

## Chapter 2: Examine Current Plans

### Introduction

The foundation for *eNEO2050* is well-rooted in NOACA's major regional planning efforts, the state transportation plan, numerous NOACA local planning efforts, a cursory review of other metropolitan planning organizations' (MPOs) long-range plans, and NOACA staff visioning.

NOACA and the other MPOs of Northeast Ohio collaborated to produce [Vibrant NEO 2040 \(2014\)](#), a comprehensive regional vision framework for the future of a 12-county region.<sup>1</sup> This framework, the recipient of the 2015 Daniel Burnham Award for a Comprehensive Plan from the American Planning Association (APA), outlines recommendations, objectives, and strategies to help the region realize its preferred future scenario to do things differently in anticipation of little, if any, population growth over the next 25 years (2015-2040). The following year, NOACA's Board finalized [Going Forward, Together \(2015\)](#), a regional strategic plan that captures and documents a vision, goals, and objectives that form the basis for NOACA's planning efforts.<sup>2</sup> *Going Forward, Together* identifies strategies for how to allocate resources—money, staffing, and Board and stakeholder activities—in pursuit of stated goals and objectives. NOACA's current long-range plan, [Aim Forward 2040 \(2017\)](#) is the agency's first based on the goals, objectives, and strategies defined in *Going Forward, Together*.<sup>3</sup> NOACA staff established *eNEO2050*'s long-range transportation plan (LRTP) goals based on the goals and objectives from *Going Forward, Together*, *Vibrant NEO 2040*, and the state's transportation plan, [Access Ohio 2045 \(AO45\)](#) (see Chapter 1).<sup>4</sup>

These regional and state plans have inspired NOACA staff to develop additional plans that guide the NOACA Board's work in transportation and environmental planning. During the same period, NOACA developed and continue to develop comprehensive plans and studies about the region's current transportation assets, bicycle infrastructure, public transportation and transit-oriented development opportunities, multimodal freight network, specialized mobility services, safety and intelligent transportation systems (ITS), and workforce accessibility and mobility. NOACA also developed a water quality strategic plan, a comprehensive wastewater management and water quality plan, an air quality public education and outreach strategy, and an air quality communication plan. These topical plans help flesh out the broader scope of the larger scale regional and state plans to focus on specific needs to realize Northeast Ohio's desired future.

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<sup>1</sup> Northeast Ohio Sustainable Communities Consortium (NEOSCC) and Sasaki, *Vibrant NEO 2040* (Northeast Ohio Sustainable Communities Consortium, Feb. 2014); <https://vibrantneo.org/vibrantneo-2040/> (accessed April 12, 2021).

<sup>2</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Going Forward, Together* (Cleveland: Northeast Ohio Areawide Coordinating Agency, 2015); <https://www.noaca.org/regional-planning/major-planning-documents/regional-strategic-plan> (accessed April 12, 2021).

<sup>3</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Aim Forward 2040* (Cleveland, Northeast Ohio Areawide Coordinating Agency, June 2017); <https://www.noaca.org/regional-planning/major-planning-documents/aim-forward-2040> (accessed April 12, 2021).

<sup>4</sup> Ohio Department of Transportation (ODOT), *Access Ohio 2045* (Columbus, OH: Ohio Department of Transportation, December 2020); <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/access-ohio-2045/access-ohio-2045#page=1> (accessed April 12, 2021).

NOACA also looked outward and inward to gain better perspective for *eNEO2050*. A cursory review of other MPOs' long-range transportation plans was conducted to provide further guidance to *eNEO2050* development. The primary purpose was to understand how other regions adopted a more comprehensive scope to both the plan's content and the MPO's approach to public stakeholder engagement. The impact of the COVID-19 pandemic, however, provided special challenges to staff ambition (see Chapter 4). NOACA staff also participated in an extensive multiday visioning session to voice their desired inputs to *eNEO2050*. Staff wanted to ensure its content thoroughly accounted for all the aspects of life in Northeast Ohio with a clear relationship to the region's transportation network.

## Regional and State Plans

### *Vibrant NEO 2040 (2014)*

*Vibrant NEO 2040* is a regional visioning framework for 12 counties in Northeast Ohio (including the five counties of NOACA): Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Mahoning, Medina, Portage, Stark, Summit, Trumbull, and Wayne. Its development began in 2010 and concluded in 2014. In 2009, the Northeast Ohio Sustainable Communities Consortium (NEOSCC), a small nonprofit established precisely for this effort, received a grant from the Partnership for Sustainable Communities, a joint effort of three cabinets of the federal government: the Environmental Protection Agency (US EPA), Housing and Urban Development (HUD), and Department of Transportation (US DOT). NEOSCC, a collaboration of 33 board member organizations, provided financial, facilities, and services support, with NOACA as lead agent. Elected officials and stakeholders throughout these communities recognized the unifying issues of housing, transportation, environment, and economy. Many Northeast Ohio communities share assets and challenges, as well as future success or failure.

This process revealed important facts about the course of the region. If Northeast Ohio continued to experience modest population decline and modest employment growth while communities maintained their current approach to land use and infrastructure development, the region would face unprecedented challenges by 2040:

- Continued development at the edges of our metro areas on land that requires new infrastructure and public services.
- Abandonment of existing communities that already have infrastructure and public services.
- Increasing distance between people and their jobs.
- Limited transportation options other than our personal vehicles
- Increased fiscal stress on both households and local governments.

The *Vibrant NEO 2040* effort engaged hundreds of elected and appointed officials and more than 5,600 residents. Outputs included a Conditions & Trends web-based Platform; Regional Analysis of Impediments to Fair Housing Choice and Fair Housing Equity Assessment; regional parcel-level land-use and zoning maps; a public feedback library to make all public input visible; a tool kit and best practices; a policy framework; pilot projects; and metrics of future success.

NEOSCC coordinated five work stream committees: Economic Development, Environment, Housing and Communities, Transportation, and Quality Connected Places. These committees represented more than 120 organizations, facilitated 27 large public events throughout 2013, and coordinated with staff and consultants to conduct two statistically valid surveys (online and telephone). An interactive online tool called “Imagine My NEO” allowed participants to use [CrowdGauge](#) software to explore policy options, investments, and trade-offs to frame their personal vision for the future.<sup>5</sup>

NEOSCC and consultants used all of this qualitative and quantitative data to generate four scenarios for what the future might hold (see Figure 2-1).

**Figure 2-1. Vibrant NEO 2040 Future Scenarios<sup>6</sup>**



NEOSCC compared the four scenarios across a variety of metrics, and Northeast Ohio public stakeholders overwhelmingly opted to pursue the “Do Things Differently” scenario. They made a bold statement that growth was not necessarily the answer, but rather an improved quality of life for the region lay in a different approach to the policies and practices that had driven the region outward from core communities to consume natural areas and farmland with low-density, auto-oriented development. NEOSCC and the consultants then developed recommendations, objectives, and strategies (see Table 1-3 in Chapter 1 of *eNEO2050*) to frame the vision for future implementation.

In 2015, the American Planning Association awarded NEOSCC and NOACA the Daniel Burnham Award, its highest honor for a comprehensive plan, for *Vibrant NEO 2040*. Even though there is no federal funding to support NEOSCC work to implement its recommendations, the group remains committed to the vision. NEOSCC still meets quarterly under the name

<sup>5</sup> Sasaki and Associates, “CrowdGauge,” 2020, <http://crowdgauged.org/> (accessed April 15, 2021).

<sup>6</sup> NEOSCC and Sasaki, *Vibrant NEO 2040*; [https://vibrantneo.org/wp-content/uploads/2014/04/Vibrant-NEO-Final-Report\\_3-31-14\\_lowres\\_ALL.pdf](https://vibrantneo.org/wp-content/uploads/2014/04/Vibrant-NEO-Final-Report_3-31-14_lowres_ALL.pdf) (accessed April 7, 2021).

Vibrant NEO to educate stakeholders, share best practices, and inspire all residents to help realize a sustainable, vibrant, and equitable region.

### *Going Forward Together (2015)*

The NOACA regional strategic plan is an organizational development document. Like *Vibrant NEO 2040*, its focus is the demographic and economic trends that will shape Northeast Ohio over the next 20 to 30 years. A strategic plan captures and documents the ultimate reasons that an agency does what it does, based on input from those who lead, operate, and are served by the organization. *Going Forward, Together* defines the agency's vision and goals, and identifies strategies for how to allocate resources—money, staffing, and Board and stakeholder activities—in pursuit of NOACA's vision and goals.

A vision statement received approval from the Board at its January 2014 meeting: *NOACA will STRENGTHEN regional cohesion, PRESERVE existing infrastructure, and BUILD a sustainable multimodal transportation system to SUPPORT economic development and ENHANCE quality of life in Northeast Ohio.*

The vision statement embodies the five goals of the strategic plan. Objectives were developed to support the goals based on input from the Board activities, visioning workshop, and external and internal scans. Final approval of the strategic plan was in January 2015. Table 1-3 in Chapter 1 of *eNEO2050* includes all of the goals and objectives in *Going Forward, Together* and illustrates how they relate to the recommendations and objectives in *Vibrant NEO 2040* and the *eNEO2050* LRTP goals.

## **Table 2-1. Summary of Key Steps in NOACA Strategic Planning Process<sup>7</sup>**

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<sup>7</sup> NOACA, *Going Forward, Together*.

