MDOT
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Statewide Transit Plan and Intercity Bus Study

Needs and Gap Analysis

January 2026

Final

CONTENTS

FIGURES

TABLES

List of Commonly Used Acronyms

ADA	Americans with Disabilities Act
BUILD	Better Utilizing Investments to Leverage Development
CTA	Coast Transit Authority
FTA	Federal Transit Administration
Hub City Transit	City of Hattiesburg Transit System
ICB	Intercity Bus
KPI	Key Performance Indicator
JTRAN	City of Jackson Transit System
MDOT	Mississippi Department of Transportation
NEPA	National Environmental Policy Act
NTD	National Transit Database
OUT	Oxford-University Transit
RTAP	Rural Transportation Assistance Program
RTPI	Real-Time Passenger Information
SGR	State of Good Repair
SMART	Starkville-MSU Area Rapid Transit
TAM	Transit Asset Management
Tech Memo	Technical Memorandum
TPC	Trips Per Capita

1 Introduction

The **Needs and Gap Analysis** represent the second phase of the Mississippi Statewide Transit Plan and Intercity Bus Study, building directly upon the foundational insights established in the *Current State Assessment* (**Tech Memo 1**)**.** While **Tech Memo 1** provided a comprehensive overview of Mississippi's existing public transportation landscape—including service types, geographic coverage, stakeholder roles, and performance metrics—this phase shifts focus toward identifying where the public transportation network has challenges meeting the mobility needs of residents, workers, and visitors across the state.

1.1 STATUTORY AND STRATEGIC CONTEXT

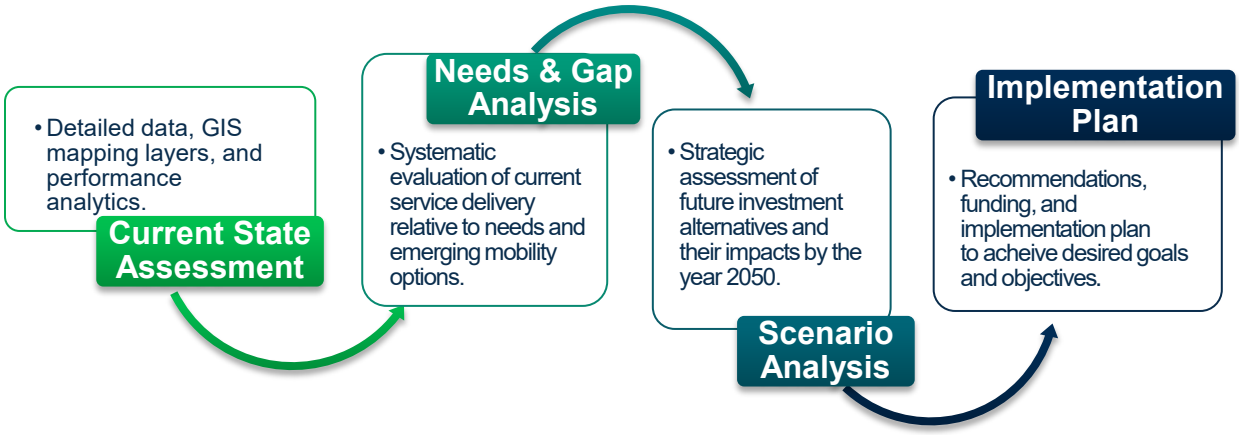
The Mississippi Department of Transportation (MDOT) is responsible for planning how people and goods move across the state—by road, rail, bus, and more. State law (Mississippi Code Section 65-1-8) and federal law (49 U.S.C. Section 5304) both require MDOT to create a long-term transportation plan that includes all modes of travel. This Study supports this effort by taking a close look at Mississippi's public transportation system. It also supports MDOT's 2045 Multiplan and the 2050 update (currently underway) to help move the state forward by improving access to jobs, boosting the economy, and making transportation more available to every Mississippi's public transportation system that operates within a complex and diverse environment, shaped by rural expanses, urban centers, tribal lands, and intercity corridors.

1.2 OUTLINE OF CURRENT AND FUTURE TASKS

Figure 1 illustrates the overall task flow for the study:

- **Current State Assessment (Tech Memo 1):** Detailed data, GIS mapping layers, and performance analytics.
- **Needs & Gap Analysis (Tech Memo 2):** Systematic evaluation of current service delivery relative to user and provider needs, readiness for federal grants, and emerging mobility options.
- **Scenario Analysis (Tech Memo 3):** Strategic assessment of future investment alternatives and their impacts through 2050.
- **Implementation Plan (Tech Memo 4):** Recommendations, funding strategies, and implementation steps to achieve desired goals and objectives.

Figure 1. Project Task Flow



Tech Memo 2 examines how well current transit services align with demographic trends, travel patterns, and federal/state priorities, evaluating access to key destinations such as major employers, healthcare facilities, and educational institutions, and considering transit-reliant populations including low-income households, seniors, individuals with disabilities, and zero-vehicle households. The analysis leverages data from **Tech Memo 1** (GIS layers, NTD metrics, provider surveys, and public engagement) to identify critical service gaps, institutional limitations, and opportunities for strategic investment. Findings will inform **Tech Memo 3** and **Tech Memo 4**, which outline future scenarios and actionable strategies to enhance transit access, equity, and efficiency statewide.

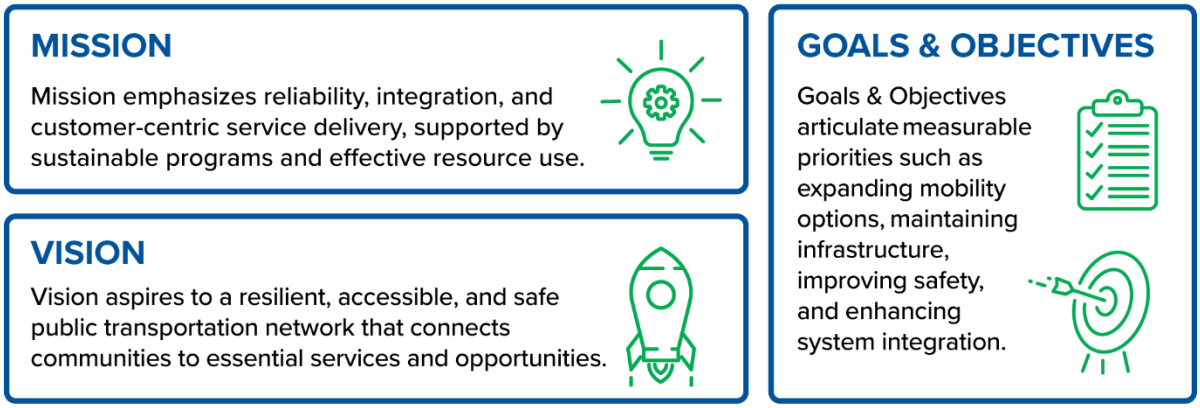
1.3 REPORT STRUCTURE

Tech Memo 2 presents the Needs & Gap Analysis in the following structure:

- **Goals, Objectives, and Key Performance Indicators** – Summarizes the Mission, Vision, and Goals & Objectives to introduce focus areas and Key Performance Indicators (KPIs) used in this analysis.
- **Focus Areas** – Provides a visual dashboard assessment of each of the four focus areas, the causes of these gaps, and supporting documentation.
- **Next Steps** – Outlines subsequent activities following Tech Memo 2 and the transition into developing scenarios and strategies to address identified deficiencies through actionable recommendations for improving transit access statewide.

2 Goals, Objectives, and Key Performance Indicators

Chapter 4 of **Tech Memo 1** establishes the strategic foundation for Mississippi's public transportation system through a clearly defined mission, vision, and a set of goals and objectives. These elements form the strategic framework for evaluating system performance and identifying service gaps statewide.



System performance was assessed across **four key focus areas**, offering a structured approach to identifying gaps and opportunities in service delivery, infrastructure, and institutional capacity. This framework is supported by a set of KPIs—**ridership, reliability, and accessibility**—to enable ongoing monitoring, foster transparency, and reinforce accountability. These KPIs serve as critical tools for guiding data-driven decision-making and confirming that Mississippi's public transportation system remains responsive to evolving needs. The scenarios outlined in **Tech Memo 3** will present targeted strategies to address identified gaps and underlying causes, with each option evaluated against these KPIs.

2.1 FOCUS AREAS

Tech Memo 2 centers on four strategic focus areas (**Figure 2**)—**User Needs, Provider Needs, Readiness,** and **Innovation**—that collectively shape the scope of the MDOT Needs and Gap Analysis. These areas are designed to evaluate the effectiveness of Mississippi's public transportation system to meet the needs of its residents and the operational demands of its providers.

Figure 2. Need & Gap Analysis Focus Areas

Grounded in MDOT's mission to promote a reliable, integrated, and customer-friendly transit network, the analysis aligns with statewide goals including improving accessibility, enhancing system resilience, expanding mobility options, and maintaining capital infrastructure. By examining these focus areas, MDOT can assess current service delivery against future mobility aspirations and identify opportunities for strategic growth and modernization. The four focus areas also serve as a framework for understanding the underlying causes of service gaps and barriers to progress. Together, these elements support a comprehensive analysis to develop actionable solutions in the next phase of the project, allowing Mississippi's transit system to evolve and meet the state's long-term transportation goals.

2.1.1 USER NEEDS

The Mission and Vision of Mississippi's public transportation system emphasizes access, customer satisfaction, and system resilience. These priorities are reflected in the goals and objectives related to **Integration**, **Accessibility**, and **Resilience**, which guide the evaluation of whether transit services effectively meet the needs of both the general population and transit-reliant individuals, including seniors, low-income households, individuals with disabilities, and students.

The user needs analysis identifies geographic and demographic gaps in service coverage, evaluates trip purposes (e.g., medical, employment, education), and assesses barriers to access.

To comprehensively assess this focus area, the following topics were considered:

- **Transit Demand & Access**

  - Transit Propensity
  - Demand
  - Access
- **Coordination**
- **Connectivity**

This analysis enables the transit service to be responsive to the lived experiences of Mississippi residents and supports the development of a more accessible, efficient, and user-centered transportation system.

2.1.2 PROVIDER NEEDS

To effectively deliver public transportation services, public transportation providers require a stable foundation of resources—including consistent funding, reliable vehicles, supportive infrastructure, and a well-trained workforce. This focus area evaluates provider needs through the lens of the system's strategic goals: **Integration**, **Accessibility**, **Resilience**, **Safety & Security**, and **Infrastructure**.

The analysis identifies disparities in provider capacity to meet needs as it relates to funding, collaboration, resource sharing, and investment. The evaluation considers:

- **Collaboration**
- **Funding**
- **Staffing**
- **Training**
- **Resources**
- **Passenger Amenities**
- **Intermodal Centers**

This analysis supports the development of targeted strategies to strengthen provider capacity, improve service reliability, and foster a more integrated and resilient public transportation system across Mississippi.

2.1.3 READINESS

The readiness of Mississippi's public transportation providers is a critical factor in determining their ability to maintain compliance with federal and state regulations and to be strongly positioned and potentially pursue discretionary grant funding. This focus area evaluates provider readiness through the strategic goals of **Integration**, **Resilience**, **Safety & Security**, and **Infrastructure**.

The analysis is structured around two items:

- **Compliance**
- **Competitiveness**

To be competitive, providers must demonstrate not only compliance but also strategic alignment with broader transportation goals, readiness to implement scalable solutions, and capacity to manage complex projects. This evaluation topic highlights gaps in institutional capacity to support targeted investments in training, technical assistance, and interagency collaboration to improve grant competitiveness and readiness for innovation.

2.1.4 INNOVATION

The Innovation focus area evaluates the capacity of Mississippi's public transportation system to adopt emerging technologies and adapt to a rapidly evolving mobility landscape. It addresses the strategic goals of **Accessibility**, **Resilience**, **Safety & Security**, **Expanding Mobility Options**, and **Capital Infrastructure**.

This section seeks to answer two critical questions:

- Is the public transportation system prepared to adopt new technologies?
- Is the system future-proofed to respond to changing travel behaviors, infrastructure demands, and multimodal integration?

To assess innovation readiness, the following items are considered:

- **Technology Adoption**
- **Pilot Projects**
- **Multimodal Integration**

This analysis identifies opportunities for innovation and highlights the conditions necessary for successful deployment—such as interagency collaboration, access to discretionary funding, and alignment with regional planning efforts. By fostering a culture of innovation and investing in scalable technologies, Mississippi's public transportation system can become more adaptive, inclusive, and future-ready.

2.2 KEY PERFORMANCE INDICATORS

Supporting ongoing evaluation and alignment with strategic goals requires the introduction of **KPIs.** These metrics serve as benchmarks for tracking progress and guiding future investment strategies.

- **Ridership**
    - **Definition**: Total annual passenger trips across service types (fixed route, demand response, intercity, vanpool).
    - **Purpose**: Measures system utilization and demand; helps assess effectiveness of outreach, route design, and service coverage.

- **Application**: Used to identify underserved regions and evaluate the impact of service changes or expansions.

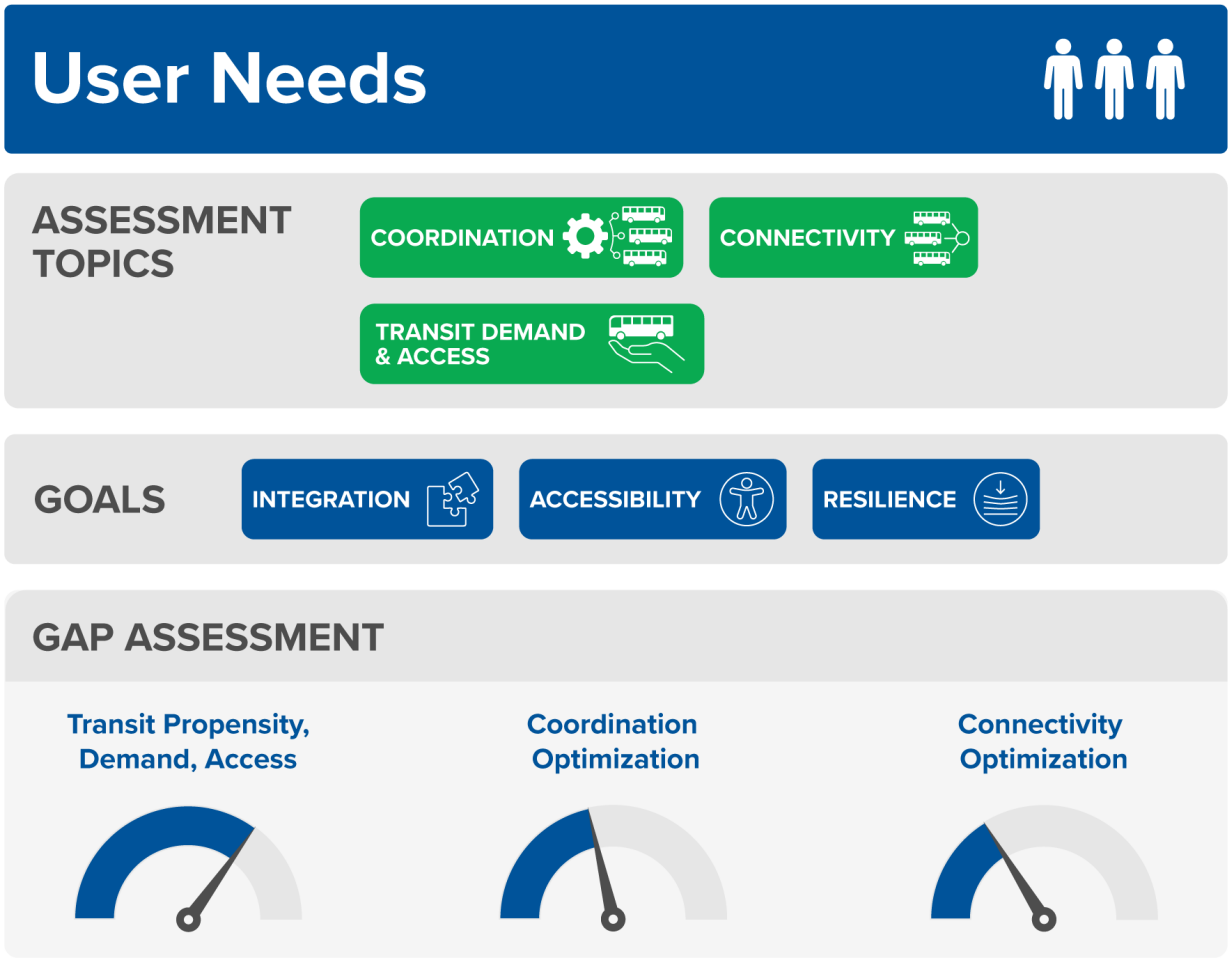
- **Reliability**
  - **Definition**: The ability of public transportation providers to meet customer needs devoid service interruptions, vehicle breakdowns, and maintenance compliance.
  - **Purpose**: Assesses operational efficiency and infrastructure condition, guiding decisions on fleet replacement and facility upgrades.
  - **Application**: Informs Transit Asset Management (TAM) planning, grant applications, and service scheduling improvements.

