY OF FREIGHT TRANSPORTATION NEEDS

HIGHWAY	RAIL	MARITIME	AIR CARGO
<ul style="list-style-type: none"> <li>• Enhance mobility and reliability</li> <li>• Maintain and enhance bridges and pavements</li> <li>• Mitigate crash hotspots</li> <li>• Implement truck parking strategies</li> <li>• Enhance two-lane rural freight routes</li> <li>• Improve operations through technology</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain and improve track conditions</li> <li>• Improve safety and grade crossing elimination</li> <li>• Plan for increased passenger rail demand</li> <li>• Invest in new and expanded transload and intermodal facilities</li> <li>• Maintain shortline support programs</li> </ul>	<ul style="list-style-type: none"> <li>• Support for “inside the gate” improvements such as new cranes, dredging and widening and new land development</li> <li>• Grade crossing eliminations on port access routes</li> <li>• Address rail bridges and clearance issues</li> <li>• Ensure safe, reliable and efficient roadway access and connectivity to the ports</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure safe, reliable, and efficient roadway access and connectivity to the airports</li> <li>• Support industrial development in and around the airport facilities</li> <li>• Support “inside the gate” investments such as additional and longer runways and expanded air cargo handling facilities</li> </ul>

Resiliency of the network against natural and man-made interruptions

Sustainable and adequate funding

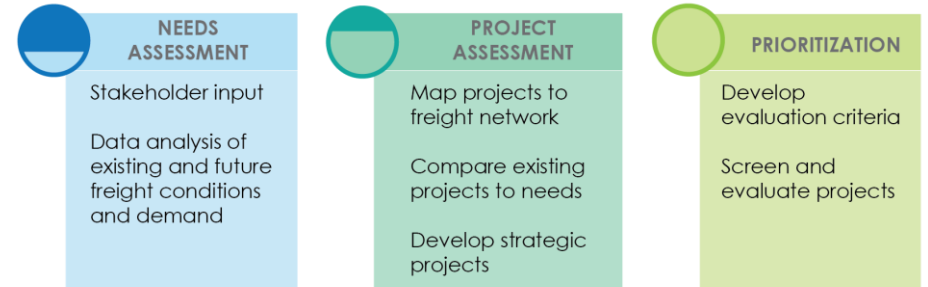
FHWA divides the strategies of state freight plans into three categories: infrastructure improvements, operational innovations, and policies. Strategies were gathered from several sources including the 1.) NCDOT priorities and previous plans, including the Highway and Modal Divisions, 2.) Priorities for North Carolina State Ports Authority, MPOs and RPOs, and North Carolina Railroad, 3.) Industry priorities and suggestions, gathered through nearly 40 interviews, and the Freight Advisory Council (FAC); and Best practices from FHWA, other states, and the private sector.

## Implementation Framework for Multimodal Recommendations

Implementation of the projects, policies and program recommendation follows NCDOT's investment decision making process. The implementation framework addresses the requirements for a 8-year fiscally constrained freight investment plan (FIP) and the outcomes of the alternative freight demand scenario by identifying five recommendation groupings:

- **Funded Projects** address an immediate or near-term need. They are worthwhile ideas today, no matter what the future holds. For example, addressing a safety hotspot. These strategies are already under development, many with funding secured. They will form the five-year Freight Investment Plan.
- **Robust Strategies** are expected to be appropriate no matter what the future holds but are not necessarily funded. For example, pursuing mitigation strategies to protect the NCPFN against climate change and weather events.
- **Hedging Strategies** might not be necessary but might shift to a higher priority dependent on pace and trends. For example, providing expanding key two lane rural routes due to priority facility expansion.

### NORTH CAROLINA FREIGHT INVESTMENT DECISION-MAKING PROCESS



- **Deferred Strategies** might be necessary, but it is safe to wait and see what happens. For example, implementing truck only lanes along major trade corridors such as I-85.
- **Transformative Strategies** allow North Carolina agencies to influence – and hopefully direct – trends for the future. For example, increasing the use of underutilized gateways and rail assets.

The FAST Act established the NHFP funds which are available to potentially fund recommended projects for up to four years. NHFP funded projects are reimbursed from the Highway Account of the Highway Trust Fund. Projects must be identified in the STIP/TIP and be consistent with the Long-Range Plans. The State Freight Plan must provide a 5-year fiscally constrained Freight Investment Plan (FIP) that describe how the funds would be invested. Eligible projects, which must contribute to the efficient movement of freight on the NHFN, include planning, construction, ITS, bridges, alt fuel, etc. North Carolina's apportionment of the NHFP funds for the period spanning 2023-2028 is \$228 million. The FIP includes projects eligible for the NHFP funds in the table to the right. The match shown in the table to the right could be provided by state, regional, local or private entities.