June 2012	New Executive Director Grace Gallucci is appointed and identifies development of strategic plan as goal for the agency.
July 2012	Executive Director announces development of a strategic plan for the agency at first Board meeting.
July-December 2012	Executive Director meets one-on-one with Board members. The need for, and thoughts, ideas and opinions about, a strategic plan is among the topics of these meetings.
November 2012	NOACA conducts a staff retreat, with a strategic plan among the topics discussed.
December 2012	NOACA conducts a Principles and Goals Workshop with Board members.
January 2013	NOACA Staff and Board members draft a mission statement based on input from the Principles and Goals Workshop in December. The draft mission statement reads as follows: "NOACA will foster the success of communities with regard to quality of life and economic strength through targeted transportation investments that create a multimodal regional transportation system in the counties of Cuyahoga, Geauga, Lake, Lorain, and Medina." Using polling devices, Board members give the proposed mission statement a 70% rate of approval.
February 2013	NOACA holds a Board Retreat to kick off the Regional Strategic Planning effort. With the assistance of Cleveland State University, Input is collected that is later used to develop initial vision statement, goals and objectives.
March 2013	BVU is brought in to assist with evaluation of the board committee structure.
April-June 2013	Board receives results of polling exercise related to the vision statement elements from the retreat and the results of a Board survey related to the Code of Regulations.
July 2013	The consultant team of Parsons Brinckerhoff (PB) and Organizational Effectiveness (OE) Strategies is selected to assist NOACA in the development of the Strategic Plan.
October 2013	NOACA staff and the consultant team hold a Board Visioning Workshop in which Board members provide input on elements of a potential vision statement.
December 2013	Board members select and make minor wording modifications to a proposed vision statement from among three potential vision statements proposed by NOACA staff and the consultant team.
January 2014	Board approves the vision statement identified and developed in the December meeting. NOACA staff and the consultant team hold a Goals and Objectives Development Workshop to identify potential elements of a set of goals and objectives for the Strategic Plan.
February 2014	NOACA Staff, PB and OE Strategies engage in a series of strategies discussions with Board committees.
February-June 2014	NOACA staff and the consultant team, with the addition of Civic Commons at ideastream, solicit public input on the plan vision statement, goals, objectives and strategies at a series of online and in-person forums around Northeast Ohio, culminating in a community forum held at the Idea Center at Public Square on June 4.
July – October 2014	Board review and refining of goals and objectives and preliminary drafting of Strategic Plan Document.
October – December 2015	Final drafting of Strategic Plan Document
January 2015	Board approval of final NOACA Regional Strategic Plan

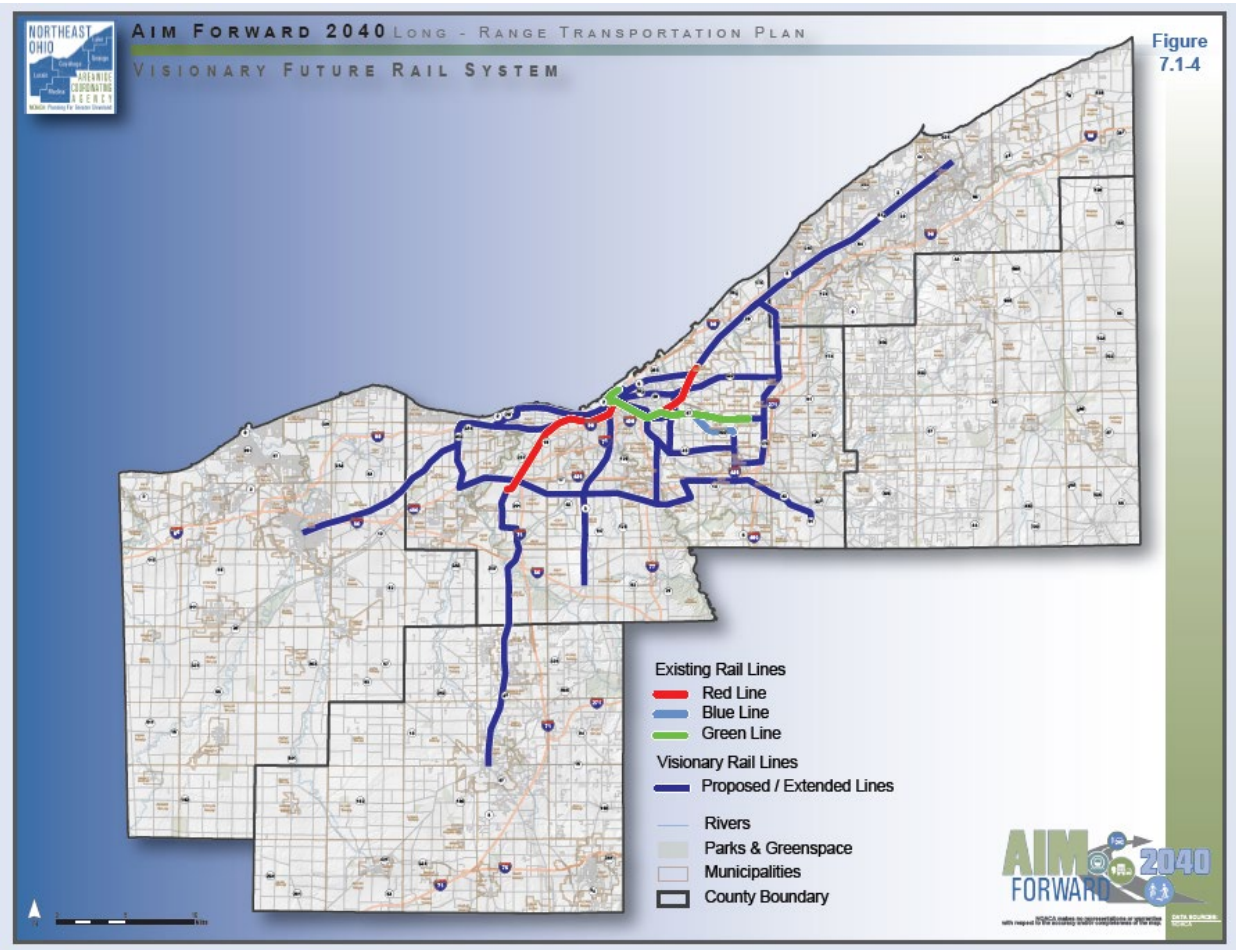
### *Aim Forward 2040 (2017)*

*AIM Forward 2040* is NOACA's current long-range plan; it is the framework for the agency to direct investment for all modes of transportation in Northeast Ohio. These modes include motor vehicles, bridges, public transportation (buses, bus rapid transit, light rail and heavy rail),

bicycles, walking, and the movement of freight. The plan offers a vision of the region's transportation system through the year 2040 and identifies \$15.8 billion in transportation investments that address accessibility, safety, and mobility for people who live and work in Northeast Ohio.

*AIM Forward 2040* makes plans to manage congestion, maintain transportation assets, plan for increased freight movements, increase transportation safety and security, and mitigate environmental impacts. More than 90% of the funds identified in *AIM Forward 2040* will go toward the maintenance of existing infrastructure and investment in transit and livability projects. The plan also highlights visionary infrastructure projects, if the funds and demand justify them as essential for inclusion in NOACA's Transportation Improvement Plan (TIP) (Figure 2-2).

**Figure 2-2. The Envisioned Future Rail Lines<sup>8</sup>**



NOACA must implement *AIM Forward 2040* in the context of *Going Forward, Together* (particularly its vision, goals, and objectives) and the region's population and economic trends. Moreover, transportation investment and the physical location and type of transportation infrastructure have a profound potential to affect the region's health and future. Thus, it is more critical than ever, given the region's longstanding stable population, to plan and develop such

<sup>8</sup> NOACA, *Aim Forward 2040*.

projects strategically. This strategy centers on how to leverage public dollars to best reignite growth and the economic competitiveness of the region.

### *Access Ohio 2045 (AO45)*

Ohio Department of Transportation's (ODOT) long -range transportation plan, *Access Ohio 2045 (AO45)*, envisions the state "connected by a safe, smart, and collaborative transportation system that moves people and freight efficiently and reliably and supports community visions."<sup>9</sup> The plan explores increasing population and commuter changes, and the infrastructure, bridges, sidewalks, and roads needed to accommodate the expected population and economic growth, as well as the innovation of new technology and efficient mobility options.

*AO45* aims to expand transportation data sharing; address security risks to transportation assets, coordinate planning at both system and corridor levels, support more multimodal options, leverage emerging technologies, and advance sustainable transportation funding options. Furthermore, the plan emphasizes the importance of cooperation between ODOT and community stakeholders to accomplish these initiatives.

*AO45* frames its objectives around seven goals (see Figure 2-3). Chapter 1 (Table 1-2) of *eNEO2050* illustrates the relationship between *AO45* goals and *eNEO2050* LRTP goals.

### **Figure 2-3. Access Ohio 2045 Goals and Objectives<sup>10</sup>**

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<sup>9</sup> ODOT, *Access Ohio 2045*.

<sup>10</sup> *Ibid.*



To achieve these goals, AO45 details 13 major strategies, categorized within 5 major themes that emphasize resiliency, equity, and sustainability (see Figure 2-4).

**Figure 2-4. Access Ohio 2045 Themes and Strategies<sup>11</sup>**

<sup>11</sup> Ibid.





## » SAFE

Strategy 1: Ohio will champion initiatives leading to zero transportation deaths and injuries.

Strategy 2: Ohio will proactively address transportation safety, security and environmental risks.



## » SMART

Strategy 3: Ohio will leverage technology and data to improve transportation safety, efficiency and reliability.

Strategy 4: Ohio will evolve its transportation system for a connected and autonomous future.



## » CONNECTED

Strategy 5: Ohio will enhance critical elements of its transportation system to optimize safe, efficient and reliable movement of people and goods.

Strategy 6: Ohio will develop transportation plans for major statewide and regional transportation corridors.



## » COMMUNITY-ORIENTED

Strategy 7: Ohio will advance transportation investments that expand the state's economy and workforce.

Strategy 8: Ohio will advance a transportation system that improves quality of life and moves communities forward for all residents.

Strategy 9: Ohio will increase access to transit and shared mobility services.

Strategy 10: Ohio will advance walking and bicycling as a safe, convenient and accessible transportation option for everyone.



## » COLLABORATIVE

Strategy 11: Ohio will strengthen its transportation partnerships.

Strategy 12: Ohio will expand the transparent use and sharing of transportation data and information.

Strategy 13: Ohio will advance innovative and sustainable transportation funding options.

Additionally, AO45 includes a transportation needs assessment, which outlines needs based on various future conditions. The assessment estimates total statewide transportation needs will cost \$6.4-6.9 billion annually (\$174-194 billion total) through 2045.

## Existing NOACA Plans

Overview

NOACA, and Northeast Ohio are aligned with the regional and state plans described in the previous section, as well as several other recent NOACA planning efforts. These other efforts target specific topics and go into much greater detail than the broader regional plans. Yet, the more targeted plans still reflect NOACA's regional strategic plan and undergird its long-range plan.