- **Accessibility**
  - **Definition**: The extent to which public transportation services are usable by all individuals, including those with disabilities, without discrimination by factoring in geographic coverage, ADA compliance, and proximity to essential destinations (e.g., hospitals, schools, employment centers).
  - **Purpose**: Evaluates equity in service delivery and identifies physical and informational barriers that limit access to public transportation.
  - **Application**: Informs planning for new service areas or modes, revisions to existing service, infrastructure investments, and coordination with land use and development policies.

3 Focus Areas

This **Tech Memo** employed a multi-method approach tailored to specific focus areas and data needs. Two targeted surveys were conducted: a **public survey** to assess travel behaviors and barriers to transit use and a **provider survey** to evaluate operational challenges, including staffing, infrastructure, technology, and funding. Communications with the regional mobility managers also provide information on coordination and collaboration activities. Additional data sources included FTA Triennial Review reports, the State Management Plan, and assessments of bus stop amenities. The methodology is provided in **Tech Memo 2: Needs and Gap Analysis Methodology** report. Findings were synthesized into the following dashboards, offering visual summaries of gaps, contributing factors, and insights to support strategic decision-making and investment planning.

3.1 USER NEEDS



User needs reflect the essential mobility requirements of Mississippi residents, especially those relying on public transportation for jobs, healthcare, education, and other vital services. These needs include geographic coverage—ensuring transit reaches high-demand areas—and demographic considerations such as seniors, individuals with disabilities, low-income households, and zero-vehicle families. Understanding these needs is critical for designing a system that promotes accessibility and economic opportunity statewide.

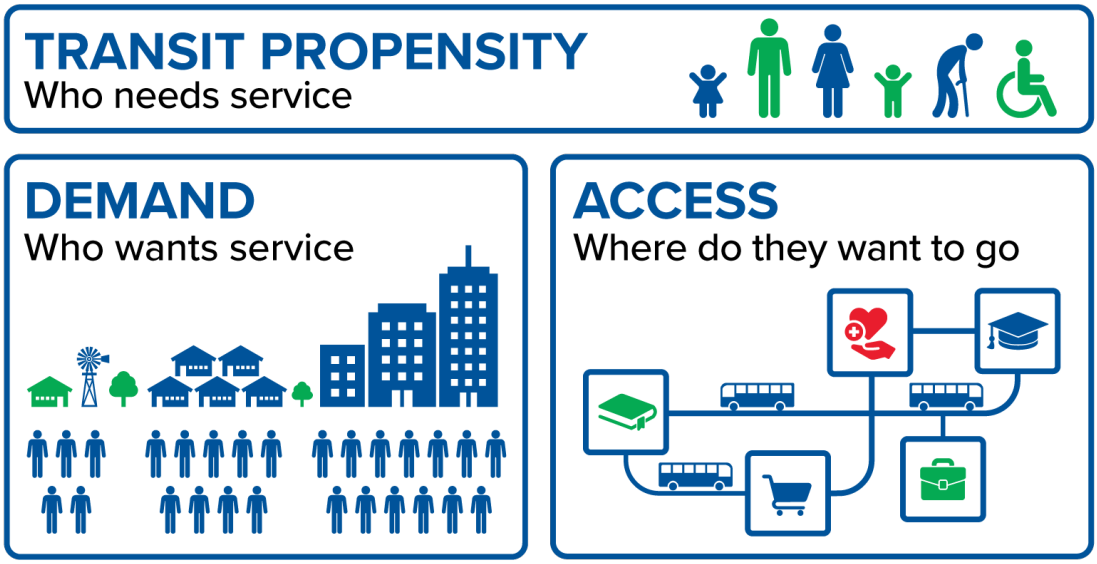
Mississippi public transportation agencies have shown success in meeting these needs through innovative partnerships and service models. Coast Transit Authority (CTA) collaborates with hospitals and casinos to provide accessible transportation along the Gulf Coast, while Delta Bus Lines connects underserved towns to major destinations like Jackson, Memphis, and Baton Rouge. Rural providers such as Delta Area Rural Transit System (DARTS) and Bolivar County Council on Aging deliver multi-county demand-response services, ensuring mobility where fixed routes are limited.

This analysis uses a multi-layered approach to evaluate transit propensity (who needs service), demand (who wants service), and access (where riders travel), along with coordination and connectivity factors. Drawing on data from **Tech Memo 1**, GIS mapping, provider surveys, and public engagement, it identifies service gaps, barriers to essential destinations, and opportunities for improvement—forming the foundation for strategies that enhance transit access and efficiency statewide.

3.1.1 TRANSIT PROPENSITY, DEMAND, AND ACCESS

Understanding where and how transit is most needed begins with analyzing transit propensity, estimating overall demand, and evaluating access to key destinations. Figure 3.**Figure 3** illustrates how access and demand influences usage, providing a foundation for identifying areas with the potential for transit use and the most critical accessibility gaps.

Figure 3. Propensity, Demand, and Access

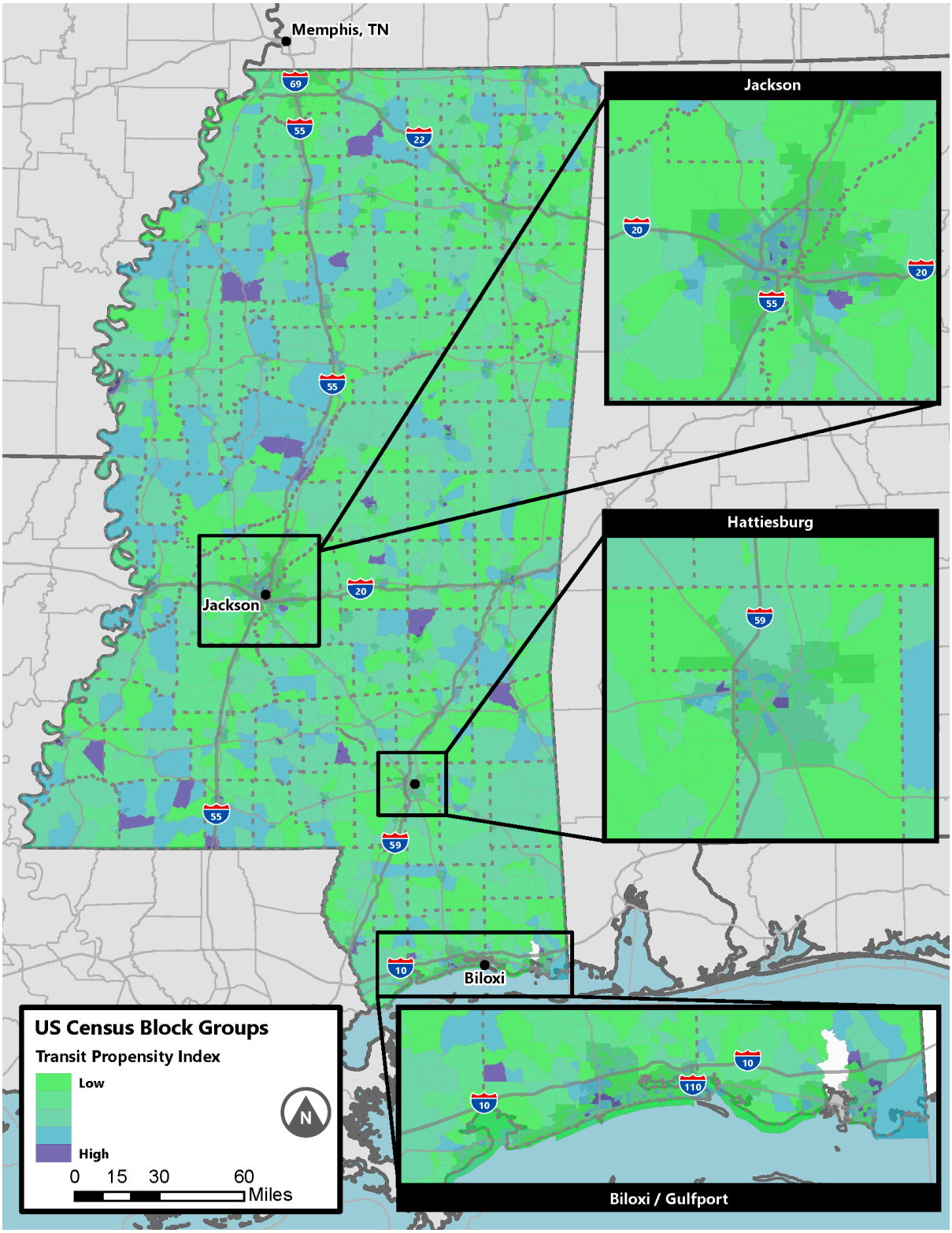


TRANSIT PROPENSITY

The first step in assessing user needs is evaluating transit propensity, an indicator of where public transportation is most likely to be used based on demographic characteristics. Public transit plays a vital role in connecting Mississippians to these life-sustaining activities, particularly for transit-reliant population which includes those without access to a personal vehicle, those with low incomes, older adults, and people with mobility impairments. This transit-reliant population forms the basis of the transit propensity analysis. This analysis helps identify communities with elevated potential demand for transit services and informs decisions about where improvements or investments may be most impactful.

Figure 4 Figure 4 illustrates transit propensity across Mississippi block groups. While rural areas show lower transit propensity, pockets of higher need are visible near county seats and smaller towns. The central-western region of the state, particularly areas bordering Louisiana, shows the highest concentrations of transit need.

Figure 4. Mississippi Transit Propensity Index



DEMAND

Building upon the **Transit Propensity**, latent demand was estimated by calculating **Trips Per Capita (TPC)** Need across system types and while also considering benchmarks through examining similar agencies in peer states (Alabama, Arkansas, Louisiana) that are similar in geography, socioeconomic, rural transit emphasis, and institutional structure. This approach in calculating TPC included:

- **Baseline Use**: Current TPC for Mississippi transit systems
- **Benchmark Need**: Average TPC from peer systems in states with similar rural–urban compositions and geographic characteristics.

The purpose of this analysis is to quantify **unmet need** across large urban, small urban, rural fixed-route, and rural demand-response systems. Mississippi currently underperforms across all system categories, with the most significant gaps in **small urban** and **rural demand-response** services when compared to their peers (**Table 1**).

Table 1. Summary of Mississippi Benchmark Group and Peer System

Transit Service Type	Trips per Capita		
	Mississippi	Peer Systems	Gap
Large Urban	4.4	4.94	-11%
Small Urban	1	2.82	-65%
Rural Fixed Route	12.55	14	-7%
Rural Demand Response	0.75	1.32	-43%
State Average	**4.67**	**5.64**	**-17%**

The demand gap in rural demand response services reflects reduced access to key destinations, service reliability, or insufficient public awareness. These issues are explored further in the report. For fixed-route systems, the gap is further assessed by comparing the population within ¾ mile of a route to the total urban area population. **Figures 5** through **9** illustrate this comparison for JTRAN, Hub City, CTA, OUT, and SMART systems with the TPI showing the transit-reliant population groups residing outside the service area.