Year Need Area	Number of Projects	Programmed Project Cost (\$M)	Total Federal Share ** (\$M)	NHFP (\$M)	Match (\$M)
<b>2023</b>		<b>\$64.50</b>	<b>\$51.60</b>	<b>\$36.16</b>	<b>\$6.54</b>
Asset Management and Utilization	5	\$64.50	\$51.60	\$36.16	\$6.54
Mobility and Reliability	0	\$0.00	\$0.00	\$0.00	\$0.00
<b>2024</b>		<b>\$64.30</b>	<b>\$51.44</b>	<b>\$36.88</b>	<b>\$12.86</b>
Asset Management and Utilization	3	\$23.75	\$19.00	\$13.88	\$4.75
Mobility and Reliability	3	\$40.55	\$32.44	\$23.00	\$8.11
<b>2025</b>		<b>\$128.85</b>	<b>\$103.08</b>	<b>\$37.62</b>	<b>\$25.77</b>
Asset Management and Utilization	4	\$128.85	\$103.08	\$37.62	\$25.77
Mobility and Reliability	0	\$0.00	\$0.00	\$0.00	\$0.00
<b>2026</b>		<b>\$75.78</b>	<b>\$60.62</b>	<b>\$38.37</b>	<b>\$15.16</b>
Asset Management and Utilization	3	\$75.78	\$60.62	\$38.37	\$15.16
Mobility and Reliability	0	\$0.00	\$0.00	\$0.00	\$0.00
<b>2027</b>		<b>\$53.55</b>	<b>\$42.84</b>	<b>\$39.14</b>	<b>\$10.71</b>
Asset Management and Utilization	5	\$53.55	\$42.84	\$39.14	\$10.71
Mobility and Reliability	0	\$0.00	\$0.00	\$0.00	\$0.00
<b>2028</b>		<b>\$78.01</b>	<b>\$62.41</b>	<b>\$39.92</b>	<b>\$15.60</b>
Asset Management and Utilization	5	\$78.01	\$62.41	\$39.92	\$15.60
Mobility and Reliability	0	\$0.00	\$0.00	\$0.00	\$0.00
<b>Grand Total 2023-2028</b>	<b>28</b>	<b>\$464.98</b>	<b>\$371.98</b>	<b>\$228.09</b>	<b>\$86.64</b>

\*\* Total Federal Share includes NHFP as well as any other federal funding source. See STIP for detailed breakout of other federal sources.

The longer-term strategies are divided into three categories. Robust strategies are the highest priority because they're needed and effective under multiple plausible freight features. Hedging strategies are ranked as the second priority, but priority but might become higher priorities dependent on direction and pace of trends. With sufficient planning and preparation NCDOT can pivot relatively quickly if needed. Deferred strategies are a lower priority, therefore requiring much less focus. Key robust and hedging strategies are summarized below:

### Hedging Strategies (Medium Priority)

#### Infrastructure

- Expand key two lane rural routes on the NCPHFN. The priority facilities that need expanding will depend on regional and industry growth trends but plans should be advancing for all two-lane facilities on the NCPHFN.
- Develop and modify infrastructure to be capable of handling platooning and autonomous vehicles.
- Invest in upgrading rail lines and other rail facilities.
- Invest in alternative routes for highly congested corridors.
- Invest in roadways, interchanges and rail spurs to serve large development sites.
- Preserve rail corridors, especially those going out of service.
- Utilize existing air cargo and maritime relationships to create more complementary cargo networks.

#### Operations

- Invest in urban locations to service increasing number of fulfillment centers.
- Develop alternative freight delivery vehicle operating guidelines.

### Robust Strategies (Highest Priority)

#### Infrastructure

- Maintain safe, reliable connections to ports, rail terminals, air cargo facilities, military bases and major logistics and manufacturing sites.
- Invest in modernizing the interstates, ensuring that they meet design standards to accommodate freight vehicles of today and in the future. This includes replacing bridges with weight restriction and weight limits on the NCPHFN.
- Pursue mitigation strategies to protect the NCPFN against climate change and increasing weather events.
- Invest in mobility solutions in the major urban areas to more efficiently and safely move both people and freight.
- Ensure adequate connectivity between rural regions and the state's gateways and urban centers. Invest in heavy haul corridors in regions with ports, energy exploration and agricultural production.
- Implement truck parking strategies at abandoned rest areas and weigh stations from the Statewide Truck Parking Study. The trucking industry suggested exploring industry user fees as a funding mechanism.
- Address congestion hot spots on NCPHFN. This may include examining mass transit opportunities for removing passenger vehicles from these routes.
- Increase truck parking capacity along key corridors.
- Develop strategies surrounding e-commerce and distribution.
- Ensure cyber security remains a top priority as freight networks continue to grow.