The following plans were developed with broad support from NOACA's Board and public stakeholders. The following presentation illustrates how each of these plans informs *eNEO2050*, which, in turn, capitalizes on each plan's advancement of recommendations and implementation actions to improve the region.

Recent NOACA plans include:

- Regional Bike Plan (2013) and ACTIVATE (2021)
- Transportation Asset Management Plan (TAMP) (2016)
- Regional Transit-Oriented Development (TOD) Scorecard and Implementation Plan (2016)
- Multimodal Regional Freight Plan (2017)
- Water Quality Strategic Plan (2017)
- Air Quality Public Education and Outreach Strategy & Communication Plan (2019)
- Intelligent Transportation Systems (ITS) Strategic Plan (2019)
- MOBILIZE: Accessibility for Independence, NOACA's Coordinated Public Transit-Human Services Transportation Plan for Northeast Ohio (2019)
- SAVE: NOACA's Plan for Transportation Safety (2019)
- Workforce Accessibility and Mobility (2019)
- Hyperloop Feasibility Study (2019)
- Clean Water 2020: A 208 Water Quality Plan (2020)
- Regional Strategic Transit Plan (2020)

Table 2-2 illustrates how each of the NOACA plans listed above corresponds to a series of plan themes and also how these plan themes relate to the 15 *eNEO2050* LRTP goals presented in Chapter 1. It is noteworthy that two of the themes (Education & Engagement and Regional Cohesion) are connected to all the local plans listed as well as all of the *eNEO2050* LRTP goals. This makes sense, because all NOACA planning efforts are done in the spirit of transparency, education, and engagement for the benefit of public stakeholders to help build a more cohesive and collaborative Northeast Ohio.

**Table 2-2. Local Plan Themes, Content and eNEO2050 LRTP Goals**

PLAN & ADOPTION YEAR	THEMES & CONTENT														
	Asset Management	Education & Engagement	Livability	Modeling & Data Analysis	Safety	Technology/Innovation	TIP/Policy	Transit	Workforce Mobility	Economy	Environment	Equity	Housing	Regionalism	Sustainability
Vibrant NEO 2040 (2014)	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Regional Bicycle Plan (2013)	✓	✓	✓		✓					✓	✓	✓		✓	
NOACA Strategic Plan (2015)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transportation Asset Management Plan (2016)	✓	✓	✓	✓	✓	✓									✓
TOD Regional Scorecard & Implementation Plan (2016)			✓	✓		✓	✓	✓	✓			✓	✓	✓	✓
Regional Multimodal Freight Plan (2017)	✓		✓			✓			✓					✓	✓
Water Quality Strategic Plan (2017)		✓	✓			✓					✓	✓		✓	✓
Air Quality Comm, Education, & Outreach Plan (2019)		✓	✓			✓	✓		✓	✓	✓			✓	✓
MOBILIZE: Accessibility for Independence (2019)	✓	✓	✓		✓	✓	✓	✓				✓		✓	
SAVE: NOACA's Plan for Transportation Safety (2019)	✓	✓	✓	✓	✓	✓						✓		✓	
Workforce Accessibility & Mobility (2019)	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓
Clean Water 2020 (2020)	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓

## Regional Bicycle Plan (2013) and ACTIVATE (2021)

### Regional Bicycle Plan (2013)

[NOACA's 2013 Regional Bicycle Plan maps](#) highlight necessary improvements to make northeast Ohio more bicycle friendly; they serve as an update to the 2008 Regional Bicycle Transportation Plan.<sup>12</sup> The 2013 plan acknowledges the benefits of a bike-friendly region: a zero-emission mode of transportation to decrease air pollution; health benefits for users; less expensive modal infrastructure; and a safe, efficient form of transportation for those without access to a personal vehicle.

The 2013 plan reviews existing infrastructure, efforts to accomplish bicycling-related goals, and the effectiveness of those efforts. NOACA examined factors such as current bicycling rates, potential demand for bicycle facilities, and volumes and trends for crashes that involved bicyclists.

Building on the 2008 *Regional Bicycle Transportation Plan*, the 2013 plan includes the following goals:

1. Plan and implement bicycle facilities.
2. Create and support new or improved policies and programs related to bicycling.

To accomplish these goals, the 2013 *Regional Bicycle Plan* focuses on the Regional Priority Bikeway Network, a visionary system of interconnected routes throughout northeast Ohio that is both safe and convenient for bicyclists. The plan proposes a multitude of programs to complement infrastructure improvements. Each program includes a suggested lead agency,

<sup>12</sup> NOACA, 2014. Regional Bicycle Plan (accessed 4.9.2021 from <https://www.noaca.org/regional-planning/transportation-planning/bicycle-pedestrian-planning>).

department, or organization, as well as suggested partners, and a list of priorities to achieve implementation.

### ACTIVATE (2021)

**ACTIVATE** is NOACA's new pedestrian and bicycle plan and the first holistic study of pedestrian planning for the region.<sup>13</sup> **ACTIVATE** highlights how communities can plan and construct both short-term, low-cost safety measures and visionary plans for connected biking and walking networks. The verb "ACTIVATE" means to make something active or to convert an immobile object or substance into an active form. Walking and biking are referred to throughout this plan as active transportation, and the title of this plan refers to NOACA's vision to ACTIVATE Northeast Ohio in several key ways (see Figure 2-5).

**Figure 2-5. ACTIVATE Plan Components**



- ACTIVATE STREETS into networks for safe biking and walking
- ACTIVATE COMMUNITIES to plan with local tools and resources
- ACTIVATE PROGRAMS to respond to the demand for biking and walking by encouraging best practices
- Ultimately, ACTIVATE PEOPLE to try biking and walking and reap the physical, economic, and social benefits of active transportation

Early public and stakeholder activities provided significant inputs that coalesced into the themes shown below (Figure 2-6). These themes served to guide the development of the plan's analyses and recommendations.

<sup>13</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *ACTIVATE* (Cleveland, Northeast Ohio Areawide Coordinating Agency, 2021); <https://www.noaca.org/regional-planning/transportation-planning/bicycle-pedestrian-planning/activate#:~:text=In%20late%202019%2C%20NOACA%20began.plan's%20objectives%2C%20needs%20and%20goals> (accessed April 1, 2021).

**Figure 2-6. ACTIVATE Themes**



NOACA also conducted a community survey and focus groups to gather valuable feedback from public stakeholders about Northeast Ohio's bicycle and pedestrian assets, as well as their user experiences. NOACA enjoyed a highly successful engagement effort and continues to develop the final plan to benefit all travelers in Northeast Ohio with the safety, welfare, and positive experience of cyclists and pedestrians as a very high priority. This effort is particularly important given the COVID-19 pandemic, which has emphasized the benefit of more physical activity and the need for more comprehensive multimodal transportation networks, especially those where the individual can be outside confined spaces.

### *Transportation Asset Management Plan (TAMP) (2016)*

#### **Introduction**

The [NOACA Transportation Asset Management Plan \(TAMP\)](#) outlines the existing and planned state of transportation asset management (TAM) in NOACA's five counties.<sup>14</sup> It begins with an overview of TAM and why it is important for the region. The *TAMP* then discusses existing asset conditions and TAM processes. It presents objectives and measures for TAM in the region, discusses performance gaps, and summarizes risks. The *TAMP* includes an assessment of NOACA's financial picture for the next 10 years, along with potential investment strategies, and future TAM process enhancements.

<sup>14</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Transportation Asset Management Plan* (Cleveland: Northeast Ohio Areawide Coordinating Agency, July 2016); <https://www.noaca.org/home/showpublisheddocument/23052/636747889911230000> (accessed April 8, 2021).

Roadway infrastructure provides the backbone of America's transportation system. It sustains the economy and contributes to the competitiveness of both the United States and Northeast Ohio. Transportation agencies recognize the immense need to preserve transportation investments. Therefore, they turn to TAM strategies to maintain, improve, and ensure future generations' ability to travel safely and efficiently.

TAM approaches have gained favor over the past decade. The establishment of a new requirement to develop risk-based TAMPs, as part of the Moving Ahead for Progress in the 21st Century (MAP-21) Act, served as a major milestone. This approach carried forward as part of the Fixing America's Surface Transportation (FAST) Act. While state departments of transportation are the primary focus of the requirement, metropolitan planning organizations also find significant benefit from well-structured TAMPs. MPOs such as NOACA will gain from a forward-thinking preservation approach given the tremendous investment that infrastructure assets represent, and the demand for economic vitality in an era of limited funding.

Other factors driving TAM include an increased emphasis on transparent performance measures in transportation, particularly on roadway and bridge system-wide asset conditions, and pending requirements for targets at the state and metropolitan area levels.

Although TAM can include a variety of functions, activities, and decisions at the state, regional, and local levels, it is most commonly comprises the following:

- Transportation investment policies;
- Institutional relationships between transportation agencies and public/private groups;
- Multimodal transportation planning;
- Program development for capital projects, operations, and maintenance;
- Real-time and periodic system monitoring; and
- Information technology (IT) support activities.

Agencies that implement TAM principles can reap many benefits, including lower long-term costs for infrastructure preservation, improved performance and service to customers, and better cost effectiveness and use of available resources. TAM's focus on performance and outcomes can ultimately result in improved credibility and accountability for decisions and expenditures.