Figure 5. Transit Propensity Index & JTRAN

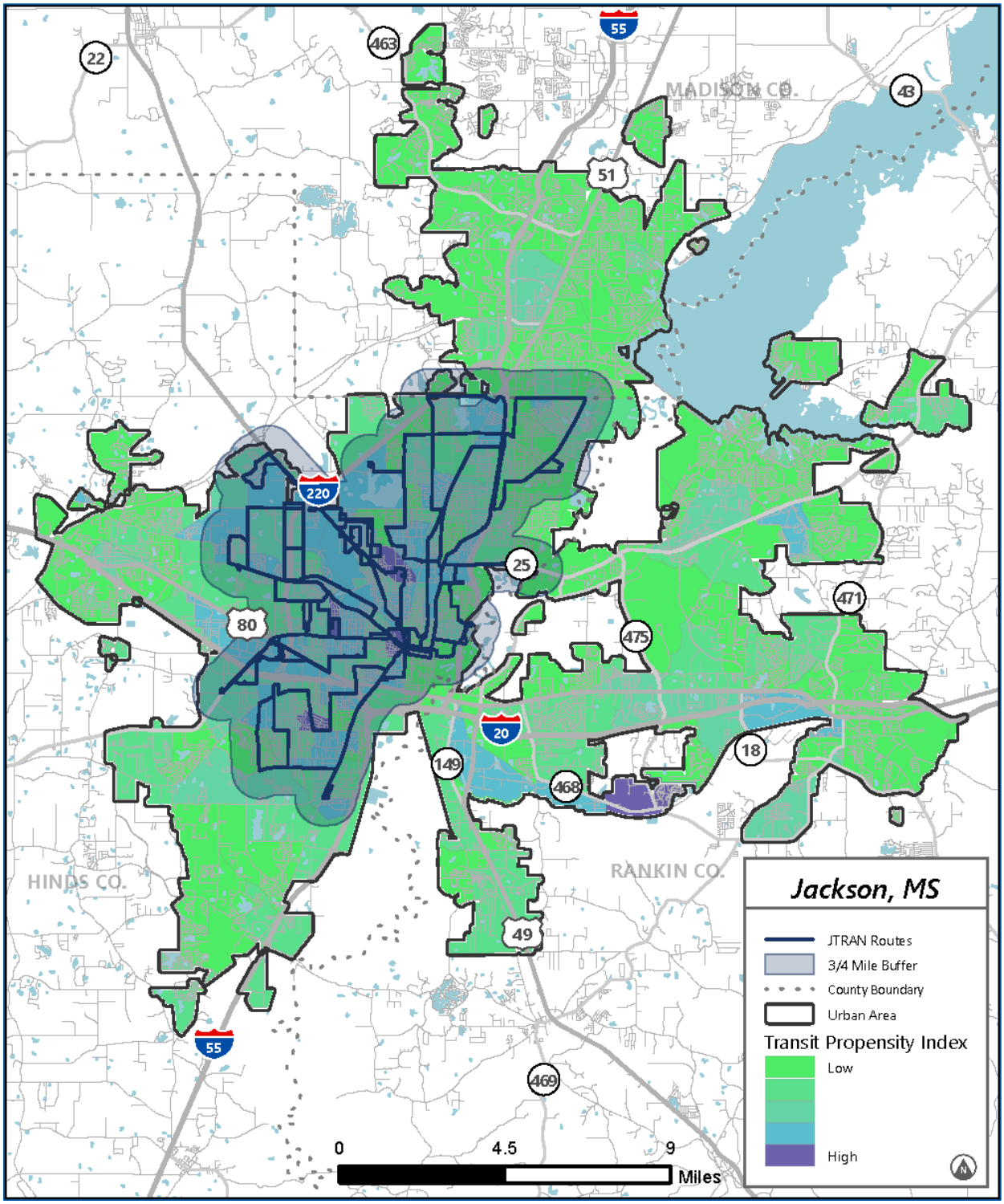


Figure 6. Transit Propensity Index & Hub City Transit

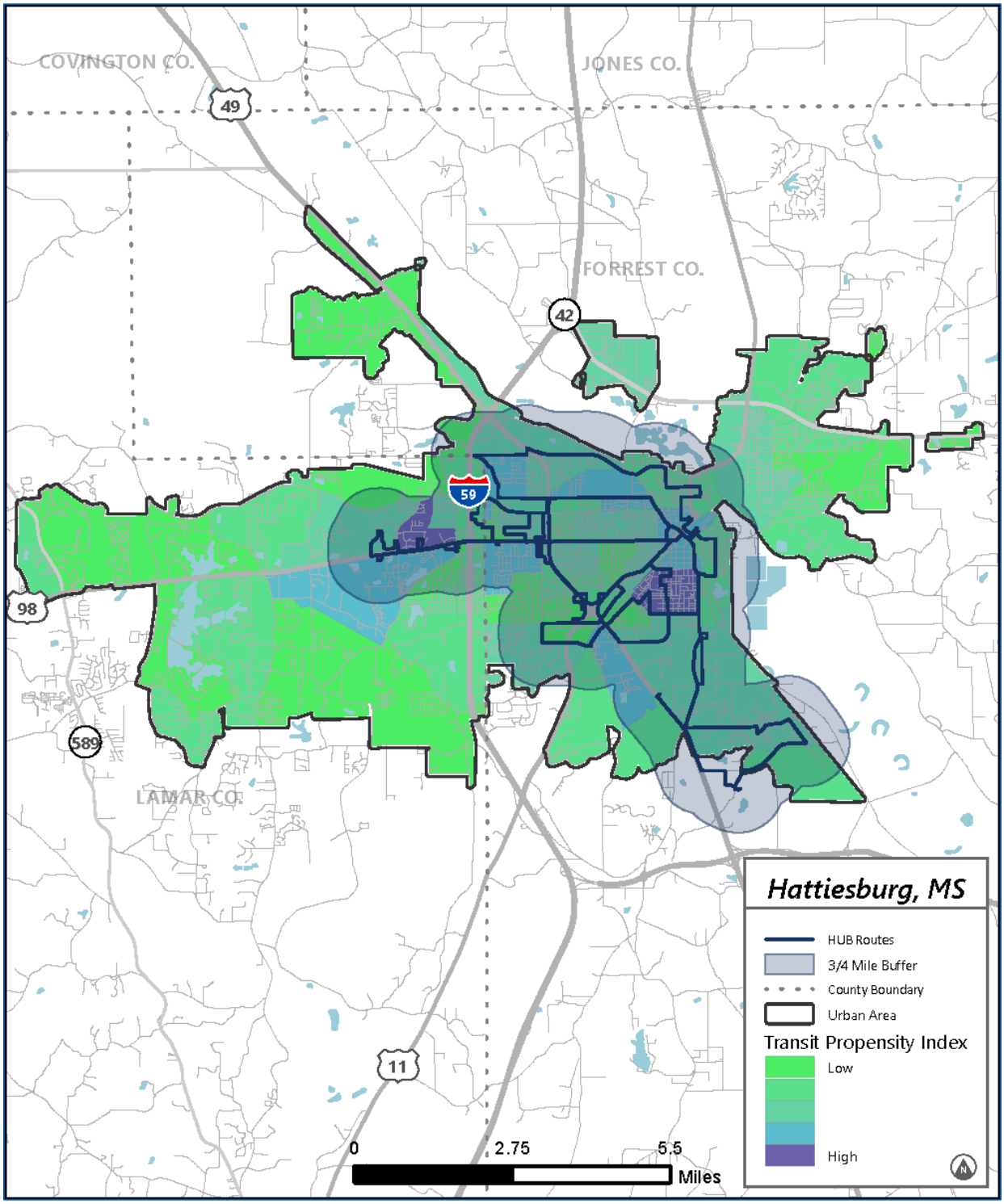


Figure 7. Transit Propensity Index & Coast Transit Authority

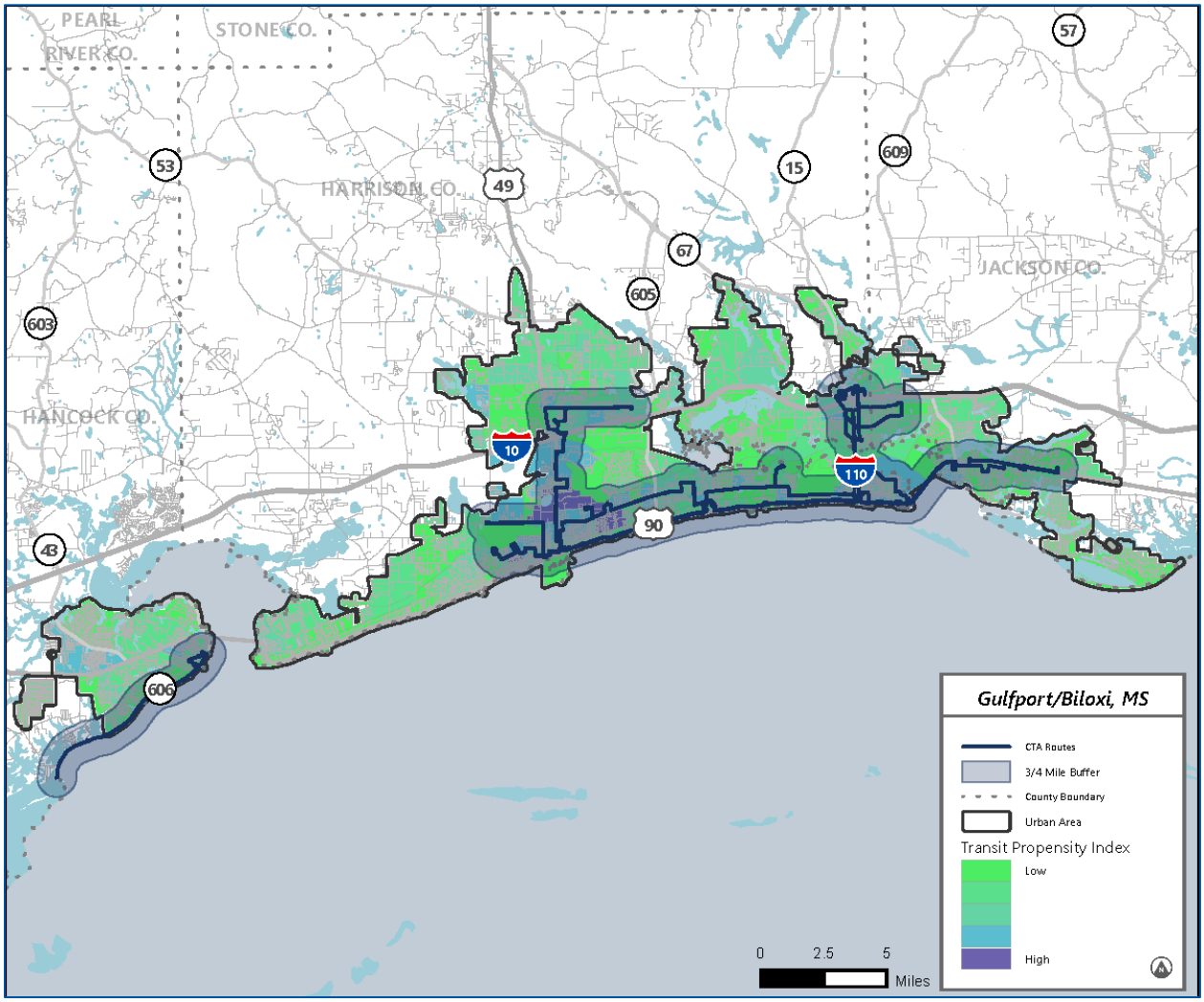


Figure 8. Transit Propensity Index & OUT

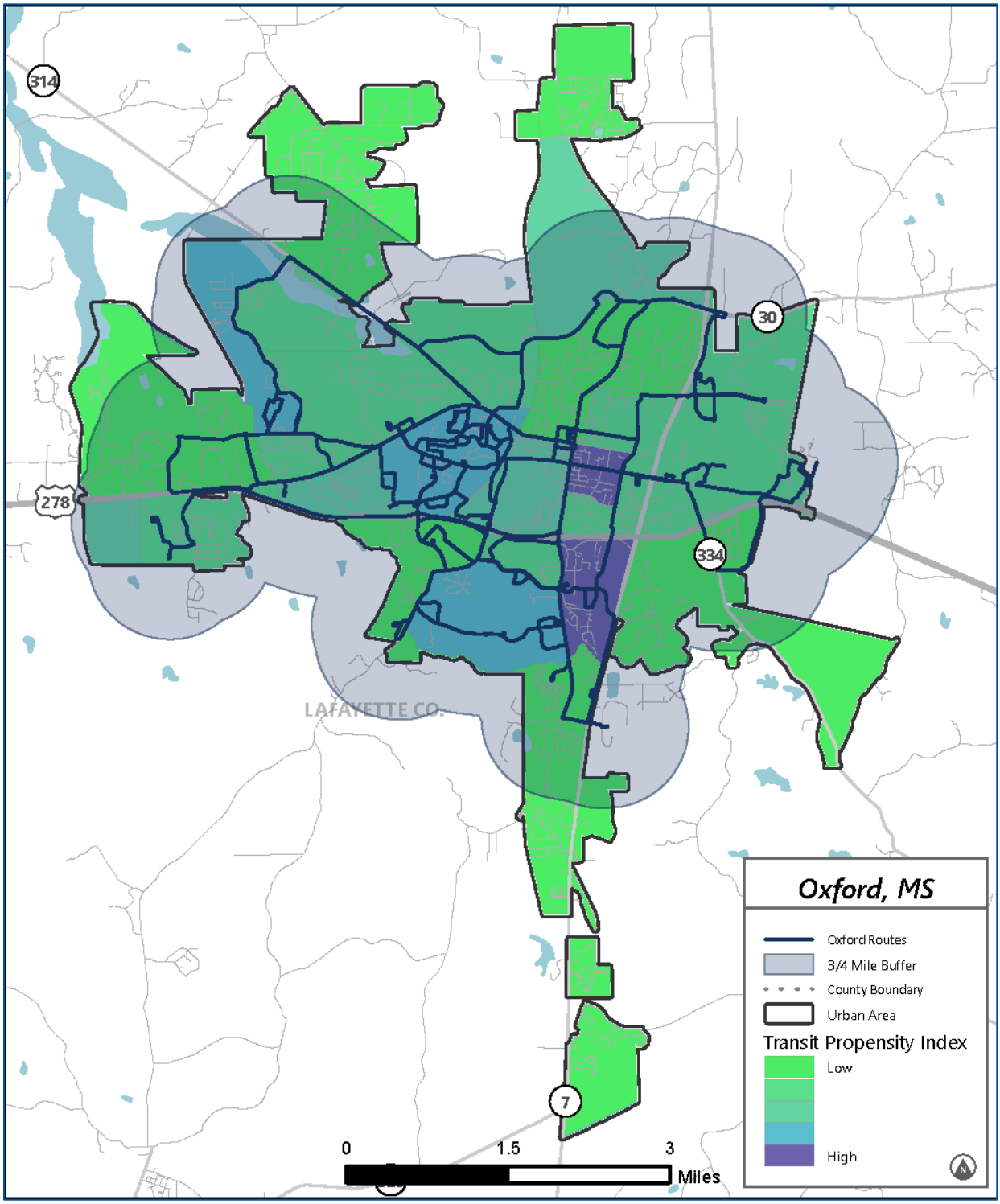
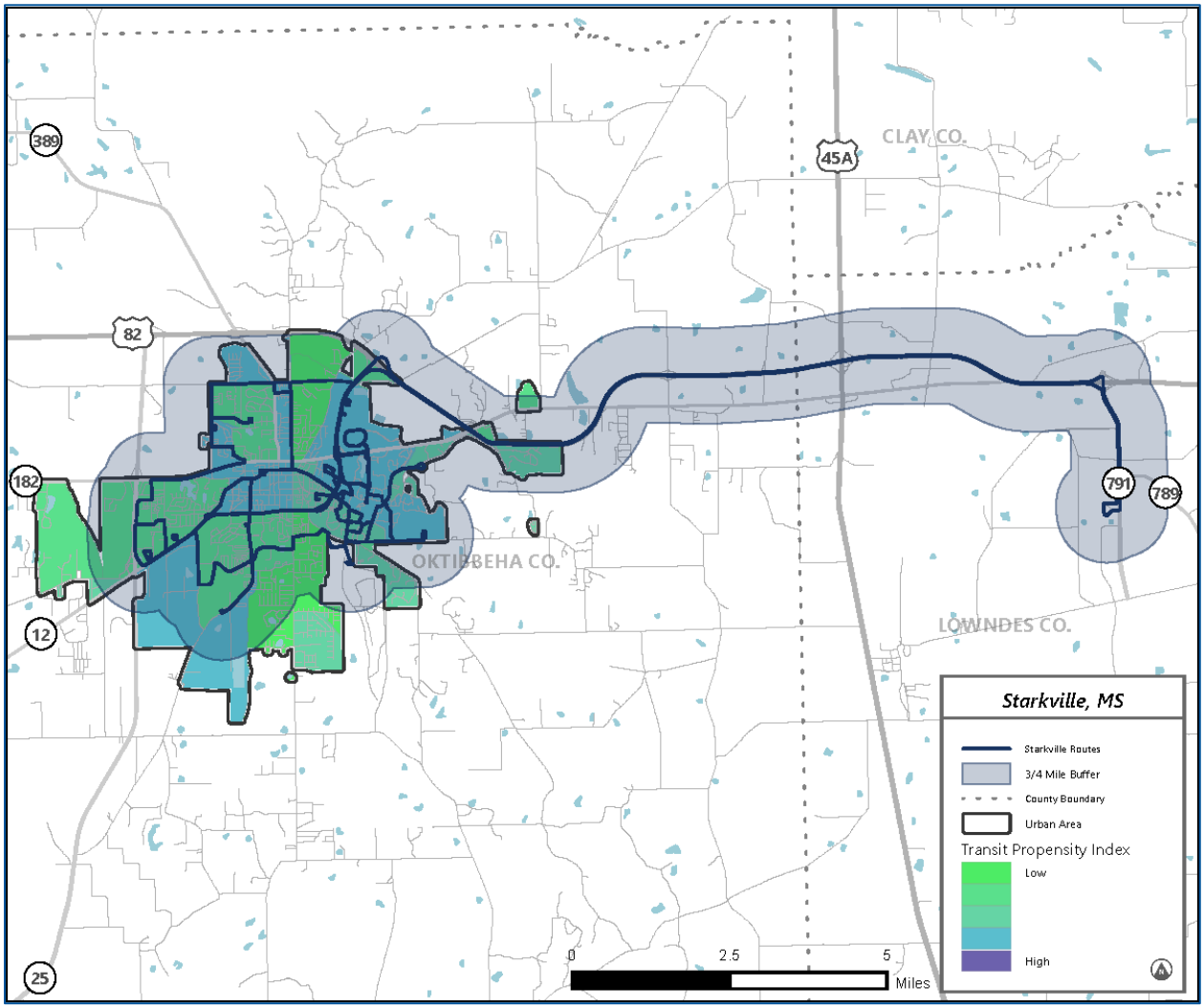


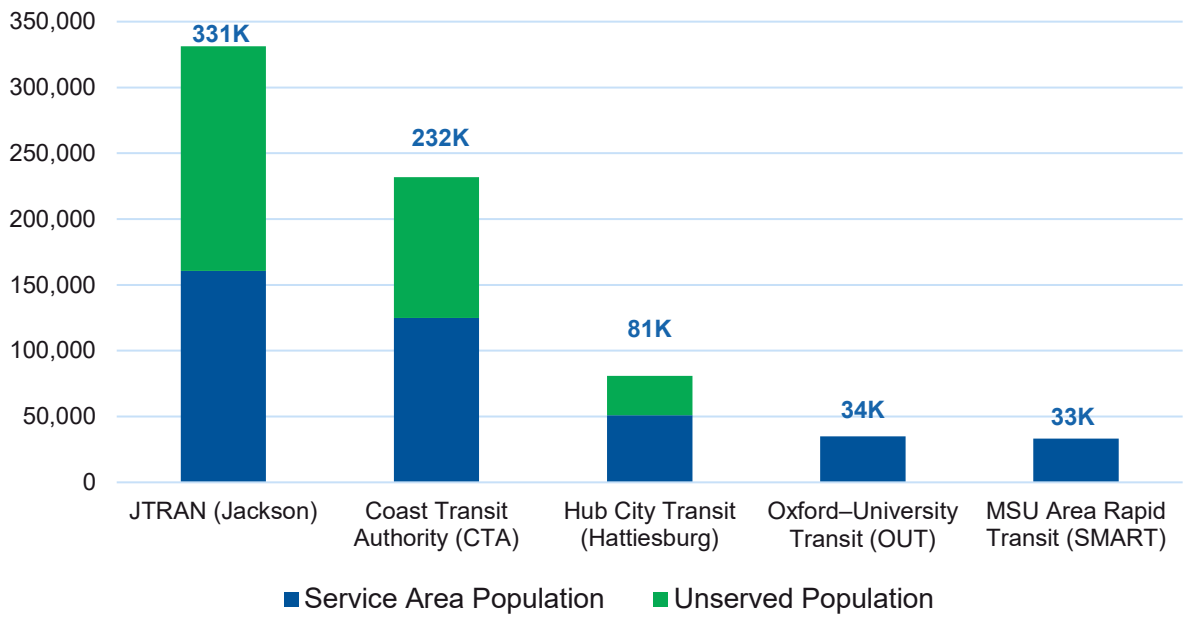
Figure 9. Transit Propensity Index & SMART-MSU



Across Mississippi's five fixed-route systems, the combined **service area population** is **405,965**, while the combined **urbanized or city boundary populations** is **709,335** as indicated by **Figure 10**Figure 10. This represents an overall **population gap of about 303,000 residents**, or **a 43 percent difference**, between the total population within the broader urbanized areas and the population served by fixed-route transit service areas.