#### Operations

- Develop resiliency strategies to mitigate impact of man-made or natural disruptions of the NCPFN.
- Invest in incident clearance on the NCPHFN. Reexamine the MOVES program for incident clearance for potential implementation.
- Develop digital backbone to deploy technology to leverage real-time travel and truck parking data aimed at the freight industry.
- Invest in ITS technology along key corridors to increase efficiency and reliability.

#### Institutional

- Enhance public awareness program on "Sharing the Road" with trucks and "BeRailSafe" with rail.
- Add safety signage on NCPHFN about safe traveling distances and passing guidelines related to trucks. Implement Freight Performance Measure Program and target setting.
- Conduct a vehicle inventory and use survey (VIUS) for commercial vehicles to enhance NCDOT's tools and processes for identifying and evaluating freight needs and projects.
- Conduct a Statewide Rail Access and Utilization Study that assesses the opportunity for truck to rail diversion and an assessment of regional rail bottlenecks and solutions.
- Implement freight planning requirements into the Comprehensive Transportation Planning (CTP) efforts at NCDOT, Metropolitan Transportation Plans performed by the Metropolitan Planning Organizations and the Comprehensive Transportation Plans performed by the Regional Planning Organizations.

# TRANSFORMATIVE STRATEGIES

The state's public and private sectors proactively pursue strategies with the intention of altering and transforming current trends with the intention of altering the future of freight. Below are three potential transformative strategies.

## Next Gen Truck Technology Strategy



## Expand Rail Freight Market Opportunities Strategy





## Next Gen Truck Technology Strategy

### Autonomous and Connected Trucking – a Game Changer for Fuel Efficiency, Safety and Mobility

Heavy-duty, long-haul commercial vehicles will be the first large group of early autonomous and connected vehicle technology adopters due to potential for efficiency gains, lower operating costs and driver shortage. Adoption of autonomous technology will depend on numerous factors including labor shortages and resistance, public perception related to safety, regulatory environment and cost. NC is home to several early pilot deployments due to its existing truck equipment manufacturing and research industry and its highly rated highway network.

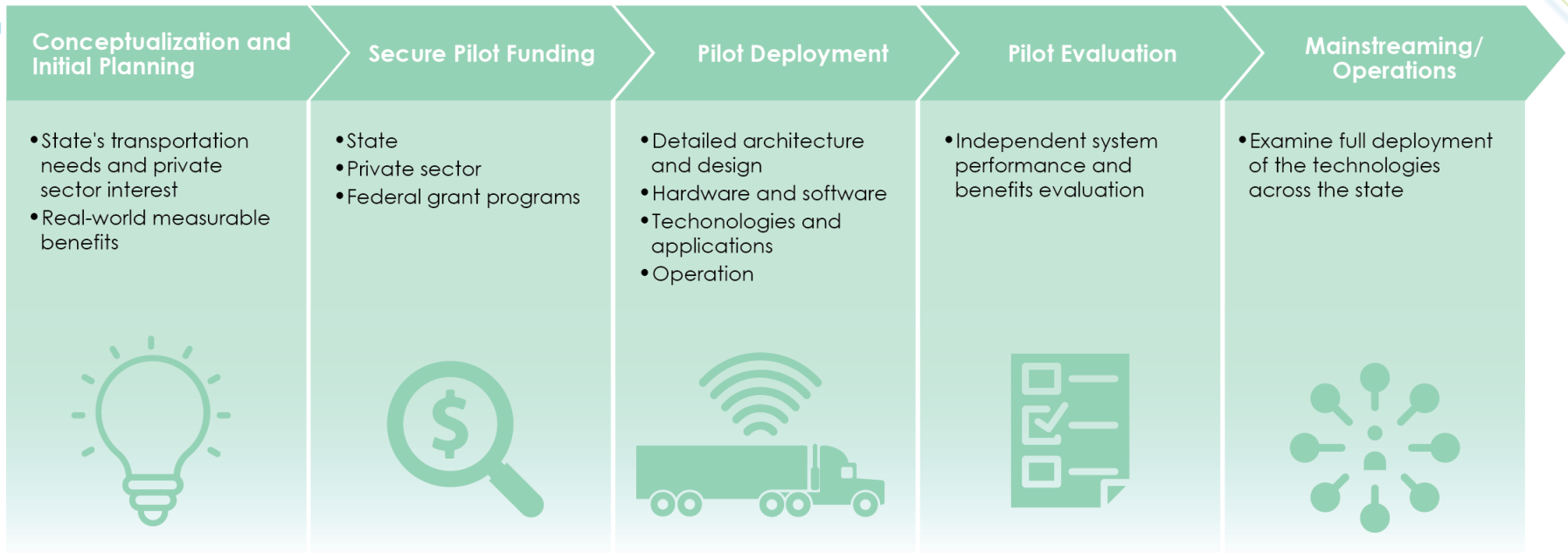
Autonomous technology is not the only technology impacting the future of trucking. Fuel diversification, including electrification, of truck fleets allows for transport companies to reduce their impact on the environment. Electric trucking also has the capability to be used with autonomous and connected technology. Fuel diversification has notable potential benefits for the environment and communities that are home to intense freight activity. However, availability of fueling infrastructure, the heavier weight associated with electric trucks, cost of fleet replacement and driving range are all potential impediments to rapid alternative fuel vehicle adoption.