### Goals and Performance Measures

The broad goals for inclusion in the NOACA TAMP are drawn from the agency's vision statement: *NOACA will STRENGTHEN regional cohesion, PRESERVE existing infrastructure, and BUILD a sustainable multimodal transportation system to SUPPORT economic development and ENHANCE quality of life in Northeast Ohio.* All actions of the TAMP should support NOACA's vision and goals. Specific TAMP objectives focus on these goals:

- **STRENGTHEN REGIONAL COHESION**
  - Objective 1: Establish Transportation Asset Management as a regional priority
  - Objective 2: Serve as a liaison for NOACA members and partners such as ODOT and FHWA
  -
- **PRESERVE EXISTING INFRASTRUCTURE**
  - Objective 3: Apply a "fix-it-first" mentality for projects that rely on NOACA funds
  - Objective 4: Achieve a state-of-good-repair for roadway assets

- Objective 5: Promote a least-life-cycle cost approach to transportation infrastructure investment
- **BUILD A SUSTAINABLE MULTIMODAL TRANSPORTATION SYSTEM TO SUPPORT ECONOMIC DEVELOPMENT AND ENHANCE QUALITY OF LIFE**
  - Objective 6: Expand Transportation Asset Management program to other modes

NOACA also focuses on the measurement and improvement of the state of good repair for pavements and bridges in the region. ODOT developed Pavement Condition Ratings (PCRs) to monitor pavement conditions over time. The scorers give each pavement segment a numeric rating between 0 and 100; they start at 100 and deduct points for each observable distress according to guidance issued by ODOT. In its *TAMP*, NOACA sets a tentative target of at least 80 PCR for its average urban and local federal-aid system condition level. The *TAMP* also established a tentative target of 85 percent of the network at or above 55 PCR. NOACA will require further financial analysis to confirm these are sustainable expectations.

FHWA guidelines assign a condition rating of Good, Fair, or Poor based on the minimum National Bridge Inventory (NBI) condition rating of each bridge’s deck, superstructure, or substructure (see Table 2-3). It is recommended that NOACA use percentage of the deck area of bridges that is good or fair based on NBI ratings (>4) to determine the state of good repair (SOGR) for bridges. As part of NOACA’s commitment to maintain regional bridges in SOGR over the life of the *TAMP*, NOACA tentatively sets a target that meets the MAP-21 requirement and dictates that no more than 10% of the total NHS bridge deck area may be on poor, or structurally deficient, bridges.

**Table 2-3. National Bridge Inventory (NBI) Ratings<sup>15</sup>**

## Bridge Condition Ratings

NBI Rating	Bridge Condition	Structural Classification
≥7	Good	Not Deficient
5 or 6	Fair	Not Deficient
≤4	Poor	Deficient

### *Regional TOD Scorecard and Implementation Plan (2016)*

In response to one of *Going Forward, Together’s* objectives, “encourage transit-oriented development in higher-density urban corridors and other higher-density areas of the region and retrofit transit-oriented elements in appropriate lower-density areas,” NOACA developed

<sup>15</sup> Federal Highway Administration (FHWA), *Bridge Preservation Guide: Maintaining a Resilient Infrastructure to Preserve Mobility* (Federal Highway Administration, Spring 2018), <https://www.fhwa.dot.gov/bridge/preservation/guide/guide.pdf> (accessed April 16, 2021).

the [Regional TOD Scorecard and Implementation Plan](#).<sup>16</sup> The plan explores transit-oriented development (TOD): compact, walkable development integrally linked to public transportation, with the goals of increased transit ridership and removed barriers to new development.

The plan is divided into two phases:

1. Phase 1 includes three tasks: 1) the development of the TOD scorecard and typologies, 2) the design of a regional TOD program, and 3) the development of an Age in Place Strategy.
2. Phase 2 consists of the development of an implementation plan for three pilot sites identified from work in Phase 1, which includes a strategy for public engagement.

In Phase 1, a key feature of NOACA's *TOD Scorecard and Implementation Plan* is the TOD Place Typology. The typology sorts the “universe of stations”—42 rail and bus rapid transit stations; 10 bus priority corridors organized into 99 segments; and 10 outlying town centers—into seven categories differentiated by location, connectivity, land use, urban form, and intensity:

- Metro Core
- Town Center
- Neighborhood Center
- Main Street
- Neighborhood Residential
- Industrial/Transitional
- Special Destination

A station's Typology category reflects its existing conditions as well as its future aspirational character. The Typology indicates the ultimate vision for a station area, regardless of current conditions, and is not expected to change unless the community's vision for a neighborhood or district fundamentally changes.

A second analytic framework, the Regional TOD Readiness Scorecard, measures how a station performs relative to the full TOD potential implied by its Place Typology category. There are four overall Readiness scores: Long-Term, Emerging, Ready, and Arrived. The purpose of the Readiness Scorecard is twofold: 1) to identify stations where high-priority investments are needed to support TOD; and 2) to set realistic expectations for the timeframe in which different stations are likely to blossom.

In Phase 2, a market analysis and implementation plan was developed for three pilot sites: West Boulevard Cudell Rapid Station, East 116<sup>th</sup> Rapid Station, and Broadway/Slavic Village Bus Corridor. NOACA can use the methods developed in the *Regional TOD Scorecard and Implementation Plan* as tools for evaluation purposes.

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<sup>16</sup> AECOM, *Regional TOD Scorecard and Implementation Plan* (Cleveland: Northeast Ohio Areawide Coordinating Agency, Nov. 2016); <https://www.noaca.org/home/showpublisheddocument/19936/636590347755130000>. And (accessed April 16, 2021).



## *Multimodal Regional Freight Plan (2017)*

### **Introduction**

Northeast Ohio is a key hub for freight due to its robust multimodal shipping network and easy access to population centers in the United States and Canada. The region has five interstates, an international airport, two major railroad lines, and three Great Lakes port facilities, as well as a developed pipeline system to move liquid products. It is critical for NOACA and its stakeholders to plan and invest in transportation projects that make goods movement into, out of, and through the region as easy possible for all modes. Doing so will help existing businesses grow, encourage the start-up of new businesses, and facilitate relocation of businesses into the region from other parts of the country or world.

NOACA's [\*Multimodal Regional Freight Plan\*](#) provides extensive data on the current freight system and conditions, especially pavement, bridge, and congestion metrics.<sup>17</sup> Intermodal connectors; these are roads that connect air, water, and rail facilities with the highway network are highlighted. Intermodal connectors are vital pieces of the freight system because they enable the movement of goods between different modes for "first and last mile" delivery.

The plan describes each of the different freight modes. While all are viable shipping methods in the region, trucking accounts for roughly 80% of all freight by both volume and value, which closely mirrors the national average. NOACA expect trucking to remain the dominant mode of goods movement. Improved security and resiliency, reduced crashes, lower congestion, and minimal road damage should be objectives of every freight mode, however. Expansion of other modes will also improve air quality, because trucks create more air pollution than rail or water shipping per ton-mile of goods shipped. Redundancy in the system means mitigation of disruption to one mode, since coordinators can shift freight temporarily to other modes.

Different modes are used for different goods and by different types of businesses. Air cargo, due to the speed, is the most expensive option. Only high-value goods or very perishable items go by air (e.g., pharmaceutical products). Rail and water freight providers both serve businesses that ship large items that will not fit on trucks, items that are not time sensitive, and low-value commodity goods (e.g., iron ore, scrap metal, or shelf-stable grains). Trucks serve essentially all other goods, including most commercial and retail products. It is important for business retention and attraction that Northeast Ohio have all modes available.

A SWOT (strengths, weaknesses, opportunities, and threats) analysis for the freight system is illustrative for future planning. Despite the advantages of location and a strong multimodal system, there will be obstacles to growth in Greater Cleveland. Most pressing, expenses outpace revenues for funding infrastructure. The existing system continues to age in older communities, while it expands in newer communities; the current gas tax is insufficient to meet these maintenance and construction needs. A stable but moving regional population means shifting locations of people, businesses, and freight movement patterns. This creates winners and losers among individual communities but has no net benefit for the region. Several technological advancements may change the movement of people and freight (e.g., Hyperloop, autonomous vehicles, or aerial delivery by drone). These will have implications for future spending, particularly if funds remain limited.

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<sup>17</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Multimodal Regional Freight Plan* (Cleveland: Northeast Ohio Areawide Coordinating Agency, 2017); <https://www.noaca.org/home/showpublisheddocument/21293/637249557653870000> (accessed April 10, 2021).

## Goals and Performance Measures

With these factors in mind, NOACA extensively engaged the freight community to develop the following goals and performance measures to meet the needs of freight stakeholders; improve the transportation system for all users; and increase safety, security, and resiliency:

The goals are:

- Prioritize maintenance over capacity additions.
- Facilitate all modes of shipping.
- Use targeted strategies to reduce congestion where it impedes freight movement.

These goals are in line with NOACA's vision statement as well as the *National Freight Strategic Plan* and *Ohio Department of Transportation Comprehensive Freight Plan*. Specific objectives and performance measures (see below) will help NOACA staff prioritize projects and track progress toward goals:

- Average Truck Travel Time Reliability Index on Interstates and the National Highway System
- Pavement condition on freight intermodal connectors
- Pavement condition on corridors where either average daily truck traffic (ADTT) is greater than 1,600 or trucks make up at least 8% of all vehicles
- Number of at-grade railroad crossings on National Highway System roads with at least 19 train crossings per 24 hours, which is the average number of trains per day for all regional crossings<sup>18</sup>

NOACA updates the *Multimodal Regional Freight Plan* every four years to coincide with NOACA's long-range plan. Additionally, NOACA drafts a "State of Freight" memo annually to document project progress and ensure advancement of performance measures. The freight community is engaged throughout to ensure transportation spending reflects regional priorities. This plan therefore provides a blueprint for NOACA and its partners to make decisions that lead to a successful and efficient freight system that advances NOACA's vision and goals.

### *Water Quality Strategic Plan (2017)*

NOACA's [Water Quality Strategic Plan](#) (WQSP) establishes a consensus-driven mission, goals, objectives, and strategies to guide the staff-supported work of the agency.<sup>19</sup> The WQSP builds on current land-use and employment trends that affect water resources and infrastructure in both rural and urban communities.

As the designated "Areawide," NOACA is responsible for water quality and wastewater planning in Northeast Ohio and prepares a 208 Plan (see below) as required by the federal Clean Water

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<sup>18</sup> The Freight Plan was drafted in 2016-2017, and some of the data was several years old. With updated data and changing movement patterns, the average number of trains per day is now 13, not 19. The new figure applies to all current and future freight planning efforts.

<sup>19</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Water Quality Strategic Plan* (Cleveland: Northeast Ohio Areawide Coordinating Agency, December 2017); <https://www.noaca.org/home/showpublisheddocument/22030/636590347755130000> (accessed April 16, 2021).