The two university systems of OUT and SMART show equal service area and actual city populations as the cities are small when compared to cities like Jackson. Furthermore, much of the population is university based and located within ¾ of a mile of the fixed route systems service area.

Figure 10. Service to Urban Area Comparison



Sources: National Transit Database, 2023; & US Census

ACCESS

Access refers to the ability of the transit-reliant population to reach essential destinations that support daily life, economic opportunity, and overall well-being. The key destinations are:

- **Employment:** Major job centers and areas with high concentrations of employment opportunities.
- **Institutions of Higher Learning:** Colleges, universities, and vocational or trade schools that support workforce development.
- **Activity Centers:** Points of interest, major shopping centers, tourist destinations, and other locations with significant regional draw.
- **Healthcare:** Clinics, hospitals, pharmacies, and other medical facilities critical to maintaining public health.

A Barrier to Access rubric was used to assign scores to all counties. The results of the analysis are presented in **Figure 11**. With the exception of the eight counties without transit service, this assessment indicates that people who want to use transit can access most key destinations with the main barriers being multi-county trips or involves coordination with other providers.

Figure 11. County Access Assessment

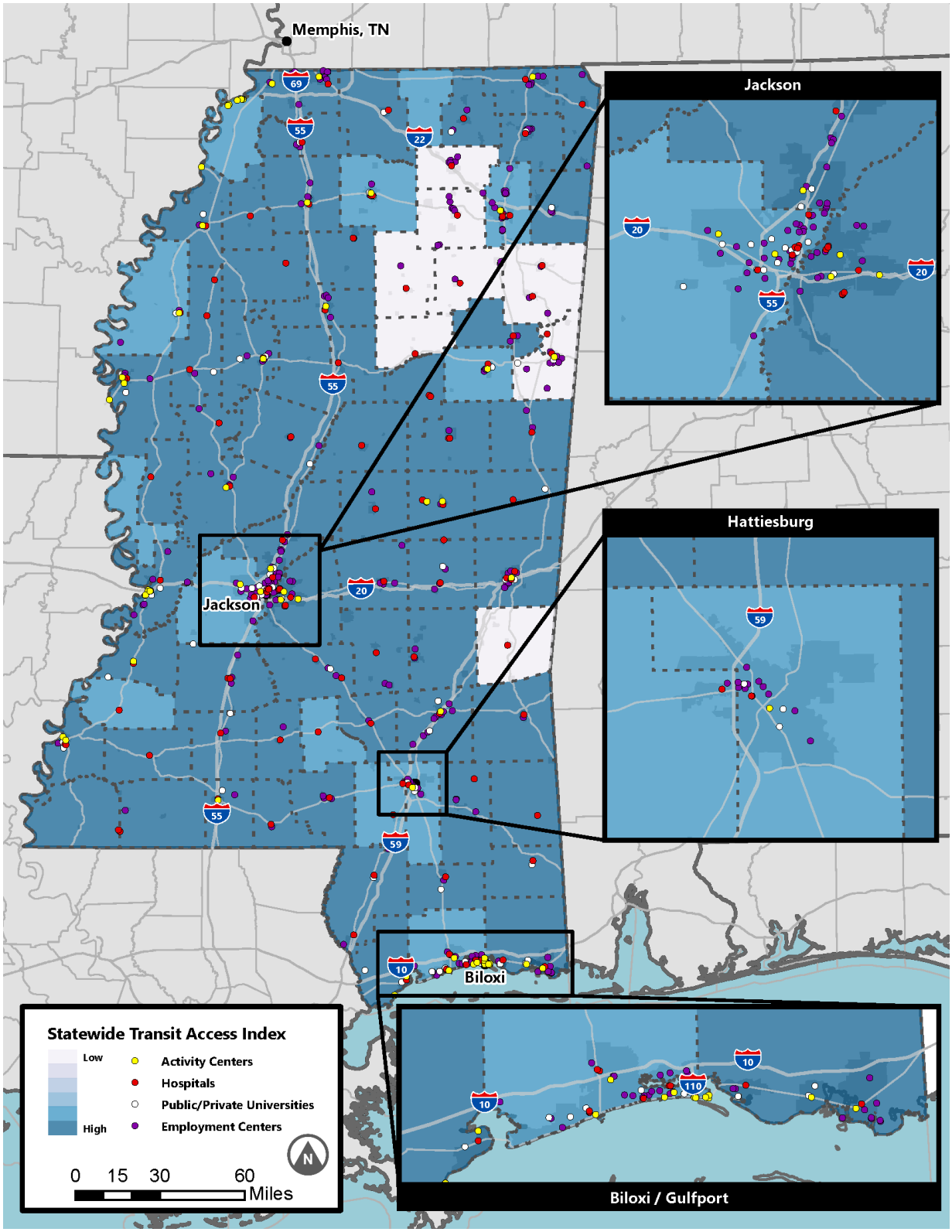
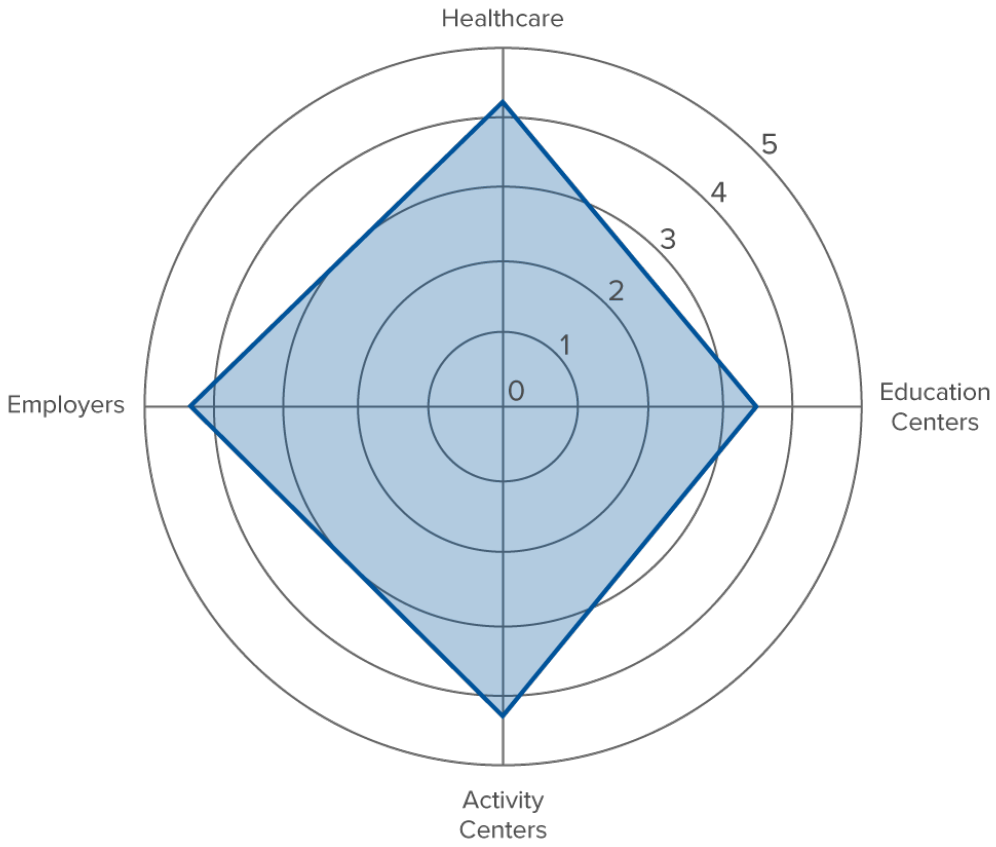


Figure 12 provides the average score for each of the access dimensions measured in this analysis. These constraints reduce access to essential services and employment opportunities, particularly for transit-reliant populations.

Figure 12. Statewide Access Score



While the previous figures suggest most transit users have access to key destinations, such as employment centers, healthcare facilities, and educational institutions, the quality of that access can vary significantly. For many riders in Mississippi accessing specialized services, such as medical specialists, advanced treatment centers, or higher education campus, requires traveling beyond the immediate community as these destinations are typically concentrated in urban or suburban areas. This creates challenges for residents in rural or low-density regions who depend on demand-response services. In more isolated rural areas, these challenges can be intensified. Accessing even basic necessities, grocery stores, pharmacies, or meal sites, can require traveling outside of the community, and in some cases, outside of their transit system's service area. Longer travel distances can translate into extended trip times, multiple transfers, and higher costs for both riders and providers.

Transit access is also impacted by a misalignment of route schedules or hours of operation with rider needs. Many rural transit systems operate during regular business hours between 8am – 5pm. Those who have shift jobs, like fast food workers or medical staff, have difficulty accessing

transit for employment trips if their shift falls outside of the transit system's hours of operation. For large employers or isolated rural communities, this can result in a more significant gap in user need. For example, Blue Springs (Union County) has a Toyota production plant that employs 3,000 people. However, there are currently no transit services available in the county that can serve them.

SURVEY RESULTS

Mississippi residents offered input about their experiences and perceptions of public transportation through a statewide public survey. The survey gauged the public's overall satisfaction, commuting needs, and priorities for improving transit services.

As it relates to the assessment of user needs, the survey revealed significant dissatisfaction with current transit options: **75 percent of respondents** reported being either *dissatisfied* or *very dissatisfied* with the availability and quality of public transportation in their communities (**Figure 13**). Furthermore, **44 percent of respondents** indicated they do not use public transit due to a **limited access or service** in their area (**Figure 13**), highlighting a critical barrier to mobility.

Figure 13. Level of Public Transportation Satisfaction with Public Transportation

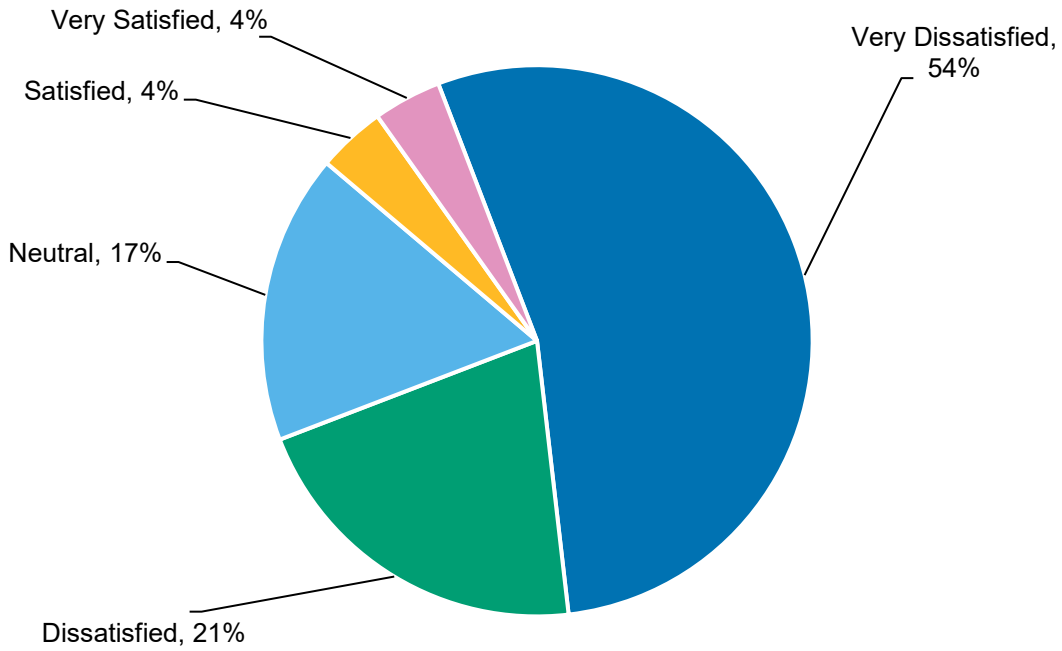
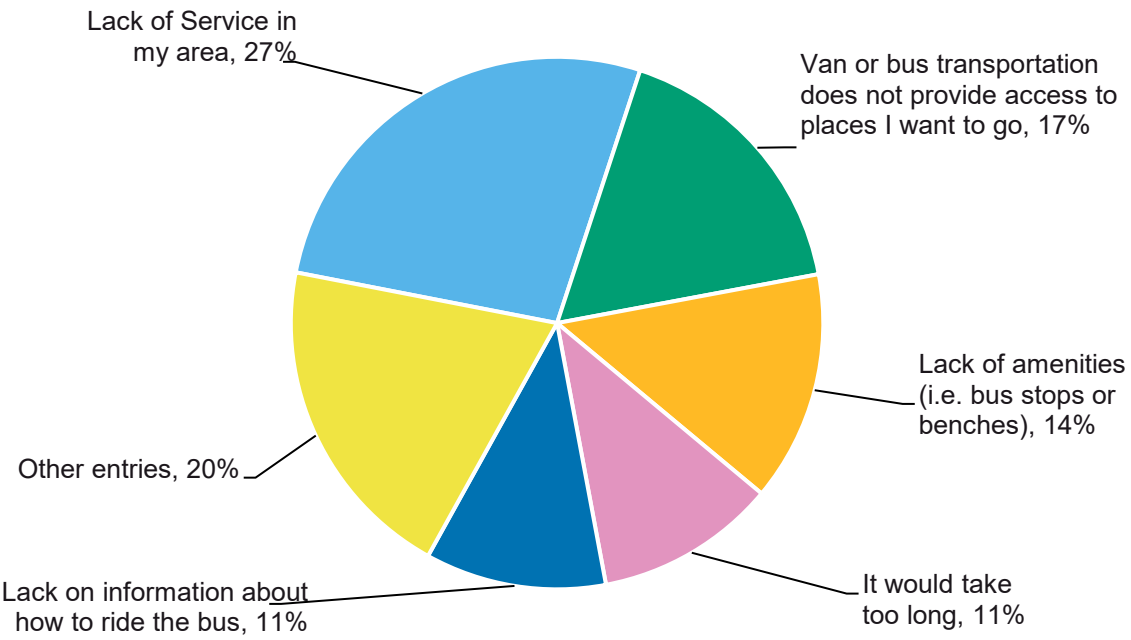
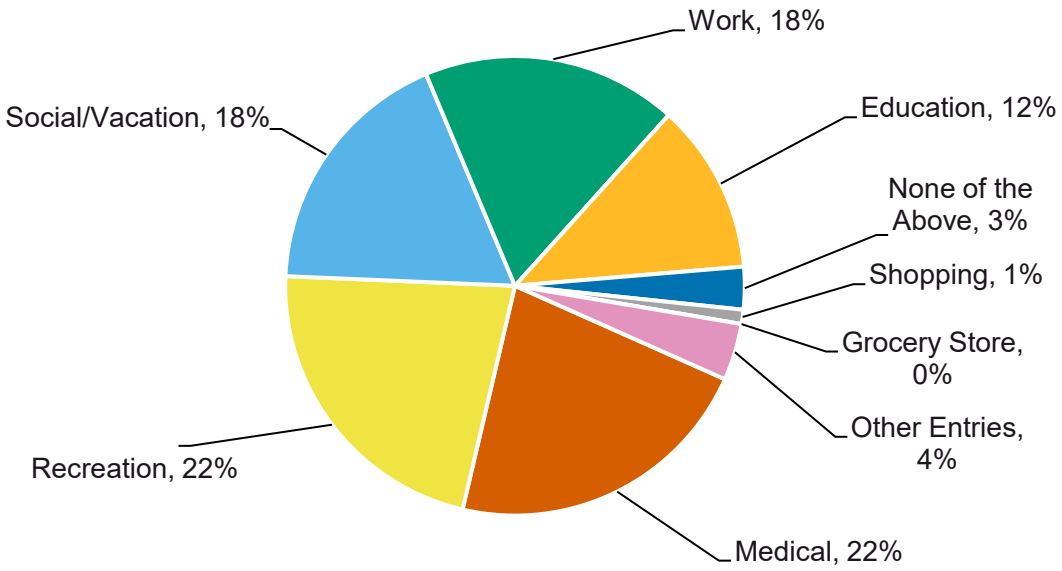


Figure 14. Reasons Why Public Transportation is not Used



With respect to trip purposes, respondents indicated no purpose was more important than the others, with interest relatively equally split between medical, recreation, social, and work trips which is then followed by education (**Figure 15**). These responses reinforce the latent demand for additional transit service in Mississippi.

