

Executive Summary

North Carolina's diversity and quality of landscape, from the Blue Ridge Mountains to the Atlantic coastal beaches that enabled the world's first powered flight, provide a wide variety of opportunities for demonstrating and commercializing new transportation technologies. This Advanced Mobility NC Strategic Plan focuses on the advancement of key air and ground mobility technologies that, when integrated into the existing transportation ecosystem and adopted at scale, hold the potential to save lives, improve quality of life, and create access and opportunity for all North Carolinians (see **Exhibit ES-1**). While this Strategic Plan focuses on multi-modal and ground mobility, the benefits of these technologies extend to watercraft.

With a vision of leveraging innovative advanced mobility technologies and platforms to provide a safe, sustainable, efficient, resilient, and equitable transportation system that works for all North Carolinians, the team, led by the Division of Aviation and the Integrated Mobility Division (IMD) focused on three goals:



Improve Quality of Life

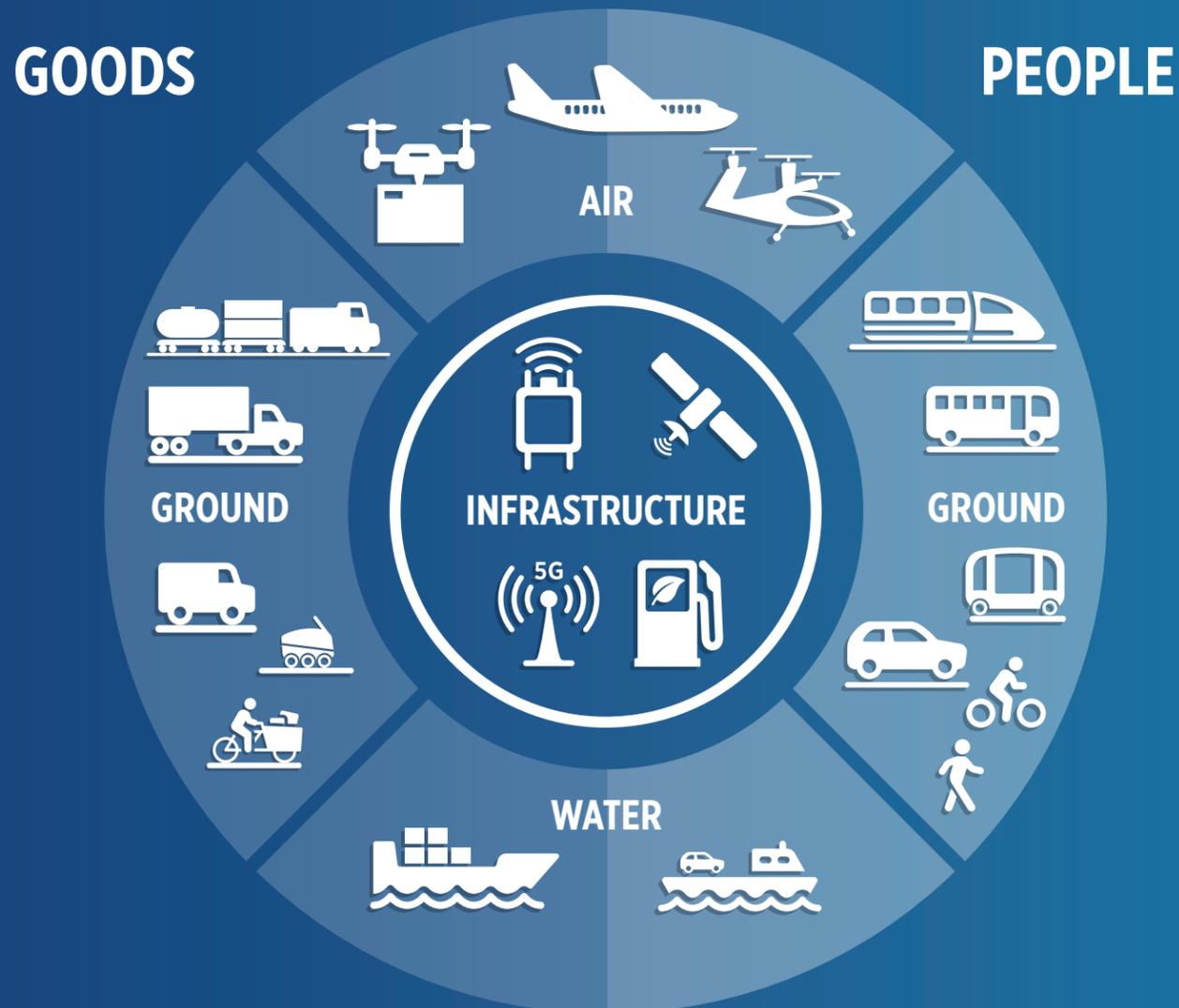


Create Economic Opportunity



Be a Transportation Trailblazer

Exhibit ES-1. North Carolina's Transportation Ecosystem



STAKEHOLDER FEEDBACK

A market sounding was conducted to understand the latest industry opportunities, pressures, and trends. Stakeholder perspectives are summarized in **Exhibit ES-2**.