Act.<sup>20</sup> While there has been marked improvement, there remains a widespread threat to water quality in Northeast Ohio from nonpoint source pollution carried by stormwater runoff from paved surfaces, rooftops, lawns, and farms.

In response to the water quality threats that persist, NOACA collaborated with stakeholders and the public to develop the following goals of the Water Quality Strategic Plan:

1. Support Work to Restore and Protect Lake Erie and the Region's Freshwater Assets
2. Promote Water's Value as a Regional Driver of Economic Competitiveness
3. Identify and Inform Communities & Organizations about Regional Impacts of Local Water Infrastructure Decisions
4. Advance the Philosophy of "One Water" through NOACA's 208 Planning Process
5. Within NOACA's Internal Structure, Consider and Address Potential Water Quality Impacts of Transportation Projects

The implementation opportunities described in the WQSP will help NOACA realize the plan's strategies and meet objectives; however, the WQSP itself requires evaluation and update every five years. Northeast Ohio is a dynamic region, and with shifting patterns in population, employment, development, land use, water quality, and policy changes, the WQSP merits review and reconsideration of the WQSP content by NOACA. There is a critical need to engage stakeholders and the public during the update process to ensure the contents of this plan best serve the interests of the region and help decision makers guide communities and watersheds in the right direction. The WQSP is a road map for NOACA to help the people who call Northeast Ohio home chart their preferred course toward a cleaner future where water is planned, protected, and valued.

#### *Air Quality Public Education and Outreach Strategy & Communication Plan (2019)*

NOACA developed the *Air Quality Public Education and Outreach Strategy & Communication Plan*. These are internal documents NOACA staff use to guide its efforts to raise awareness about persistent air quality issues in Northeast Ohio and to develop strategies to educate public stakeholders about both the problem and potential solutions.

The mission for this strategy:

NOACA will educate the community about the region's air quality challenges and the linkages among air quality, transportation, land use, and public health. NOACA will empower individuals and organizations to improve air quality, in particular through increased use of alternate transportation modes. NOACA will advocate for public policies that provide greater transportation choice, reduce mobile emissions, benefit public health, create economic opportunity, and enhance the quality of life in Northeast Ohio.

The team fleshed out this mission statement into specific goals, attainable objectives, and actionable items to focus NOACA's efforts. The five goals are:

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<sup>20</sup> Areawide Councils of Governments act as the lead planning agencies in 24 Ohio counties (those with large urban populations). These Areawide Agencies prepare and approve the 208 Plan in their counties. The State of Ohio prepares and maintains the 208 Plan applicable in the remaining 64 counties. The Governor then certifies the entire 208 Plan via submission to US EPA for their approval (accessed 4.17.2021 from Ohio EPA (<https://www.epa.ohio.gov/dsw/mgmtplans/208index>)).

1. Increase awareness of the air quality challenge in Northeast Ohio.
2. Educate the community on the causes and potential solutions for the air quality challenge in Northeast Ohio.
3. Empower employers, health-care providers, and educational institutions with resources to be air quality champions.
4. Promote a culture at NOACA that better integrates air quality with other programs.
5. Promote strategies outside NOACA to change transportation and infrastructure policy and increase clean air funding.

The strategy identifies five major target audiences: 1) the general public; 2) businesses and organizations (employers, health-care providers, religious institutions, and educators); 3) the media; 4) NOACA staff, Board, Committee, Subcommittee, and Council members; and 5) government leaders and elected officials. Additionally, the team prioritized three media categories to interact best with those audiences:

1. Owned media (website, social media, content marketing, email campaigns)
2. Paid media (social media ads, radio, television, print, and outdoor)
3. Earned media (media relationships, lunch and learns, conferences and events, Gohio Commute promotions, search engine optimization)

A communication plan is a policy-driven approach to provide stakeholders with information. Less formally, this document is a roadmap to get NOACA's message out to the right people. NOACA's *Communication Plan* to accompany the *Air Quality Public Education and Outreach Strategy* formally defines to whom NOACA should give specific information, how NOACA should deliver that information, and what communication channels NOACA should use to deliver the information. The *Communication Plan* also includes three budget ranges and corresponding message impact based on the level of investment NOACA will make to educate and engage public stakeholders about Northeast Ohio air quality.

### *Intelligent Transportation Systems (ITS) Strategic Plan (2019)*

NOACA developed the [\*Northeast Ohio Intelligent Transportation Systems \(ITS\) Strategic Plan\*](#) as part of the agency's effort to update the region's ITS Architecture.<sup>21</sup> An ITS Architecture is a structured plan that defines and integrates ITS technologies at a national, state, or regional level. The ITS Architecture presents a structured framework to describe the interaction among ITS stakeholders, inventory, and service packages; and a blueprint for efficient ITS deployment and operation.<sup>22</sup> An ITS Strategic Plan should clearly define the region's vision for ITS implementation, identify regional ITS gaps and needs, and present feasible ITS projects to consider for short, medium, and long-term implementation. An ITS Strategic Plan aligns closely with the ITS Architecture; it supports the identification and understanding of projects to be considered and included in the regional ITS Architecture.

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<sup>21</sup> Cambridge Systematics, Inc. (, *Northeast Ohio ITS Strategic Plan* (Cleveland: Northeast Ohio Areawide Coordinating Agency, September 2019); <https://www.noaca.org/regional-planning/transportation-planning/operations-its-planning> (accessed April 14, 2021). This link does not take you to the ITS Strategic Plan; this one does: [https://noaca-its.aecomonline.net/NOACA\\_ITSSStrategicPlan\\_2019-09.pdf](https://noaca-its.aecomonline.net/NOACA_ITSSStrategicPlan_2019-09.pdf). And it looks as if Cambridge Systematics is the author.

<sup>22</sup> United States Department of Transportation (US DOT), "Architecture Reference for Cooperative and Intelligent Transportation," (<https://local.iteris.com/arc-it/> (accessed April 15, 2019).

US DOT describes ITS as “technologies [that] improve transportation safety and mobility, reduce environmental impacts, and enhance productivity through the integration of advanced communications-based information and electronic technologies into the transportation infrastructure and vehicles.”<sup>23</sup> ITS includes the planning, design, and implementation of technology on transportation infrastructure and services to meet transportation needs better and reduce negative externalities on the environment. ITS technologies encompass all modes, from pedestrian activities to freight movement. The goal of ITS implementation is to enhance the mobility and accessibility in a defined region and help users go where and when they want to go in an easier, and cleaner, manner.

The *Northeast Ohio ITS Strategic Plan* aligns with NOACA’s regional strategic plan goals from *Going Forward, Together*. The ITS Strategic Plan vision is to develop a roadmap to encourage efficient technology deployment to use the region’s infrastructure better; enhance communication across regional stakeholders; and position the region for emerging technology. To reach this vision, the Northeast Ohio ITS Strategic Plan includes five general objectives. Table 2-4 presents a summary of the ITS Strategic Plan objectives, and maps these objectives to corresponding regional strategic plan goals.

**Table 2-4. Northeast Ohio ITS Strategic Plan Objectives<sup>24</sup>**

ITS Strategic Plan Objectives	Regional Strategic Plan Goals				
	STRENGTHEN regional cohesion	PRESERVE existing infrastructure	BUILD a sustainable, multi-modal transportation system	SUPPORT economic development	ENHANCE quality of life in Northeast Ohio
Develop a complete inventory of current ITS equipment and technology	✓	✓			
Collaborate with regional stakeholders to identify regional transportation gaps and needs	✓		✓		
Identify planned and proposed ITS projects to address regional needs and emerging technology	✓		✓	✓	✓
Update the region’s ITS Architecture to incorporate ITS Strategic Plan			✓	✓	✓
Develop an initial assessment of projects and a proposed project implementation strategy			✓	✓	✓

One of the objectives in Figure 2-7 is “develop an initial assessment of projects and a proposed project implementation strategy.” Such a strategy builds upon identified projects and their analysis to define a path toward implementation. The ITS projects NOACA staff and the consultants identified and described the *ITS Strategic Plan* respond to a variety of needs in

<sup>23</sup> U.S. Department of Transportation, *ITS Strategic Plan, 2015 – 2019*, Intelligent Transportation System (ITS) Joint Program Office (JPO), FHWA-JPO-14-145 (Dec. 2014); <https://www.its.dot.gov/strategicplan.pdf> (accessed January 15, 2019).

<sup>24</sup> NOACA, *Northeast Ohio ITS Strategic Plan*.

Northeast Ohio, from short-term solutions to current problems to long-term visions. As such, projects may have different levels of detail in concept definition; it is a challenge to compare these projects to define an implementation path.

The *ITS Strategic Plan* implementation strategy is based on a project scoring analysis. To score the different types of projects fairly, it was important to identify scoring criteria that could be comparable among the different projects and their respective stages. Through this prioritization strategy, it was possible to score the projects and rank them in order of relevance and importance to develop the implementation strategy. Based on the results obtained from the project prioritization analysis, NOACA staff put forth recommendations to promote the implementation of projects according to their expected implementation time frame (Figure 2-7).

**Figure 2-7. Northeast Ohio ITS Projects Implementation Strategy<sup>25</sup>**

#### *8.4.1 Short term implementation (1 to 3 years)*

In a short term, the region could focus on more on local projects, with low cost projects such as Signal Timing Optimization Program and the Automated Traffic Signal Performance Measures projects scoring the highest in the region. There are also plenty of signal implementation projects that could benefit the region at a low cost and fast implementation.

At the State level, there are projects that can have significant impact in the region that may be considered as an expansion of current solutions, such as “ODOT Advanced Traffic Management System (ATMS)”, “Expand Traveler Information Delivery Methods” and “Freeway Management System (FMS) Expansion” projects. These projects are already operating at the State level, and could be considered in the short term for the NOACA region.

At the regional level, it is important to continue promoting ITS solutions in public transportation services, promoting the implementation of projects such as CAD/AVL on GCRTA, Laketran, and other municipal transit agencies’ vehicles.

#### *8.4.2 Medium term implementation (3 to 6 years)*

In the medium term implementation, the project with the highest score was the Regional Traffic Management Center (TMC). This project, although it could represent a significant investment, could help promote other ITS solutions in the region. A regional TMC would also enhance communication within regional agencies, and allow traffic operators to implement strategies to address recurrent and non-recurrent congestion in the region.