Figure 15. Desired Public Transportation Trip Purposes



In response to the gaps in access and demand, participants consistently identified the following top priorities for improvement:

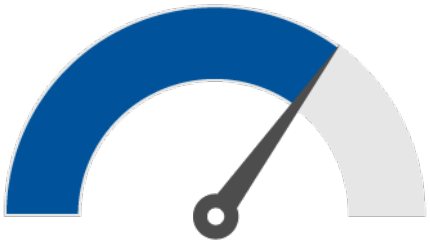
- **More transit routes**
- **Higher service frequency**
- **Better access to key destinations**

These findings reinforce the results of the user need analysis and underscore the need for expanded service coverage, especially in underserved areas, to reduce barriers and better meet the mobility needs of Mississippi residents.

GAP ASSESSMENT

Mississippi's public transportation system demonstrates moderate alignment between transit services and areas of greatest need, leading to an overall optimization score of 75 percent (**Figure 16**) for transit propensity, demand, and access. This score reflects gaps in service coverage, particularly for transit-reliant populations. Despite identifying high-need areas through demographic and spatial analysis, many residents remain outside transit service areas, transporting 17 percent less TPC when compared to peer states. These gaps are further compounded by limited access to essential destinations and the absence of transit service in some counties, underscoring the need for targeted expansion and strategic investment.

Figure 16. Transit Propensity, Demand, Access Optimization



GAP CAUSES

Mississippi's public transportation system exhibits persistent and systemic challenges in meeting access and utilization needs, particularly for transit-reliant populations. These challenges are shaped by a combination of geographic, operational, and institutional factors that limit the ability of residents to reach essential destinations without a personal vehicle. In rural areas, access to healthcare, education, and employment is often constrained by limited services availability which disproportionately affects older adults, low-income households, and individuals without access to a car.

In urban settings, transit coverage is frequently concentrated around downtown areas and university campuses, resulting in underserving surrounding, high transit need neighborhoods. These coverage limitations contribute to underutilization of available services and reduce

opportunities for trip-making. Mississippi's transit systems currently operate at 17 percent below peer state averages in trips per capita, reflecting gaps in service frequency, reliability, and geographic reach.

The following highlight the underlying causes of these access and utilization challenges.

Transit-related causes include:

- **Sparse rural service:** Many rural areas rely solely on demand-response systems, which often cannot meet daily mobility needs.
- **Fragmented service areas in resource-constrained counties:** Counties who do not have transit providers due to limited resources and population size**.**
- **Inconsistent and limited service hours among providers:** Transit operating hours differ between Mississippi systems, creating uneven access for riders across the state. Some agencies offer full-day, weekday coverage, while others operate only during peak or limited hours, especially in smaller communities.

Non-transit causes include:

- **Low population density:** Makes transit service financially and operationally challenging in many areas.
- **Jurisdictional boundaries:** Limit coordination and expansion across county lines.
- **Dispersed development & geography:** Long travel distances and isolated communities increase the cost and complexity of service delivery.

3.1.2 COORDINATION

This gap analysis evaluates the extent to which public transportation providers and regional mobility managers coordinate to facilitate seamless travel across county lines.

Coordination plays a critical role in Mississippi's statewide transit network by linking transit-reliant populations to available services and reducing fragmentation across jurisdictions. Effective coordination enhances system performance by enabling locally tailored solutions that expand mobility options and improve access to essential destinations. This approach aligns with nationally recognized practices supported by the Federal Transit Administration (FTA) and MDOT so that transit services are responsive to user needs.

For the purpose of the gap analysis, coordination activities were informed by state and national best practices. Regional mobility managers were consulted to identify coordination efforts in their areas, while additional insights were drawn from previous work on the MDOT Statewide Transit Plan & Intercity Bus Study.

Coordination activities were classified as follows:

- **Fundamental activities:** Essential building blocks of a coordinated transit system, enabling basic interoperability, rider accessibility, and operational efficiency across multiple providers.
- **Advanced activities:** Reflect a higher level of operational integration that enhances system responsiveness, user convenience, and inter-agency collaboration, but require more coordination through planning, technology, and governance than fundamental practices.
- **Innovative activities:** Represent forward-thinking, system-wide practices that leverage advanced technology and regional collaboration to optimize transit delivery and user experience across the transit system.

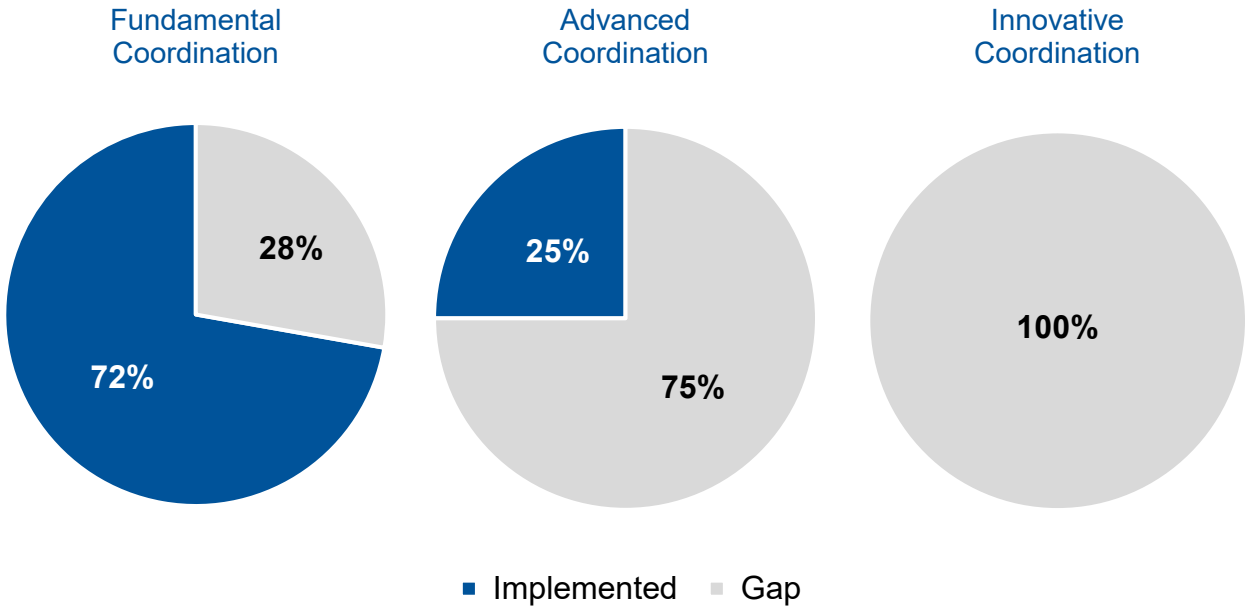
A **System Maturity Rubric** was used to assess coordination activities in these three categories, where each region was scored based on the number of coordination activities implemented relative to the total possible activities within each subcategory.

GAP ASSESSMENT

The analysis indicates Mississippi exhibits a mid-level maturation for Coordination (**Figure 17**). Scoring results for each Coordination category are represented in **Figure 18**, reflecting the percentage of activities implemented compared to activities not yet in use, referred to as gaps.

Figure 17. Coordination Optimization

Figure 18. Coordination Optimization by Maturity Category



GAP CAUSES

These gaps stem from both structural and resource-related challenges and can be grouped into transit and non-transit causes.

Transit-related causes include:

- **Limited funding:** Insufficient resources restrict infrastructure investments (e.g., transfer hubs, sidewalks), making safe and efficient passenger transfers difficult.
- **Operational challenges:** Staffing shortages, absence of transfer points, and limited scheduling flexibility hinder coordination, especially in rural regions.
- **Infrastructure gaps**: Absence of shared dispatch systems and mobility hubs limits advanced coordination like fare integration and real-time communication.
- **Disincentives to coordination:** Absence of shared dispatch systems and mobility hubs limits advanced coordination like fare integration and real-time communication.

Non-transit-related causes include:

- **Political and jurisdictional barriers**: County-based service structures and limited political will discourage cross-boundary coordination and regional planning.
- **Socioeconomic and geographic constraints:** High poverty rates and low vehicle ownership increase transit reliance, while dispersed development and long travel distances complicate coordinated service delivery.

3.1.3 INTERCITY CONNECTIVITY

Intercity connectivity refers to how well Mississippi's public transportation systems link with intercity services (e.g., **Amtrak**, **Delta Bus Lines**, and **Greyhound**) enabling residents, especially in rural areas, to reach destinations beyond their local communities.

Effective connectivity minimizes transfer times providing smooth transitions between modes of transportation. Key connectivity dimensions include:

- **Physical connectivity:** Availability of transfer points, multimodal hubs, and supporting infrastructure (e.g., sidewalks, bike lanes).
- **Service connectivity:** Coordinated schedules that reduce waiting times and improve transfer reliability.
- **Geographic coverage:** Reach of services across rural and urban areas, connecting people to education, healthcare, employment, and other essential services.
- **Intermodal integration:** Seamless transitions between different modes of transport.
- **User experience:** Ease of navigation, signage, amenities, and trip planning tools.

SURVEY RESULTS

Survey results show 27 percent of the respondents used intercity public transportation (**Figure 19**). However, the responses also indicate an interest in using services to access regional destinations such as Atlanta, Biloxi, Jackson, Memphis, and New Orleans (**Figure 20**). This suggests a latent demand for improved connectivity to these cities.

Figure 19. Respondents Who Use Intercity Transportation

Figure 20. Top Intercity Destinations

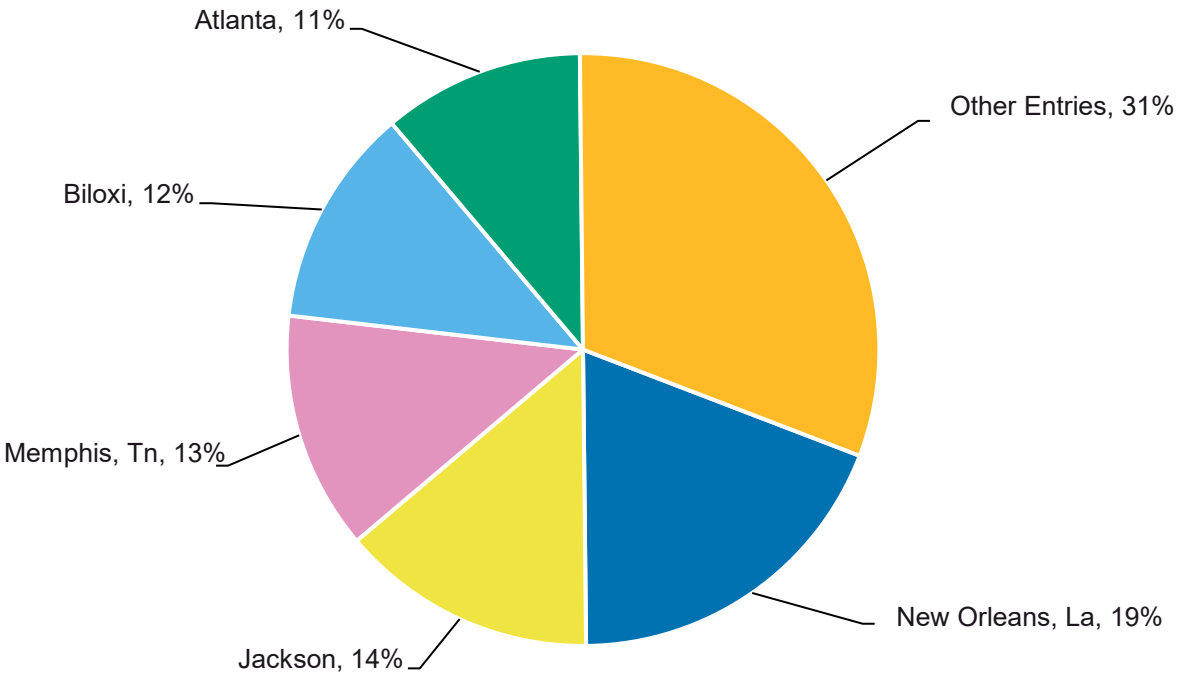
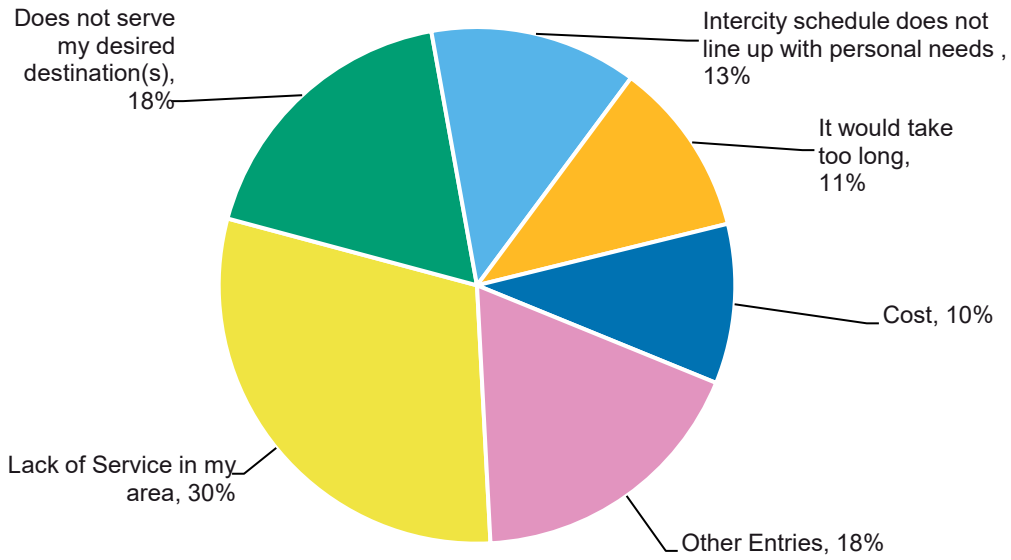


Figure 21 provides the reasons why the respondents are not using intercity public transportation service.