Exhibit ES-2. Advance Mobility Stakeholder Feedback

TECHNOLOGY

Focus on high-value use cases that can provide tangible results today.

Use technology to **leverage cost-effective and scalable options** for freight movement and last-mile solutions.

COLLABORATIONS

Cross-sector collaboration is key for facilitating innovation, testing and deployments, and workforce development.

Advanced mobility **creates economic opportunity** by attracting new companies to NC and creating high-quality jobs.

Encourage apprenticeships and short-term training programs focused on industry needs that **incorporate immediate job placement**.

POLICY

In the face of ongoing rapid technological change, **standards and guidelines** are needed to **ensure interoperability** and **mitigate the risk of obsolescence**.

True Beyond Visual Line-Of-Sight operations (BVLOS) flight is needed to **unlock the Advanced Air Mobility market's significant growth potential**. Limited BVLOS authorizations and supporting infrastructure is restricting adoption.

NCDOT can **provide guidance to local agencies** on land use and airspace planning, complete streets, and mobility hub integration of air and ground modes and secure consensus at all levels within the department.

INFRASTRUCTURE

Increased electric grid capacity and resiliency are crucial for enabling advanced mobility technology adoption at scale.

Prioritize investments in advanced testing corridors and **integrate** advanced mobility and infrastructure with existing **multimodal systems**.

USE CASES

From this input, an understanding of the North Carolina culture and strengths, and additional research, several use cases were developed and evaluated for future air and ground applications, as noted in **Exhibit ES-3**.

Exhibit ES-3. Potential Advanced Mobility Technology Use Cases



Unlike in most states, North Carolina’s department of transportation maintains most public roads. The state supports local agencies in delivering multimodal transportation options that meet the needs of their communities. The state will continue to support local agencies as their role evolves to include the siting of infrastructure to support ground and advanced air mobility use cases.

LOCAL AGENCY SUPPORT

To support local agencies as they continue to play a key role in advanced mobility use cases, several prompting questions were developed. These questions can be used to help conceive, evaluate, and integrate advanced mobility solutions into their transportation systems. The following contains sample questions from each of the categories addressed in more detail in the full Strategic Plan.

Readiness

What are the viable use cases in terms of technology and policy maturity?

Operations

Is there sufficient local and regional supporting infrastructure?

Utilities

If additional electrical capacity is needed, what is the timeline for implementing it?

Stakeholders

- Is there a champion?
- Will local stakeholders partner?
- Is there a path to community support?

Site & Facility

- What location would provide the greatest opportunity for success?
- Is adequate security possible?

The future of mobility will be realized through better connectivity that will occur at a variety of **mobility hubs**. These will vary based on their urban, suburban, or rural setting and their functionality – whether it be for intermodal connections, distribution centers, central or satellite uses.

ACTION ITEMS

Specific action items included in the full strategic plan support North Carolina’s path to an advanced mobility future. The action items are organized around five key success factors, show below, to support the plan’s goals of improving quality of life, creating economic opportunity, and being a transportation trailblazer. Under each key success factor is a list of the categories of action items included in greater detail in the plan.

REGULATORY, POLICY, AND PROCESS CONSIDERATIONS

- Implement comprehensive statewide advanced mobility approach
- Create consistent Internal policies
- Identify policies that support integration of AAM technology at airports
- Develop policies that emphasize environmental benefits of advanced mobility technology

WORKFORCE DEVELOPMENT AND GROWING INDUSTRY PRESENCE

- Conduct an advanced air mobility economic impact study
- Develop a cohesive workforce and economic development strategy that attracts industry investment, creates well-paying jobs, and develops, attracts, and retains talent to fill those jobs
- Incentivize internal innovation and ideas

PUBLIC ENGAGEMENT

- Develop and implement a comprehensive public education and engagement strategy

TECHNICAL READINESS

- Monitor progress through the states of technology maturity
- Collaborate with stakeholders, including federal agencies, to help advance the state of the industry
- Identify the key physical and digital infrastructure needed to support advanced mobility technology integration, and if applicable, develop strategic plans to invest and/or upgrade
- Expand data collection and integration capabilities

STRATEGIC FUNDING OPPORTUNITIES

- Leverage existing funding opportunities
- Create new funding opportunities

ADVANCED MOBILITY INTEGRATION PROCESS

Finally, the Advanced Mobility NC Strategic Plan presents a process by which ideas brought by outside stakeholders or internal staff can be tested against the established goals to determine if and how resources should be allocated to support them. If a decision is made to move forward, specific planning, implementation, and performance measurement aspects such as identifying a project champion, obtaining permits and licenses, and capturing lessons learned are noted to help guide the state partner in project development.