At the state level, the project with the highest score was the Transportation Systems Management and Operations (TSMO) project. This project is currently being implemented, and it is suggested to continue promoting its implementation to enhance coordination among regional stakeholder, and improve mobility in the region.

#### *8.4.3 Long term implementation (6 to 9 years)*

In the long term, the projects with the highest scores were all State projects. In a long term future, and considering that short and medium term projects have been implemented, it is possible to consider projects and strategies that rely heavily on new technology. These projects include the “Truck Parking Information Management System (TPIMS)”, “Freeway Managed Lanes”, and “Freeway Speed Harmonization.

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<sup>25</sup> Ibid.

NOACA's *Mobilize: Accessibility for Independence*<sup>26</sup> focuses on the transportation needs of seniors and individuals with disabilities, and barriers that may hinder their personal mobility. As the federally mandated Coordinated Public Transit-Human Services Transportation Plan, *Mobilize* assesses needs and available resources to coordinate transportation services and improve these individuals' mobility in Northeast Ohio. The plan also acts as an evaluation tool to prioritize project funding for the Federal Transit Administration's (FTA's) Enhanced Mobility for Seniors and Individuals with Disabilities (Section 5310) program.

The plan accounts for the target population within the NOACA region, as well as projections and trends. NOACA reviewed current U.S. Census data, including American Community Survey (ACS) projections, and projected that Northeast Ohio will experience a 40% population increase in seniors by 2040. Additionally, data shows 14% of the region's total population includes individuals with disabilities. Given both age and disability, 35% of seniors identify as disabled. These projections suggest the demand for mobility options and transportation services will also grow.

In *Mobilize*, NOACA also examined the current state of mobility in Northeast Ohio through existing transportation options and available specialized services. NOACA also explored the existing need for specialized mobility options. NOACA facilitated public meetings in each of the five counties and sought feedback at community events and stakeholder/advisory meetings. Additionally, NOACA developed and distributed a Rider/Client Survey and Provider/Stakeholder Survey to gather both statistical and anecdotal feedback about regional transportation needs.

*Mobilize* outlines Goals for the Future and Strategies for Implementation. The four goals address the mobility of seniors and individuals with disabilities in Northeast Ohio, while each strategy furthers the overarching goals of the Coordinated Plan. The strategies include "Potential Actions" that serve as launching points for implementation. NOACA staff prioritized strategies by anticipated funding, available resources, and time frame of implementation.

#### Goals for the Future

- 1) Improve and expand transportation options for seniors and individuals with disabilities
- 2) Improve accessibility, affordability, and quality of transportation services for seniors and individuals with disabilities
- 3) Improve coordination of transportation services and resources
- 4) Increase awareness of transportation issues and resources

#### Strategies for Implementation

- 1) Provide platform for identifying transportation resources and service
- 2) Develop and implement educational programs and training opportunities for seniors, individuals with disabilities, advocates, stakeholders, and drivers
- 3) Explore accessibility and relationships with transportation network companies
- 4) Mitigate environmental barriers
- 5) Use technologies to improve communication between riders, drivers, and transportation providers
- 6) Improve/increase night, weekend, and last-minute transportation options
- 7) Improve access to underserved and unserved areas

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<sup>26</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Mobilize: Accessibility for Independence* (Cleveland: Northeast Ohio Areawide Coordinating Agency, June 2019); [https://www.noaca.org/home/showpublisheddocument/24371/637061460339570000\\_\(accessed March 1, 2021\)](https://www.noaca.org/home/showpublisheddocument/24371/637061460339570000_(accessed March 1, 2021)).

- 8) Improve cross-county transportation options and efficiencies
- 9) Improve frequency and timeliness of service

### *SAVE: NOACA's Plan for Transportation Safety (2019)*

The purpose of *SAVE: NOACA's Plan for Transportation Safety* (aka the "SAVE" Plan) is to save lives in the NOACA region through strategies and actions to reduce the most severe crashes that result in fatalities and serious injuries in Northeast Ohio.<sup>27</sup> The *SAVE Plan* is a localized companion document that supports ODOT's *Strategic Highway Safety Plan* (SHSP), which is the cornerstone of the federal Highway Safety Improvement Program (HSIP) in Ohio.

NOACA developed the *SAVE Plan* with the vision that traffic deaths and injuries are preventable with appropriate planning, policies, and programs. The long-term goal is to reduce the number of fatalities and serious injuries by 50% by the year 2040. Regional data from State of Safety reports helped NOACA identify emphasis areas to reflect regional safety priorities. NOACA, its member communities, and its partner agencies identified and quantified the magnitude of the problem in specific emphasis areas to focus the collective resources of the region on what is most critical to improve safety for all road users. These areas are where NOACA trends higher than the state average, as well as other key statewide areas. The 10 emphasis areas are Intersection, Roadway Departure, Young Driver, Speed, Impaired Driving, Older Driver, Distracted Driving, Pedestrian, Motorcycle, and Bicycle.

A safer transportation network requires stakeholders to address the interaction among the infrastructure, vehicles, and the skill and behavior of travelers. To this end, the strategies and actions recommended in the *SAVE Plan* incorporate a "6 E's" approach into the safety planning process: engineering, education, enforcement, emergency response, evaluation, and equity. All play a key role in the prevention of severe crashes and saving lives in the areas of greatest need. As an MPO, NOACA is well suited to take action on strategies related to "evaluation" and "engineering," given that a primary function of MPOs is to coordinate the planning and implementation of transportation infrastructure throughout the region.

Because technical analysis is one of NOACA's strengths, actions that support the strategies of the *SAVE Plan* tend to focus on the analysis and evaluation of crash data at the regional level. Perhaps the most important task staff perform in support of the *SAVE Plan* is to identify regional safety priority locations through evaluation of historical crash performance at intersections and along roadway corridors. Regional safety priority lists account for the total number of all crashes and the combined number of fatalities and serious injuries (FSIs) that have occurred at intersections or along one-mile defined-length corridors along *all* roads (not just numbered state routes like ODOT's HSIP lists) in the region's non-freeway network. Locations that experience FSIs received greater emphasis over the total count of all crashes to align regional priorities with the national emphasis outlined in the FAST Act.

NOACA has recently embarked on a safety initiative to develop a predictive method for urban and suburban arterial streets and intersections in all cities and villages in the region. This study has four objectives:

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<sup>27</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *SAVE: NOACA's Plan for Transportation Safety* (Cleveland: Northeast Ohio Areawide Coordinating Agency, May 2019); <https://www.noaca.org/home/showpublisheddocument/23712/636928352508970000> (accessed April 15, 2021).



- Provide a structured methodology and develop predictive models to estimate the expected average crash frequency and crash severity
- Produce a separate safety report for each community in the NOACA region
- Prioritize the expected crash locations locally and regionally
- Recommend crash mitigation remedies to communities

This study applies the Highway Safety Manual methodology and uses the crash data for the calibration stage of the developed predictive models. The results will help cities and villages rank safety priorities on arterial streets and intersections within their jurisdictions for individual communities.

NOACA also recognizes the importance of other “E’s,” and can support partners to improve the “behavior” elements of transportation safety through its stature as a regional leader. NOACA can connect the planners, engineers, and officials at local governments with resources that support and promote actions directed toward “education,” “enforcement,” and “equity.”

### *Workforce Access and Mobility Study (2019)*

Transportation access for workers to jobs is important to the economic vitality of a region, as well as a social equity issue with regard to Environmental Justice populations (see Chapter 1). NOACA conducted its [\*Workforce Access and Mobility Study\*](#) to analyze the accessibility of job hubs in the region with a mathematical model, and to recommend strategies to improve access and mobility of workers.<sup>28</sup> The study examines both the number of available workers in an area and transportation (workforce information). The commute time during the morning peak period is the most important concern for workers (by personal vehicle and transit). The combination of travel time measure with workforce information provides a powerful transportation planning tool.

The *Workforce Access and Mobility Study* also presents annual benefits of travel time and congestion savings for each percent of the worker-employer mismatch reduction and recommends a number of transportation and land-use solutions to alleviate the overall strain to the transportation system these mismatches cause. To reduce mismatches and implement the study’s recommendations, NOACA staff recommended the following transportation and land-use solutions:

- Transit Solutions
  - Schedule more frequent express and local buses to major regional job hubs
  - Implement low-cost traffic engineering solutions at identified arterial bottleneck locations on transit routes
  - Extend the transit network to/from major regional job hubs and intercounty transit services
  - Add more park-and-ride locations throughout the region
  - Dedicate highway lanes to express buses and car pools
  - Develop more bike lanes to access major transit stations
- Land-use Solutions
  - Encourage mixed-use development along existing major transit corridors
  - Encourage mixed-use development around job hubs

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<sup>28</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Workforce Access and Mobility Study* (Cleveland: Northeast Ohio Areawide Coordinating Agency, Nov. 2019); <https://www.noaca.org/home/showpublisheddocument/24551/637117481132970000> (accessed March 15, 2021).

- Support policies for housing development closer to job hubs
- Encourage businesses to locate near existing transit services, particularly rail and bus rapid transit
- NOACA Policies: The potential planning policies currently under discussion with NOACA's Policy Committee are:
  - Support and prioritize transportation funding, especially transit expansion and enhancements around major regional job hubs
  - Support and prioritize funding for multimodal accessibility to job hubs and connections to transit services
  - Support a regionalized transit system—intercounty transit routes and expansion of park and ride systems
  - Encourage efficient mixed-use development
  - Implement a mobility-accessibility study for any current and potential employment centers

The *Workforce Access and Mobility Study* can encourage the business community and government organizations to consider siting their locations near the workforce during the planning and decision-making process to create shorter work commutes. Business site selection and housing incentive programs should attempt to match the industry sectors of existing employment centers with workers of a required skill-set who reside within a shorter distance. Such approaches will save commute time, alleviate traffic congestion, reduce accidents, and mitigate pollution to enhance quality of life.