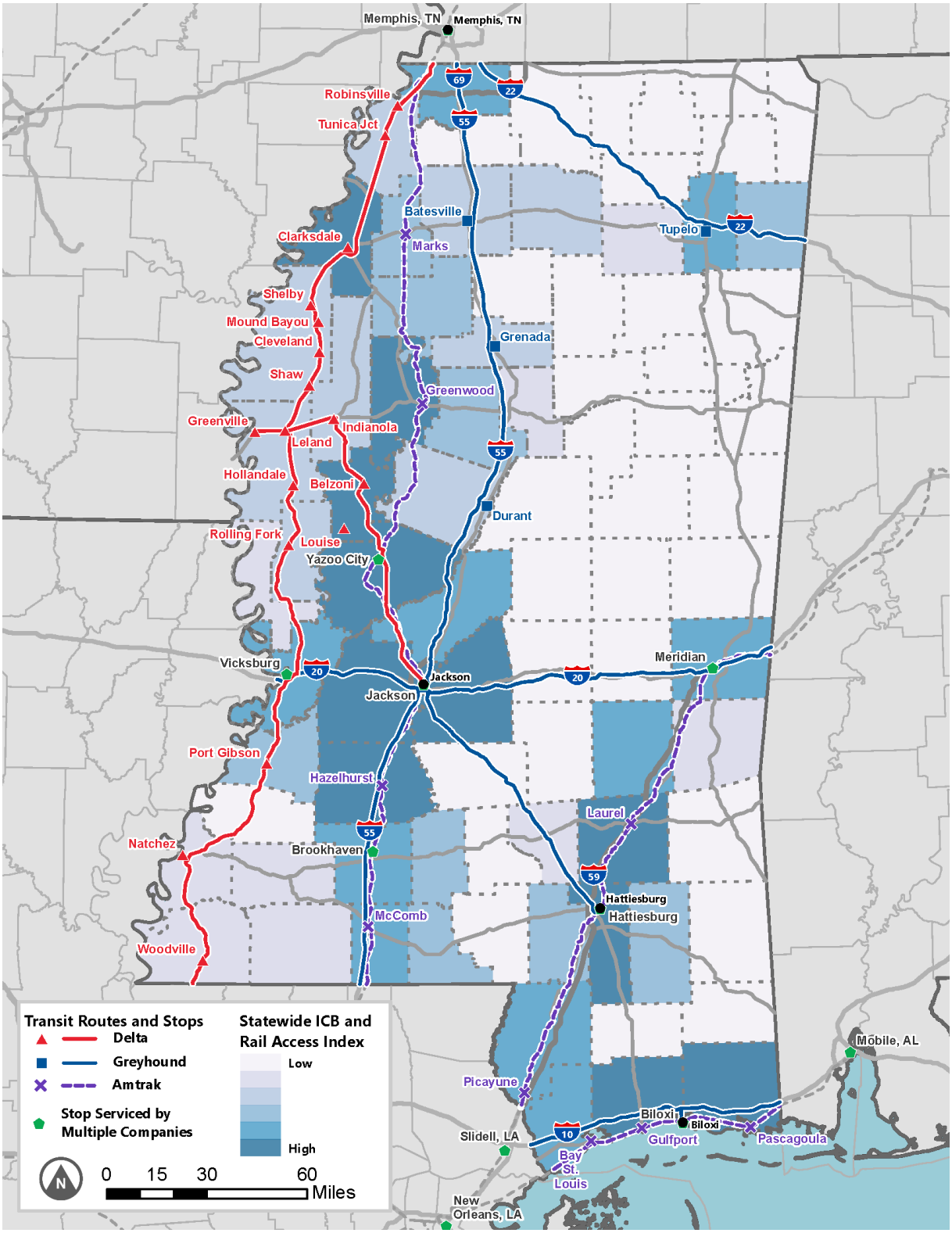
Figure 21. Reasons Why Intercity Service is Not Used



GAP ASSESSMENT

The survey results indicate **geographic and operational gaps** in current intercity offerings, while also pointing to opportunities for targeted service improvements and better alignment with traveler needs. To confirm this, connectivity was assessed by evaluating the proximity of rural populations to intercity bus (ICB) and rail stops, the availability of public transit services, and the extent of rural coverage. Following guidance from the Bureau of Transportation Statistics, each county received a score on a 0–5 scale based on the percentage of its rural population that is located within a 25-mile radius of an ICB or rail stop. Additional points were rewarded based on the presence of local or regional public transportation services that facilitate seamless connections between modes. As shown in **Figure 22**, counties scoring 0–2 (lighter shades) face the greatest challenges, primarily in the eastern and southern regions, where intercity stops are sparse and public transit is limited. Counties scoring three or higher (darker shades) are located in urban areas, where fixed-route services connect residents to intercity transportation.

Figure 22. Intercity Bus and Rail Access by County



Mississippi's **statewide average score is 1.8 out of 5** or 36 percent out of 100, indicating a low optimization level due to **significant gaps in intercity connectivity** (**Figure 23**). The recommended goal is for all counties to achieve a score of **3 or higher** (60 percent out of 100) which is equivalent to a majority of rural residents having access to intercity services.

Figure 23. Connectivity Optimization

GAP CAUSES

Mississippi's limited connectivity to intercity bus and rail services is driven by a combination of transit system constraints and broader geographic and socioeconomic factors.

Transit-related causes include:

- **Insufficient funding:** Many rural transit providers have limited operating and capital resources to support feeder services to intercity stops. Limited local match funding restricts access to federal and state grants, resulting in reduced service availability.
- **Service availability:** Survey data shows that 73 percent of residents do not use intercity bus or rail, primarily due to limited service in their area or to desired destinations, reinforcing the cycle of low investment and limited service.
- **Schedule misalignment:** Intercity bus and rail schedules often do not align with local transit operations or rider needs, reducing usability and convenience.

Non-transit-related causes include:

- **Low population density:** Sparse populations in rural areas reduce ridership potential, making it difficult for intercity providers to justify adding stops or increasing service frequency.
- **Geographic isolation**: Long travel distances and dispersed development patterns increase the cost and complexity of providing intercity access.

3.1.4 KEY TAKEAWAYS – USER NEEDS

Mississippi's public transportation system faces challenges in meeting user needs for transit-reliant populations. The following key takeaways summarize the most significant gaps identified.

- **High transit need, limited coverage**: Portions of Mississippi, especially the areas bordering Louisiana, exhibit the highest transit propensity. However, many of these high-

need areas have challenges providing sufficient service coverage, leaving vulnerable populations underserved.

- **Significant demand shortfalls**: Mississippi's transit systems operate 17 percent below peer state averages in TPC, with small urban systems underperforming by 65 percent and rural systems by 43 percent. These gaps reflect latent demand and highlight the need for expanded service options.
- **Access barriers to essential destinations**: Only 57 percent of urban residents live within ¾ mile of a fixed route, resulting in a gap of over 300,000 people who reside outside this fixed route boundary. Rural counites face the greatest connectivity challenges due to limited-service hours and geographic isolation.
- **Coordination gaps across jurisdictions**: While fundamental coordination practices are in place, advanced and innovative coordination activities – such as fare integration and regional scheduling – are absent. This limits seamless travel across county lines and reduces system efficiency.
- **Intercity connectivity deficiencies**: Mississippi's average county score for intercity access is below 1.8 on a 5-point scale, indicating limited access to intercity service. This gap is most pronounced in rural and eastern counties, where there is a shortage of viable options for regional travel.
- **Public sentiment reflects systemic issues**: Survey results show that 75 percent of respondents are dissatisfied with current transit options with 44 percent citing the lack of service as the primary reason for non-use. Desired improvements include more routes and better access to key destinations.

These findings underscore the need for targeted investments, improved coordination, and strategic expansion so that Mississippi's transit system is inclusive, accessible, and responsive to the mobility needs of all residents.

3.2 PROVIDER NEEDS

Provider Needs encompass the resources and capabilities transit agencies require to deliver safe, reliable, and efficient service. These include funding, skilled workforce, training, informative websites and regulatory guidance, and infrastructure improvements such as passenger amenities and intermodal facilities. Mississippi agencies have shown success in addressing these needs through collaboration and innovation. CTA implemented advanced scheduling platforms with federal support and SMART region agencies launched regional maintenance and workforce programs. This analysis evaluates Provider Needs using surveys, interviews, compliance reviews, and GIS-based assessments. The findings identify gaps and opportunities that inform strategies to strengthen operational resilience and statewide collaboration.

3.2.1 COLLABORATION

This assessment examines the extent to which public transportation providers and regional mobility managers collaborate by **sharing resources, coordinating services,** and **exchanging expertise** to address operational challenges and improve service delivery through cost-effective resources and training.

Collaboration activities were derived from peers and national best practices. Additional insights were drawn from previous work on the MDOT Statewide Transit Plan & Intercity Bus Study, along with input received from Mobility Managers. These activities were then categorized into three tiers based on their functionality and level of complexity:

- **Fundamental:** These activities represent the baseline level of collaboration/cooperation among transportation providers—shared training opportunities, joint vehicle procurement, information exchange—that improves efficiency and fosters trust without requiring deep integration or structural change.
- **Advanced**: These activities go beyond foundational collaboration/cooperation and demand greater alignment and resource integration. They include shared infrastructure, joint planning strategies, and standardized systems and processes that typically require more formal agreements, sustained collaboration, higher levels of organizational maturity, and have regional or multi-agency impact.
- **Innovative**: These activities reflect transformational approaches that reimagine how transportation providers collaborate across regions. These activities challenge traditional models and introduce new technologies, partnerships, strategies, and service models with formalized structures, shared systems, and cross-sector partnerships enabling pooled resources, unified planning, and integrated service delivery. Innovation is marked by regional scale, strategic alignment, and the inclusion of non-traditional stakeholders, all aimed at creating sustainable, scalable solutions.

GAP ASSESSMENT

Mississippi regional mobility managers support transportation providers and other regions to develop and implement coordination activities previously identified. Common successes among majority of regions (also noted in **Section 3.1.2**) include:

- **Shared long-term planning/funding strategies:** Regional groups have coordinated approaches to long-term planning and funding strategy. Some regions have taken the next step by identifying fund-braiding opportunities between providers.
- **Joint recruitment efforts:** Transit systems collaborate to host joint recruitment opportunities in their respective regions.
- **Purchased services agreements:** Section 5310 grant fund recipients contracting with Section 5311 grant funding recipients.
- **Joint training workshops:** Mobility managers provide annual joint training opportunities in their regions.
- **Shared maintenance functions:** Some transportation providers offer vehicle maintenance services for partners that do not operate their own maintenance facilities.
- **Special transportation services partnerships:** Regional mobility managers facilitate partnerships between transportation providers and other stakeholders, such as human services programs and non-transit stakeholders, for special transportation services.

Some limited, but innovative successes include:

- **Regional workforce training:** SMART and EZTAG regions have implemented regional workforce training efforts for CDL driver licensing and maintenance certifications.
- **Shared procurement of vehicle parts/equipment:** Delta Rides has implemented shared procurement of vehicle parts/equipment for shared maintenance functions.
- **Shared vendor pools:** Delta Rides, EZTAG, and SMART regions share vendor lists of pre-qualified vendors with multiple providers.
- **Shared EV infrastructure:** Southern Connect has shared EV infrastructure among multiple providers.

The analysis revealed the following barriers to collaboration:

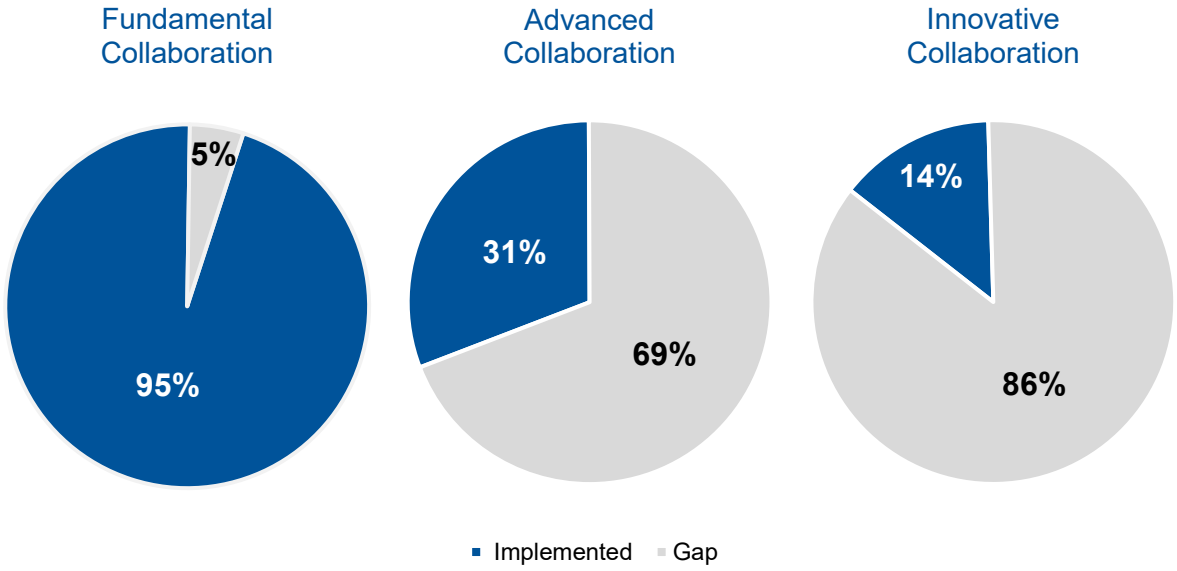
- **Policy and planning**: Regionally coordinated human services plans are outdated and do not feature comprehensive long-term strategies that support transit systems operating in a broader regional environment. Similarly, while there are individual successes with advanced and innovative collaboration efforts occurring in each region, there are challenges with implementing broader regional successes.
- **Technology**: Public transportation providers and regional mobility managers have misaligned scheduling/operating systems and technology that make regional or shared operations difficult to implement. Though all providers have access to QRyde for scheduling, the platform does not currently allow providers to view each other's vehicles to allow for shared operations.
- **Grants/funding**: Though regional mobility managers help facilitate contracts between public transportation providers and other stakeholders, there is less collaboration between providers for shared agreements and procurements.

While collaboration activities are varied and unique among MDOT's regions, the **overall Mississippi implementation optimization rate is high** (**Figure 24**). This accounts for high

implementation rate for fundamental collaboration **(95 percent),** over half of advanced collaborative activities implemented **(31 percent),** and just under half of innovative collaboration activities applied **(14 percent)** as shown in **Figure 25**.

Figure 24. Collaboration Optimization

Figure 25. Collaboration Optimization by Maturity Category



GAP CAUSES

The following gap causes contribute toward the barriers in collaboration among regional mobility managers and providers within their respective regions:

- **Funding silos:** Limited cost-sharing among providers prevents partners from further collaborating.
- **Limited funding:** Limited funding results in available funds being applied to maintain existing services. In these scenarios, there are no additional funds being applied to new technologies or other innovative activities.
- **Communication structure:** Though regional mobility managers collaborate at statewide summits or conferences, there is not a framework for routine communication between regional mobility managers that allows for ongoing information sharing and collaboration.

3.2.2 FUNDING

This gap analysis examines the adequacy and diversity of funding sources available to support transit operations and maintain assets in a **State of Good Repair (SGR)**. It assesses the current mix of federal, state, local, and directly generated revenues, beginning with an evaluation of whether federal funding is sufficient to sustain ongoing vehicle replacement and infrastructure maintenance. The analysis then explores the range of funding sources accessible to MDOT and its transit partners, identifying which are currently utilized and which remain untapped. Together, these assessments inform the identification of funding gaps that may impact long-term transit sustainability and performance.

FUNDING ADEQUACY

Adequate and sustainable funding is essential for maintaining SGR requirement and confirming reliable transit service. This section evaluated the extent to which current funding streams can meet the capital needs of the public transportation providers.

GAP ASSESSMENT

Figure 26 builds upon the FY2022 TAM Group Plan (excluding Hub City) to forecast anticipated capital needs for vehicle replacement and facility renewal. These projections are based on three Useful Life performance targets for vehicles: 50 percent (current benchmark), 60 percent (2050 Multiplan), and 80 percent (preferred) and assume full facility replacement every 40 years. The projected needs are compared against expected federal apportionments, specifically Section 5339 and Section 5311 funds.