North Carolina serves as a thought leader. The state is a research and development hub for all technology related things, especially truck manufacturing. Combining this with the state's expansive highway system, it positions North Carolina to take advantage of this opportunity. Not only could deploying the technology energize shippers and carriers, but leading the research, development, and equipment production could have unprecedented impacts on the state's role in freight transportation and all its related upstream and downstream opportunities. A first step for NCDOT is to ensure that the NCPHFN has the appropriate digital infrastructure necessary for facilitating new truck technologies.



"Research suggests that platooning technology can provide a 5 to 20% fuel savings, depending on the gap, speed, number of vehicles and location of a vehicle within a platoon...Platooning also offers other benefits, such as emission reductions, additional vehicle safety features and increased highway throughput, just to name a few."

TTI Senior Research Engineer Beverly Kuhn



## Expand Rail Freight Market Opportunities

North Carolina is positioned to grow rail freight by capitalizing on recent developments within the state as well as global shifts in trade patterns. With strategic action, North Carolina rail freight market can expand, making it more competitive for shippers while easing pressures on the highways.

### Expanding/Modernizing Rail Infrastructure

North Carolina recognizes the critical need of continually improving its rail infrastructure to best benefit their businesses and residents. The rail network serves passenger and freight needs. Direct improvements to one often indirectly impact the other. Rail is a vital freight asset to the state's economy as most shippers necessitate reliable, efficient rail service to remain competitive. Modernizing the rail system increases its functionality, for example:

- Continue upgrading all trackage to sustain 286,000 lb. loads improves customer service by standardizing load limits throughout the State to minimize transfer and repacking issues and time.
- Continuing the strong Federal Railroad Authority's Competitive Discretionary Grant Programs FRA CRSI program increases safety by replacing aged and obsolete rail structures and reducing at-grade highway/rail crossings.
- Reconstructing rail corridors to accommodate double-stacked containers and oversized (wide) project cargo creates flexible, high-capacity facilities that dovetail well with private industry's push to intermodal yard automation.
- Implementation of Positive Train Control
- Increase of track speeds through improving track curves to improve network efficiencies.
- Partnering with private rail carriers, such as Norfolk Southern (NS), CSX Transportation (CSX), and 24 freight short line railroads in North Carolina, to provide expedited, regular service.
- Preserving and increasing the number of direct rail-served sites.



### Shifting Distribution Center Activity Along Eastern Seaboard

Larger ships now reach the east coast through the Panama Canal's expansion. North Carolina can capitalize on the shift in trade patterns by encouraging distribution centers around the state's freight hubs, which include the ports, airports, intermodal facilities and short rail corridors. North Carolina has momentum through new developments such as the CCX Intermodal Terminal in Rocky Mount. To further capitalize, the state can incentivize rail-centric mega sites (sites where rail is the primary mode to move goods at larger industrial sites) and encourage rail-port connections across North Carolina to better support the east coast's growing container shipping market.

## Truck to Rail Diversion

Railroads can serve as a viable, lower cost alternative for moving certain goods, especially heavier, bulkier commodities and containerized freight moving longer distances. If trucking becomes more expensive and less available due to driver and equipment shortages, more congested roadways and fuel prices, rail becomes more competitive. However, the ability to provide reliable, time definitive door-to-door service remains a constraint for diverting much of the truck traffic to rail. Because of the state-owned rail network in NC, the state is in a better position to potentially influence the overall competitiveness of moving goods via rail as opposed to trucks.



## Conclusion

The North Carolina Statewide Multimodal Freight Plan update captures current and future analysis of the freight transportation strengths, weaknesses, opportunities and challenges. The update provides recommendations and strategies intended to assist the state in meeting existing needs and future challenges. In addition, it defines strategies meant to shape North Carolina's freight transportation system and economic well-being. The update positions the state to take advantage of new federal funding opportunities for freight infrastructure as it complies with new BIL requirements as well as FAST Act regulations.

However, it's important to understand that will not be enough. The state's needs far exceed the available resources. Therefore, public-private partnerships and other funding opportunities must be identified and secured to ensure the key elements of this plan can be implemented.

This blueprint of recommended actions and funding resources will serve to improve North Carolina's economic potential and position the state to compete in a global economy reliant on safe and efficient movement of freight.