### *Hyperloop Feasibility Study (2019)*

On February 26, 2018, the Northeast Ohio Areawide Coordinating Agency (NOACA) and Hyperloop Transportation Technologies (HTT) entered into a public private partnership to complete a feasibility study for the technical analysis and evaluation of a Cleveland, Ohio to Chicago, Illinois and Pittsburgh, Pennsylvania corridor; known as the Great Lakes Hyperloop Feasibility Study. The project launched on July 1, 2018 with the feasibility study being completed December 2019. NOACA also conducted a peer review of the feasibility study with participants from Cleveland State University, Carnegie Mellon, The University of Illinois Chicago and Northwestern University to provide an independent review of the project framework, assumptions, and analysis approach. The project had many collaborating partners such as: Illinois Department of Transportation, Indiana Toll Road, Federal Highway Administration, NASA, Eastgate Regional Council of Governments, Erie Regional Planning Commission, Southwestern Pennsylvania Commission, Team NEO, and Toledo Metropolitan Area Council of Governments.

The feasibility study assessed the technical and financial feasibility for the environmental, financial, operational, and structural requirements to create a Hyperloop Transportation System. The feasibility study also addressed the requirements for building and achieving optimal alignment of the system, siting requirements for location of major structures, assessing the constraints on alignment of the system, integrating the Hyperloop transportation system with existing transportation infrastructure, and identifying issues with construction of the optimized system.

The Feasibility Study for the Great Lakes Hyperloop revealed positive financial and cost benefit results creating a strong case for developing the corridor connecting Chicago, Cleveland and Pittsburgh as a passenger and freight system. As a result of these positive findings the

Preliminary Development phase becomes the next necessary step forward in the project development process.

### *Clean Water 2020 (2020)*

NOACA is one of six Areawides designated by the Ohio governor to develop and implement wastewater management and water quality plans (208 plans) as required by Section 208 of the Clean Water Act (CWA). NOACA's 208 plan, [Clean Water 2020](#), guides local water quality improvement efforts.<sup>29</sup> Within the plan, NOACA designate the management responsibilities for wastewater, point source, and nonpoint source pollution control within Northeast Ohio. *Clean Water 2020* is a comprehensive update of *Clean Water 2000*, and serves as the region's wastewater management and water quality plan for the next 20 years.

*Clean Water 2020* focuses on the protection and restoration of water resources in a region where the population has slowly declined while it has spread out over a larger area. This pattern of lower density and a larger development footprint results in higher funding demands from fewer people both to construct new infrastructure and to maintain existing, aging infrastructure. *Clean Water 2020* emphasizes the optimization of existing infrastructure; minimization of development impacts associated with sanitary sewer extensions; protection of regional water quality improvements; support for watershed planning, protection, and restoration of critical water resources; and support for efforts to manage stormwater runoff and on-site sewage treatment systems.

The following goals served as a framework for the development of *Clean Water 2020*:

1. Optimize investment in existing infrastructure to support existing and infill development and not encourage new development on greenfield sites.
2. Provide a framework for locally determined development density that mitigates water quality impacts.
3. Protect regional water quality gains and guide implementation measures to improve water resources that do not yet meet designated uses.
4. Support programs that address stormwater and sewage treatment systems management.
5. Protect and restore valuable water resource areas.
6. Support watershed planning activities that address point and nonpoint source pollution.
7. Educate local decision makers on regional water quality management issues.
8. Create a plan that can meet the future water quality needs of Northeast Ohio.
9. Educate and solicit support for implementation of *Clean Water 2020*.
10. Allow flexibility in the plan to adapt to changes in future water quality needs of Northeast Ohio.

### *Regional Strategic Transit Plan (2020)*

In the last few decades, the NOACA region has experienced significant changes in population, land use, travel patterns, and funding mechanisms. These changes have led to population shifts from urban to suburban/exurban areas; employment shifts from the core cities to edge communities; and lower transit ridership. Several previous efforts have called for a more

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<sup>29</sup> Northeast Ohio Areawide Coordinating Agency (NOACA), *Clean Water 2020* (Cleveland: Northeast Ohio Areawide Coordinating Agency, Sept. 11, 2020); <https://www.noaca.org/home/showpublisheddocument/25346/637359378998830000> (accessed Feb. 10, 2021).

strategic and cohesive approach to regional transit: NOACA's *Going Forward, Together*, the 2014 *Ohio Statewide Transit Needs Study, Build Your Own Transit System*; and results from *CrowdGauge*.

The purpose of the recently completed *Regional Strategic Transit Plan* is to support the development of a cohesive and coordinated vision for public transit investment in the NOACA region. The five public transit agencies in the region are Greater Cleveland Regional Transit Authority (GCRTA), Laketran, Lorain County Transit (LCT), Medina County Public Transit (MCPT), and Geauga County Transit (GCT). This study sought to do the following:

1. Analyze current transit service, needs, gaps, and areas of potential improvement and enhancement; analyze the projected future population and service needs (regional); determine the transit options required to serve the NOACA region effectively as well as how to best connect the region over a 10-year horizon.
2. Develop a plan that supports the development of a cohesive, coordinated vision for investment in public transit on a regional scale; identify opportunities, advantages, disadvantages, and barriers to service enhancement or service expansion.
3. Improve coordination of the five current public transit agencies listed above and examine opportunities for enhanced regional coordination with neighboring public and private transit systems and providers.
4. Analyze current funding mechanisms and determine potential new sources of funding necessary to meet projected needs.
5. Prepare a strategic plan that identifies strategies to enhance mobility across the region (see Table 2-5).

**Table 2-5. Summary of Recommended Action Strategies<sup>30</sup>**

Short-Term Actions (1 to 5 Years)	Long-Term Actions (5 to 10 Years)	Aspirational Actions (5-to 10 Years with further investigation)
<ul style="list-style-type: none"> <li>• Expansion of demand response service design to enhance intercounty service                             <ul style="list-style-type: none"> <li>– Alignment of eligibility criteria</li> <li>– Development of cost-sharing for cross-boundary service where warranted for seamless transit</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Intercounty transit service                             <ul style="list-style-type: none"> <li>– Commuter services to University Circle</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Regional high capacity transit                             <ul style="list-style-type: none"> <li>– Explore additional connections: Lorain/Elyria–Westlake-Rocky River-Lakewood-Cleveland</li> <li>– Cleveland-Solon</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Multi-jurisdictional procurement and support                             <ul style="list-style-type: none"> <li>– Consider single procurement for service contractors</li> <li>– Advance existing NEORide initiatives for joint vehicle and equipment procurements</li> <li>– Consider centralized scheduling and dispatching for regional demand response transit</li> <li>– Continue to collaborate through active information technology (IT) planning on shared IT services</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Regional Service                             <ul style="list-style-type: none"> <li>– Micro mobility, shared use mobility, active modes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Connections to Areas Outside NOACA (High-Quality Transit/DR/MB)                             <ul style="list-style-type: none"> <li>– Canton-Akron-Cleveland</li> <li>– Medina-Akron bus route</li> <li>– Existing plans for intercity transportation</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Unified regional transit information systems                             <ul style="list-style-type: none"> <li>– Provide unified graphics and combined route maps to support cohesive regional transit</li> <li>– Provide regional transit information helpline or website. (e.g., 411 number)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Support Functions                             <ul style="list-style-type: none"> <li>– Shared administrative functions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Regional Transit Funding                             <ul style="list-style-type: none"> <li>– Allocation of benefit from cross boundary travel</li> <li>– Contributions from existing public assistance sources</li> <li>– Innovative plans for additional funding to capture regional synergies</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Coordinated regional fare policies                             <ul style="list-style-type: none"> <li>– Encourage the use of existing unified fare collection systems</li> <li>– Coordinate regional fare structures</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Customer Interface                             <ul style="list-style-type: none"> <li>– Fare policy alignment</li> </ul> </li> </ul>	

## Review of Metropolitan Planning Organizations’ Long-Range Transportation Plans and Regional Transportation Plans

Very early in the NOACA visioning process for the scope of its 2021 long-range plan, NOACA staff conducted a review of metropolitan planning organizations’ (MPO) long-range transportation plans (LRTPs) and regional transportation plans (RTPs), along with associated documents. The review covered 11 such plans from peer MPOs during the first quarter of 2020. NOACA staff conducted a review of various plan elements and public participation plans. NOACA staff used this review to establish a framework for further *eNEO2050* thematic development. Table 2-6 lists the documents that NOACA staff reviewed.

<sup>30</sup> NOACA staff and consultants completed the Regional Strategic Transit Plan in early 2021; pending post on NOACA website.

**Table 2-6. Long-Range Transportation Plans and Regional Transportation Plans Included in NOACA Staff Review**

<b>MPO Agency</b>	<b>Location</b>	<b>Document Plan Name</b>
Atlanta Regional Council (ARC)	Atlanta, GA	<i>The Atlanta Region's Plan 2050</i>
Chicago Metropolitan Agency for Planning (CMAP)	Chicago, IL	<i>On to 2050 Long-Range Plan</i>
Ohio-Kentucky-Indiana Council of Governments (OKI)	Cincinnati, OH	<i>2040 OKI Regional Transportation Plan</i>
The Mid-Ohio Regional Planning Commission(MORPC)	Columbus, OH	<i>2020-2050 Metropolitan Transportation Plan</i>
Denver Region Council of Governments (DRCOG)	Denver, CO	<i>Metro Vision 2050</i>
Houston-Galveston Council of Governments (HGAC)	Houston, TX	<i>HGAC 2045 Regional Transportation Plan</i>
Mid-America Regional Council (MARC)	Kansas City, MO	<i>Connected KC 2050</i>
South California Association of Governments (SCAG)	Los Angeles, CA	<i>SCAG 2012-2035 Sustainable Communities Strategy</i>
Southwest Pennsylvania Commission (SPC)	Pittsburgh, PA	<i>SmartMoves for a Changing Region 2050</i>
Wasatch Front Regional Council (WFRC)	Salt Lake City, UT	<i>Explore. Choose. Prioritize. Implement. 2050 Regional Plan</i>
The San Diego Association of Governments (SANDAG)	San Diego, CA	<i>SANDAG 2050 Regional Plan</i>

NOACA staff learned that the majority of reviewed documents dated to within the past five years and used a 30-year planning horizon. This makes sense because FHWA requires MPOs to update their LRTPs every four years and use a minimum 20-year planning horizon. During its review process, NOACA staff discovered commonalities among the 30+ plan elements included in these 11 plans. Many of these themes were consistent across all the MPO plans NOACA staff reviewed. Figure 2-9 shows a word cloud NOACA staff created to highlight the themes that appeared most frequently across the plan elements. For readers who may not be familiar with the term, a word cloud is an electronic image that shows words used in a particular piece of electronic text or series of texts. The words are different sizes according to how often they are used in the text.<sup>31</sup>

Figure 2-8 portrays several themes quite prominently, which became central to *eNEO2050*:

- Transportation Choices
- Placemaking
- Livability
- Mobility
- Vitality
- Environmental Justice

<sup>31</sup> Cambridge Dictionary, Definition of “word cloud,” 2021, <https://dictionary.cambridge.org/us/dictionary/english/word-cloud> (accessed April 16, 2021).