Figure 26. SGR Shortfall - Rural Providers

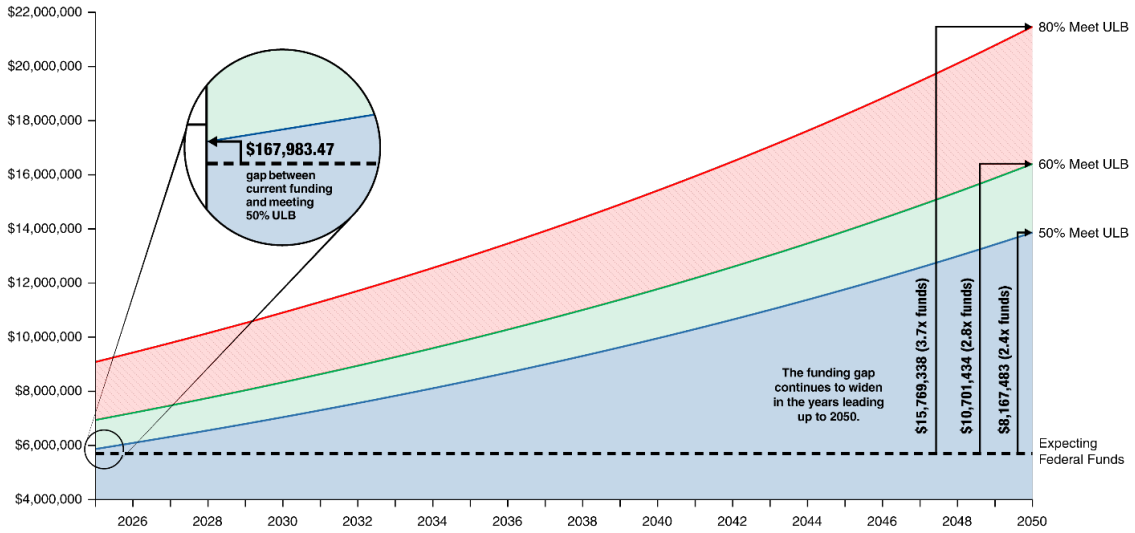
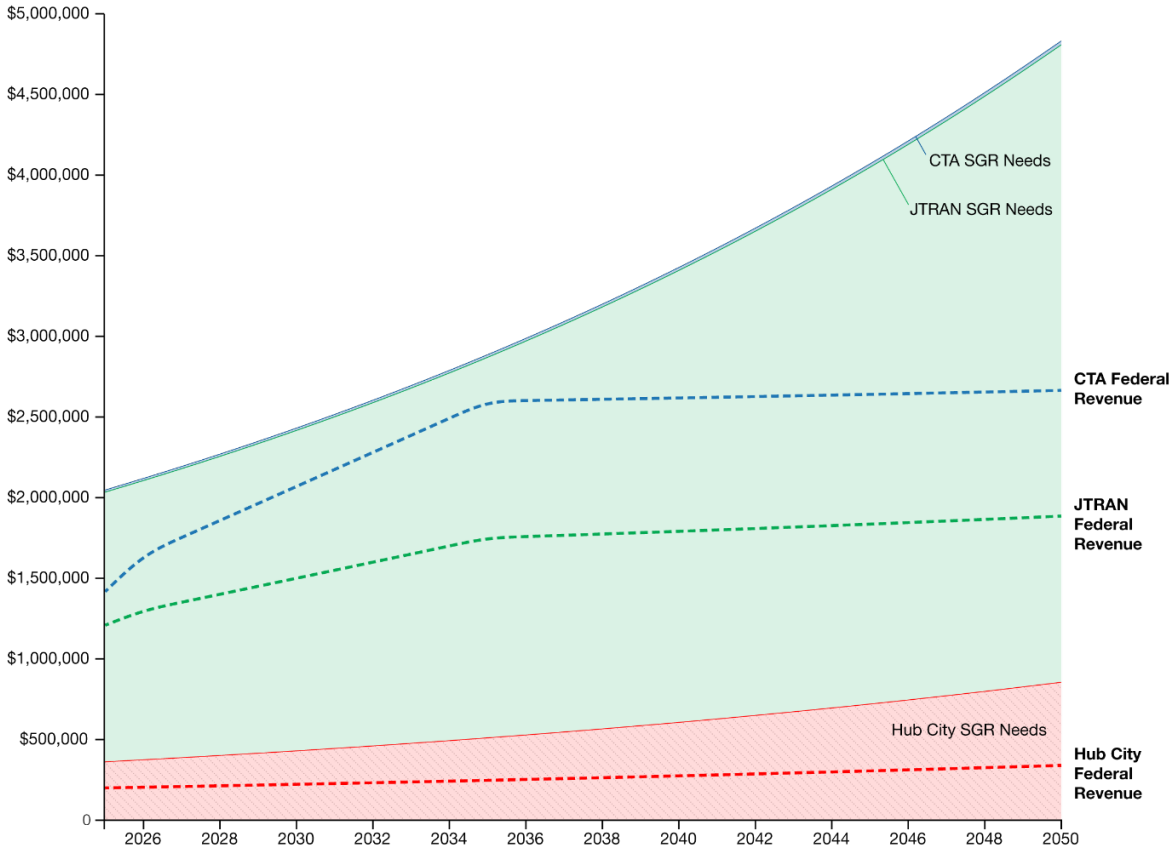


Figure 27 presents the estimated capital funding shortfall for urban public transportation providers—CTA, Hub City, and JTRAN—based on the performance measures outlined in their

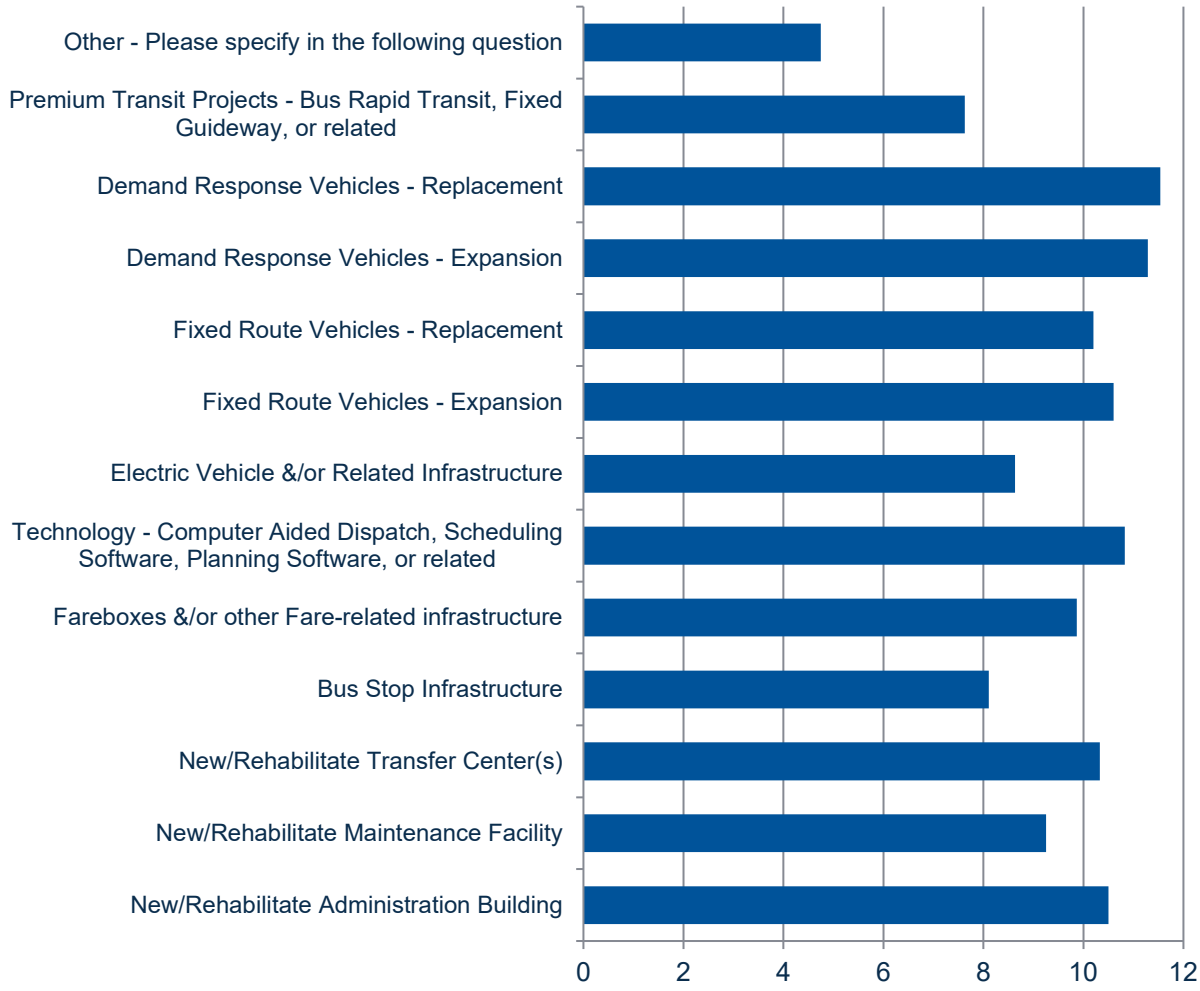
individual TAM Plans. For this analysis, Hub City's benchmark is set at 80 percent. Anticipated federal funding includes Section 5307 (assumed at 25 percent for CTA and JTRAN due to their eligibility under the special rule allowing use for operating expenses, and none for Hub City, which uses all its 5307 funds for operations) and Section 5339.

Figure 27. SGR Shortfall - Urban Systems



To provide additional context, a statewide survey of 36 public transportation providers identified their most pressing capital needs (**Figure 28**), showing a strong **emphasis on vehicle-related investments, particularly for demand response services**. Eleven agencies ranked demand response vehicle expansion as their top priority, followed by nine agencies prioritizing demand response vehicle replacement. Technology upgrades, including computer-aided dispatch, scheduling software, and planning tools, were also a significant concern with five agencies listing them as their highest need.

Figure 28. Transit Agency Capital Needs Top Ranking



Facility improvements, such as new or rehabilitated administrative and maintenance buildings, were ranked lower (around priority four out of eight), indicating they are important but not immediate concerns. These findings suggest that funding strategies should focus on vehicle acquisition and modernization of operational technologies to address the most urgent needs identified by providers.

The analysis of projected capital needs, available funding sources, and provider-identified priorities reveals a significant and persistent **gap between current resources and future requirements.** While MDOT and its transit partners have made strategic use of federal programs such as Sections 5307, 5311, and 5339, these sources alone are insufficient to fully support ongoing vehicle replacement, facility renewal, and technology upgrades.

The prioritization of Demand Response vehicles and operational technologies by transit agencies highlights the immediate pressures on service delivery, particularly in rural areas. Without expanded and diversified funding, especially for capital investments, MDOT and public

transportation providers will face increased challenges in maintaining an SGR and meeting evolving mobility needs. Addressing these gaps will require continued coordination, advocacy for additional resources, and strategic planning to provide for the long-term sustainability of Mississippi's public transportation network.

FUNDING SOURCES

Various federal, state, and local funding sources support public transportation services in Mississippi. Funding diversity is vital for transportation providers because it enhances flexibility, sustainability, and the ability to respond to evolving needs. Regional Mobility Managers support strategic planning that is unique to the operating characteristics in each region by brokering and facilitating funding relationships between public transportation providers, community organizations, planning development districts, and human services.

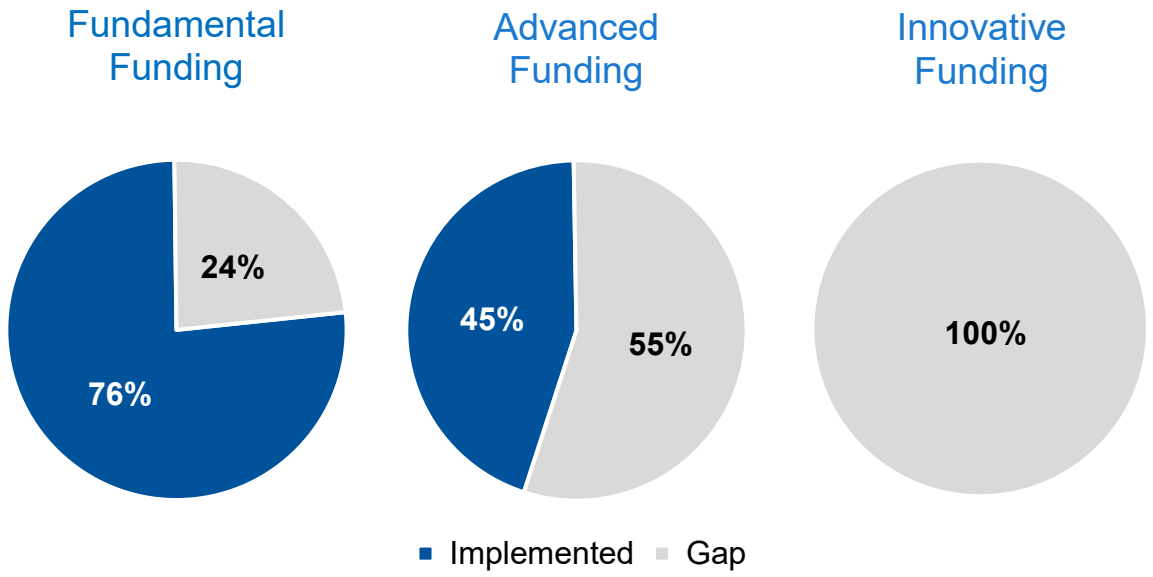
For the gap analysis, the Project Team developed a comprehensive list of funding sources by scanning national resources and other industry best practices (refer to **Tech Memo 2 – Needs & Gap Analysis Methodology** for a list of funding sources). The Implementation Maturity Index was applied to assess the Mississippi public transit network's utilization of these funding options, categorized as follows:

- **Fundamental**: Sources considered foundational because they include stable and recurring federal programs, predictable state allocations, and locally generated revenues that support the core operations and maintenance of transit systems.
- **Advanced**: Sources leverage targeted federal and state programs addressing specific populations or social needs, along with locally driven mechanisms like special districts and user-based fees that support broader community development and mobility goals beyond core transit operations.
- **Innovative**: Draw on specialized federal grants targeting specific populations and social challenges, combined with emerging local funding strategies like congestion pricing and vehicle-miles-traveled fees that reflect evolving policy priorities and technology-driven approaches to mobility funding.

GAP ASSESSMENT

The state's funding utilization maturity level rates as low where public transportation providers tap into **76 percent** fundamental sources**, 45 percent** of advanced funding sources**,** and **0 percent** of innovative funding sources**. Figure 29** illustrates the utilization of different sources.

Figure 29. Funding Optimization by Maturity Category



Key takeaways from the analysis include:

- **There are gaps in local funding sources**: Funding is generally derived from sources such as property taxes, state shared revenue from fuel taxes, concession, and lease revenues by partnering with local businesses to collect fees for sharing parking lots or serving popular areas (e.g., dining or tourist attractions). Obtaining local taxes for transit use requires referendums or other legislation.
- **Opportunities exist in advanced funding mechanisms:** While state block grants are routinely obtained, other advanced funding sources such as special development districts and room/occupancy or impact/mobility fees are not typically utilized.
- **Innovative funding sources are not pursued:** These include federal discretionary programs and specialized human services transportation grants.

FUNDING & FUNDING DIVERSITY GAP ASSESSMENT

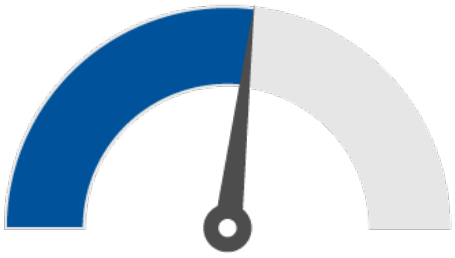
Mississippi's public transportation funding landscape reveals significant structural deficiencies that threaten long-term system sustainability. While agencies demonstrate strong reliance on fundamental funding sources (**77 percent utilization**), adoption of advanced mechanisms such as development districts and mobility fees remains limited, and innovative strategies—including discretionary grants and congestion pricing—are entirely absent. This absence of diversification constrains flexibility and reduces resilience against fluctuating federal allocations or economic downturns.