**Figure 2.8: Summary of Plan Element Themes**



NOACA staff also reviewed the MPOs’ public participation plans for ideas on how to elevate the regional transportation conversation to diverse audiences in multiple formats. Many of the MPOs’ plans illustrated engagement in various formats. These formats ranged from traditional, “in-person” community meetings and workshops to innovative “YouTube” videos. Below is a summary of the different approaches to public engagement NOACA staff uncovered in the reviewed plans:

- Traditional in-person community meetings
- In-person, off-site community workshops
- Facebook Live and other social media platforms
- Video series posted on various outlets (e.g., YouTube) about important regional topics
- Pop-up engagements at regional destinations, events, and major gatherings
- Interactive iPad kiosks with questionnaires
- Online surveys and interactive online games
- Advisory panels and mailing lists to target environmental social communities and youth stakeholders (ages 14-18)

NOACA staff considered a combination of many of these approaches, but due to the COVID-19 pandemic, a different engagement plan was necessary. NOACA developed a creative and entrepreneurial approach that did not involve a mass gathering of residents and stakeholders but still had the ability to reach a critical mass of the population. For more information on NOACA’s public engagement process, please see Chapter 4.

## NOACA Staff Visioning Session

NOACA launched the long-range plan process in January 2020 with a significant media event; one of the early follow-ups to that event was a staff-wide visioning session held on March 12, 2020, just days before NOACA and most other employers instituted COVID-19 remote work policies that remain in effect in April 2021. NOACA staff collaborated during the four-hour session that focused on the agency's five strategic goals:

1. STRENGTHEN regional cohesion
2. PRESERVE existing infrastructure
3. BUILD a sustainable, multimodal transportation system
4. SUPPORT economic development
5. ENHANCE quality of life in Northeast Ohio

NOACA's senior management team randomly assigned staff to one of five stations (5-7 persons per station), each focused on one of the NOACA goals. With questions to prompt discussion (see below) and the directive to "think big and outside the box," the groups spent 20 minutes per session in collaborative brainstorming while volunteer scribes jotted notes on large flip charts. At the end of each session, scribes "reported out" the ideas generated at their particular station to the whole. This process continued until all staff members had the opportunity to participate in the five stations (e.g., five sessions).

The visioning session concluded with flip chart sheets displayed throughout the room, and staff members asked to vote for their favorite ideas via sticky labels of different colors. Select NOACA staff recorded all feedback and votes from these flip chart sheets and captured them in a Visioning Session matrix (see Table 2-7).



**Table 2-7. NOACA Staff Visioning Session Feedback Matrix and Plan Focus Areas/Themes**

NOACA STAFF VISIONING SESSION: MARCH 12, 2020 FEEDBACK MATRIX & PLAN FOCUS AREAS/THEMES				
NOACA GOALS	VISIONING PROMPTS			
	What does this goal mean to you?	What are the top 3 challenges?	What are visionary ways to achieve this goal?	How does this goal translate
<b>STRENGTHEN</b> regional cohesion	<ul style="list-style-type: none"> <li>* regional identity (1)</li> <li>* efficiency</li> <li>* collaboration</li> <li>* regional scale and scope</li> <li>* larger than just NOACA's 5 counties</li> <li>* common goals (we're in this together)</li> </ul>	<ul style="list-style-type: none"> <li>* income segregation (1)</li> <li>* urban, suburban, exurban, rural fragmentation</li> <li>* competing interests</li> <li>* competition for resources</li> <li>* desire for local autonomy/Home Rule</li> </ul>	<ul style="list-style-type: none"> <li>* regional corridor improvements (revitalize arterials) (5)</li> <li>* one-region government (7 counties) (4)</li> <li>* accessible, multi-modal transportation network (3)</li> <li>* cost-sharing, collaboration (1)</li> <li>* regional conference for decision-makers (2)</li> <li>* welcome immigrants (2)</li> <li>* school funding overhaul (1)</li> <li>* consolidate regional services and systems</li> <li>* revenue sharing</li> </ul>	<ul style="list-style-type: none"> <li>* expand NEOSCC framework (2)</li> <li>* MPO collaboration (4)</li> <li>* MSA project (1)</li> <li>* Lake Erie protection (3)</li> <li>* Regional bike map (3)</li> <li>* no investment in infrastructure on project sprawl (1)</li> <li>* working groups and relationship- buildin</li> <li>* poverty reduction strategies through lan</li> <li>* awards/recognition of local organization:</li> <li>* target funds through scoring level (1)</li> <li>* score regionally-significant projects high</li> <li>* regional plans: transit, bike/ped, safety, TLC</li> </ul>
<b>PRESERVE</b> existing infrastructure	<ul style="list-style-type: none"> <li>* maintain existing infrastructure "fix it first" (1)</li> <li>* investigate communities' expansion in a shrinking region (1)</li> <li>* prioritize useful life benchmarks</li> <li>* new projects should not encourage sprawl</li> <li>* maximize current capacity before expansion</li> <li>* reuse where possible (brown fields/gray fields, facilities)</li> </ul>	<ul style="list-style-type: none"> <li>* priorities: 1) what to maintain, 2) what NOT to maintain, 3) what to repurpose (7)</li> <li>* funding</li> <li>* no incentives for developers to redevelop/reinvest vs. build on green fields</li> <li>* policies and philosophies on growth and sprawl</li> <li>* lack of regional growth policies among municipalities (Home Rule)</li> </ul>	<ul style="list-style-type: none"> <li>* reduce VMT (work from home, encourage public transit) (3)</li> <li>* uniform asset management program across municipalities (1)</li> <li>* one regional entity manage wastewater/sewer (1)</li> <li>* innovation (1)</li> <li>* incentivize developers to reuse land/facilities (1)</li> <li>* new technologies and methods to preserve infrastructure (1)</li> <li>* focus on whole systems (not portions) (2)</li> <li>* educate decision-makers with NOACA data (1)</li> <li>* more bike and transit options to take stress off roads (1)</li> <li>* make transit a viable transportation option (2)</li> <li>* evaluate existing systems, do some portions no longer make sense? (1)</li> </ul>	<ul style="list-style-type: none"> <li>* outreach/education on importance of iss regional conversation (1)</li> <li>* broaden definition of preservation (1)</li> <li>* climate change (1)</li> <li>* preserve shoreline (1)</li> <li>* interactive website for paving reports (4)</li> <li>* demonstrate regional impact of local dec negative) (1)</li> <li>* better coordination across municipalities, or</li> </ul>
<b>BUILD</b> a sustainable multimodal transportation system	<ul style="list-style-type: none"> <li>* options for all (affordable, many modes, accessible)</li> <li>* interconnected, modes coexist and work together</li> <li>* cost-effective and able to be maintained financially for longevity</li> </ul>	<ul style="list-style-type: none"> <li>* funding is siloed and lack of funding</li> <li>* access</li> <li>* redevelop/reinvest vs. build on green fields</li> <li>* need for collaboration among entities, municipalities</li> <li>* regional growth patterns, current system is built for and prioritizes automobiles</li> </ul>	<ul style="list-style-type: none"> <li>* rail network connections (1)</li> <li>* true regional wide (5-7 counties) transit agency/plan together (4)/(4)</li> <li>* smarter infrastructure (1)</li> <li>* build D.C.-style metro/rail system to connect Akron, Canton, Sandusky, Youngstown (2)</li> <li>* solar rail cars (1)</li> <li>* identify smart tech corridors and green infrastructure corridors (2)</li> <li>* establish mode shift goals (1)</li> <li>* comprehensive complete streets</li> <li>* safe access across modes (transit, bike, pedestrian)</li> <li>* prioritize alternative modes and their systems (transit, bike, pedestrian)</li> </ul>	<ul style="list-style-type: none"> <li>* transit strategic plan, regional study and policy to encourage TOD (1)</li> <li>* incorporate goals from existing plans and pr mobility, ACTIVATE, TAM and TAMP, SAVE, 5310, TLCI)</li> <li>* innovation and technology</li> </ul>
	<ul style="list-style-type: none"> <li>* attract and retain residents and businesses (1)</li> <li>* access to opportunity (training, education, jobs) (1)</li> <li>* growth of high-quality jobs</li> </ul>	<ul style="list-style-type: none"> <li>* declining population (1)</li> <li>* population loss and spread out</li> <li>* workforce education</li> <li>* communities competing for businesses/poaching</li> </ul>	<ul style="list-style-type: none"> <li>* embrace innovation, technology, trades (1)</li> <li>* prioritize projects and support smart growth (1)</li> <li>* workforce planning (2)</li> <li>* promote brown and gray field development</li> <li>* decline of manufacturing sector</li> </ul>	<ul style="list-style-type: none"> <li>* review of existing policies + develop new</li> <li>* Downtown Cleveland/Lakefront Master P</li> <li>* prioritize practical improvement for Dow Lakefront + bikeway, green space, shoppi</li> <li>* encourage jurisdictions to follow best pr</li> </ul>

## Conclusion

NOACA's major regional planning efforts, the state transportation plan, numerous NOACA local planning efforts, inspiration from other MPOs, and NOACA staff visioning contributed to a strong foundation for eNEO2050. NOACA's plans, in particular, showcase the agency's initiative to improve constantly upon each long-range plan and move the region closer to its envisioned goals. This perpetually evolving process reflects the dynamic nature of a diverse region.