Compounding these challenges is a persistent capital funding shortfall for maintaining an appropriate SGR. Rural providers face an average **60 percent deficiency,** and urban systems

report a **55 percent gap**, underscoring the inability of current resources to support timely vehicle replacement, facility renewal, and technology upgrades.

Figure 30 provides an overall funding assessment (**56 percent**) which factors in both the availability and diversity of funds. Without expanded and diversified funding streams, Mississippi's transit agencies risk service degradation, reduced reliability, and diminished competitiveness for federal discretionary programs.

Figure 30. Funding Optimization



GAP CAUSES

Mississippi's transit agencies face a combination of transit-specific and broader contextual challenges that limit their ability to pursue and secure diverse funding sources. These barriers restrict innovation, reduce competitiveness for discretionary grants, and constrain the ability to meet evolving transportation needs.

Transit-related Causes:

- **Operational capacity limitations:** Many agencies do not have staff with expertise in grant writing, financial planning, and partnership development, making it difficult to pursue complex or competitive funding opportunities.
- **Fragmented funding strategies**: Agencies rely heavily on formula funds and rarely pursue advanced or innovative sources, such as mobility fees or discretionary grants.
- **Inadequate financial planning tools**: The absence of standardized templates and forecasting tools hinder long-term capital planning and readiness for competitive funding.

Non-transit-related Causes:

- **Enabling legislation barriers:** Many potential funding mechanisms such as local taxes, impact fees, or special districts require legislative approval or voter referendums, which are difficult to initiate and successfully pass.
- **Low-Density development patterns:** Dispersed populations and car-centric land use reduce the perceived need for transit investment, making it harder to justify funding expansion.
- **Limited political support**: Inconsistent or limited political support at the local and state levels affects the prioritization of transit funding and the passage of enabling policies.

3.2.3 STAFFING

Resilient and effective public transportation systems rely on a stable, well-trained workforce. In Mississippi, transit agencies face persistent staffing challenges that impact service delivery, safety, and innovation. This section evaluates current staffing levels at the agencies across the state with a focus on operator/driver positions. It highlights gaps in capacity and identifies opportunities to strengthen the transit workforce through strategic planning and investment.

GAP ASSESSMENT

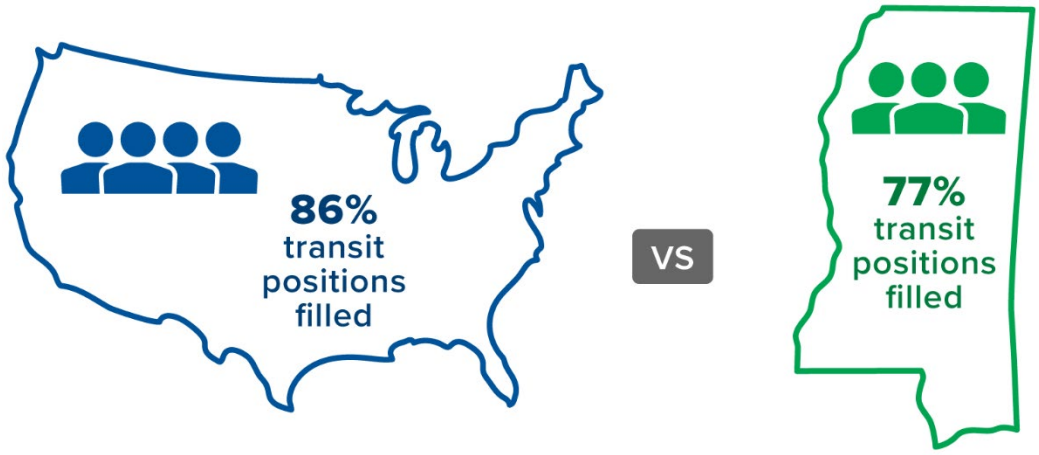
Mississippi's transit staffing levels and needs were assessed using information obtained from the provider survey and examining staffing practices among transportation providers within each region. This information was categorized as follows:

- **Fundamental:** Staffing levels that are enabling transit providers to meet travel demand in their service area.
- **Advanced:** Staffing practices that demonstrate shared recruitment, hiring, and retention practices among public transportation providers.
- **Innovative:** Staffing practices that support regional workforce development activities and shared recruitment, hiring, and retention practices among regional public transportation providers.

Fundamental staffing was assessed through two methods. The first method (applied to the Fundamental category) compared Mississippi and national average transit staffing levels (**Figure 31**). Advanced and innovative staffing activities were assessed through a System Maturity Rubric that considered responses gathered from regional mobility managers on collaborative staffing efforts taking place within each respective region.

Mississippi's transit staffing challenges mirror national trends. According to the American Public Transportation Association's *Transit Workforce Shortage: Root Causes, Potential Solutions, and the Road Ahead* (2022), 15-25% of operator/driver positions remain unfilled on a national scale, with 92% of agencies reporting significant challenges hiring bus operators. A survey of **Mississippi's transit providers suggests similar operator/driver shortages of 23% statewide (Figure 31)**. Eight of these providers reported operator/driver shortages exceeding 30%, with the greatest shortage reaching 65%. Providers who reported higher operator/driver staffing levels explained that, although they were able to meet existing service needs, continued expansion would require additional staffing support.

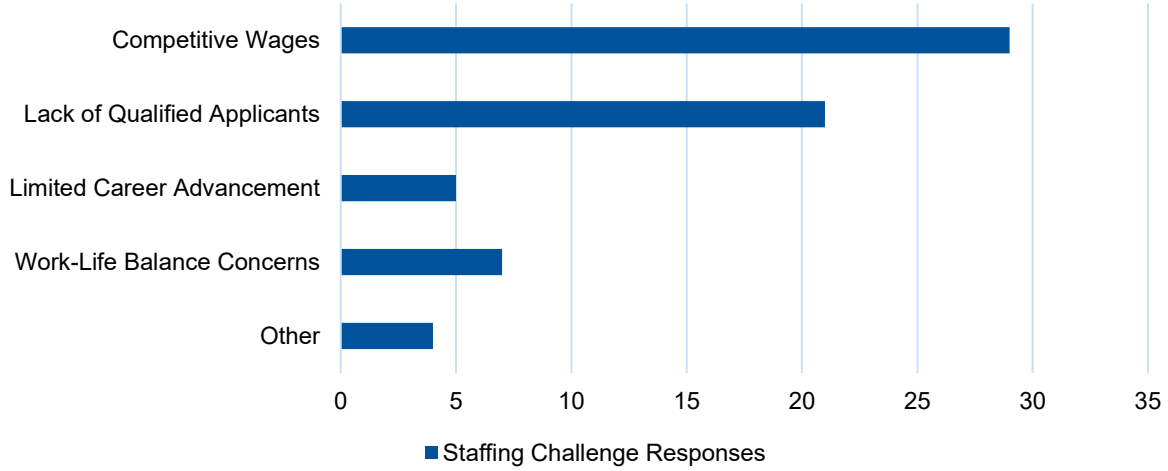
Figure 31. Mississippi Staffing Level Comparison



Sources: National averages obtained from FTA's 2023 Transit Summaries (represents both full-time and part-time staffing equivalents); Mississippi average obtained from 2025 Public Transportation Provider survey.

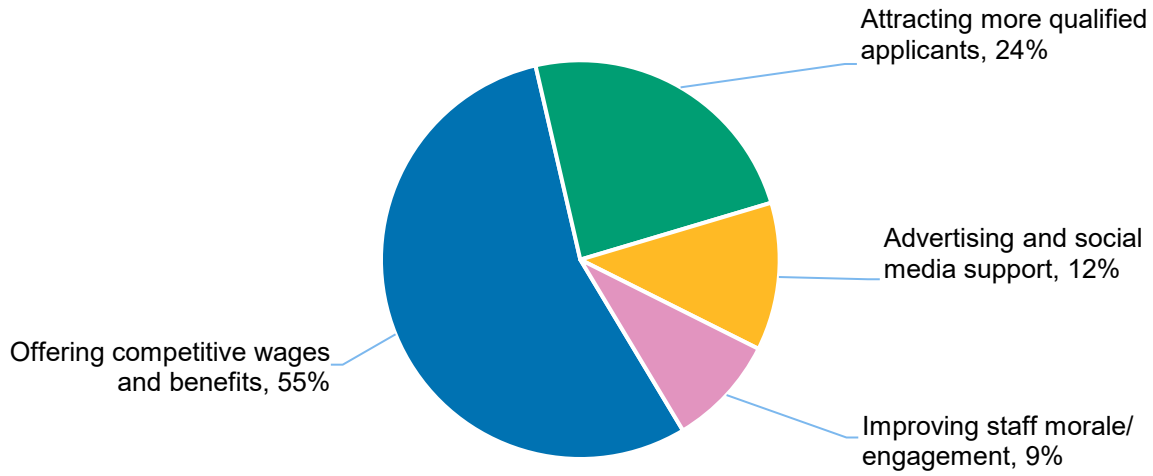
Staff recruitment and retention is a perennial challenge in Mississippi, which is consistent with trends in the transportation industry across the country. Survey results indicate that **81 percent** of respondents believe **wage/benefits** represent the most substantial barriers for recruiting and retaining qualified staff, followed by **lack of qualified applicants** (**Figure 32**).

Figure 32. Mississippi Public Transportation Staffing Challenges



Transportation providers identified areas where staff recruitment and retention support is needed in **Figure 33**.

Figure 33. Staff Recruitment and Retention Needs



Results indicate Mississippi's overall staffing optimization rates as moderate (**Figure 34**). **Figure 35** provides the score by maturation level, where the average staffing level (Fundamental) is currently **77 percent**, resulting in a **23 percent gap**. Around **29 percent** of advanced staffing practices and **11 percent** of innovative staffing practices have been implemented throughout the state. The majority of Mississippi's regions have explored joint recruitment practices, with the Delta Rides region also sharing staff position description templates between providers. Additionally, the Trans-Con and Delta Rides regions feature centralized routine recruitment and marketing efforts.

Figure 34. Staffing Optimization

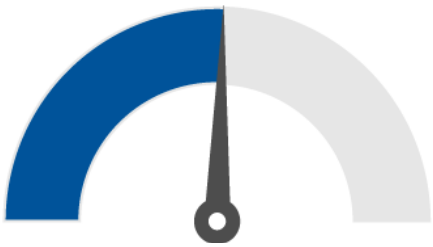
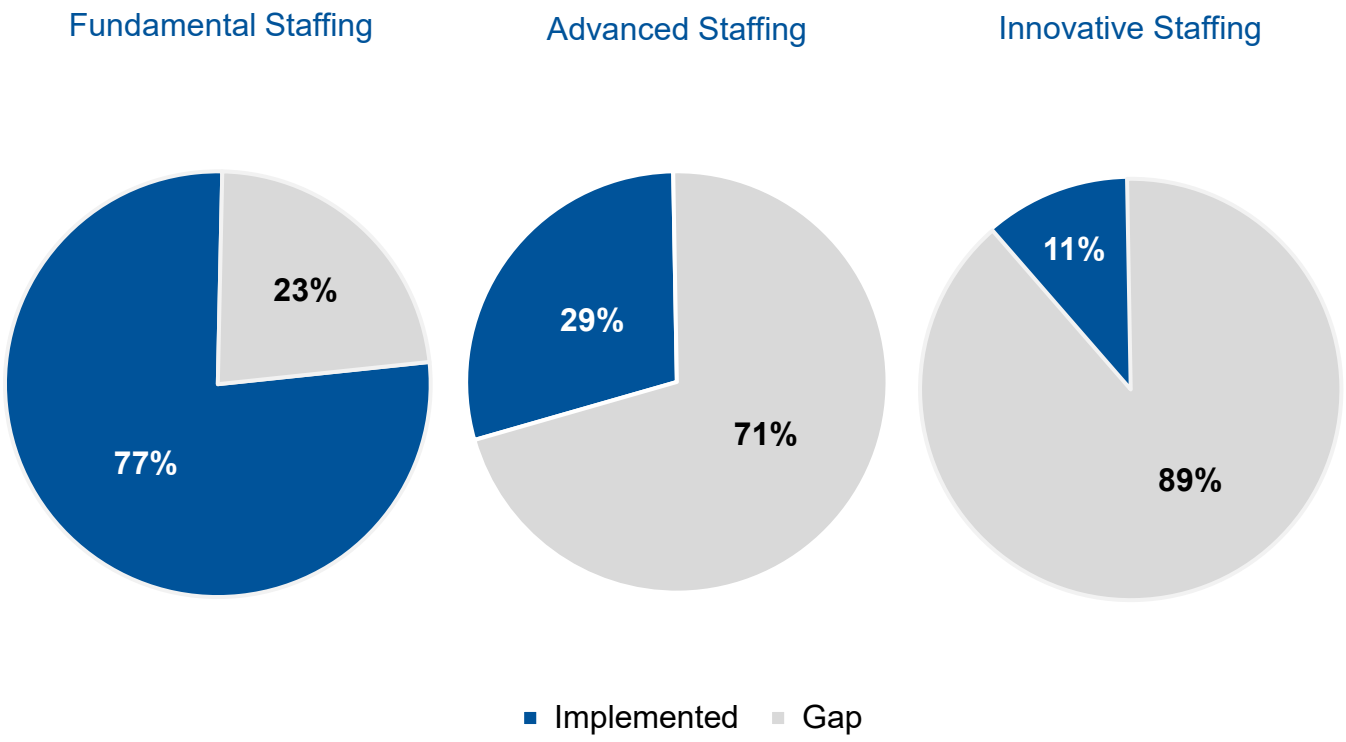


Figure 35. Staffing Strategies Optimization by Maturity Category



GAP CAUSES

The causes of transit staffing gaps are:

- **Limited funding:** Local grant match requirements can further limit the amount of funds available for transit staff wages and benefits.
- **Limited exploration of shared staffing between providers:** Although transit providers are collaborating to host joint job fairs, there has been limited exploration of more innovative staffing methods like cost-sharing for certain positions or creating regional operations centers.
- **Traditional hiring practices:** Transit providers have not yet explored advanced hiring practices, such as shared candidate pools or joint background screening among multiple providers in a region.
- **Rural environment (Non-Transit):** While recruiting and training staff is challenging for all transit agencies, these difficulties are compounded in rural areas where applicant pools are smaller, and training is harder to access.

3.2.4 TRAINING

This section evaluates the extent to which public transportation providers implement training practices that align with federal requirements, industry best practices, and innovative approaches. While there are minimal federal requirements for training programs, FTA encourages states to establish their own minimum training thresholds that align with Safety Management Systems principles. These realities were factored into the three training categories in this assessment:

- **Fundamental**: Training elements that are required by law, regulation/statute, or policy and are a condition of performance within a contractual agreement.
- **Advanced**: Training activities representing industry best practices that transportation providers should include in respective training curriculums.
- **Innovative:** Forward-thinking, creative approaches to training that may be undertaken statewide or regionally to achieve comprehensive and consistent performance in transit safety, reliability, or more.

GAP ASSESSMENT

Training is a foundational element of a safe, reliable, and resilient public transportation system. Transit staff positions require training in specific areas such as driving, maintenance, administration, and customer service. Training is a critical method of confirming consistency in passenger safety and transit system reliability.

Training was assessed through compliance and availability/needs lenses. The compliance portion involved a scan of the State Management Review, agency monitoring reports, and triennial reviews. The availability/needs assessment involved input from mobility managers, provider needs survey results, and access to training resources and state policies. The **System Maturity Rubric** scoring methodology was applied.

The analysis reveals there are no identifiable training gaps through a compliance lens. State management reviews and triennial reviews indicate transit agencies are complying with all fundamental training requirements that are defined under the code of federal regulations for safety promotion, passenger sensitivity, and drug and alcohol.

Seventy-three percent of the advanced training activities that serve as best practices are in use. Gaps include:

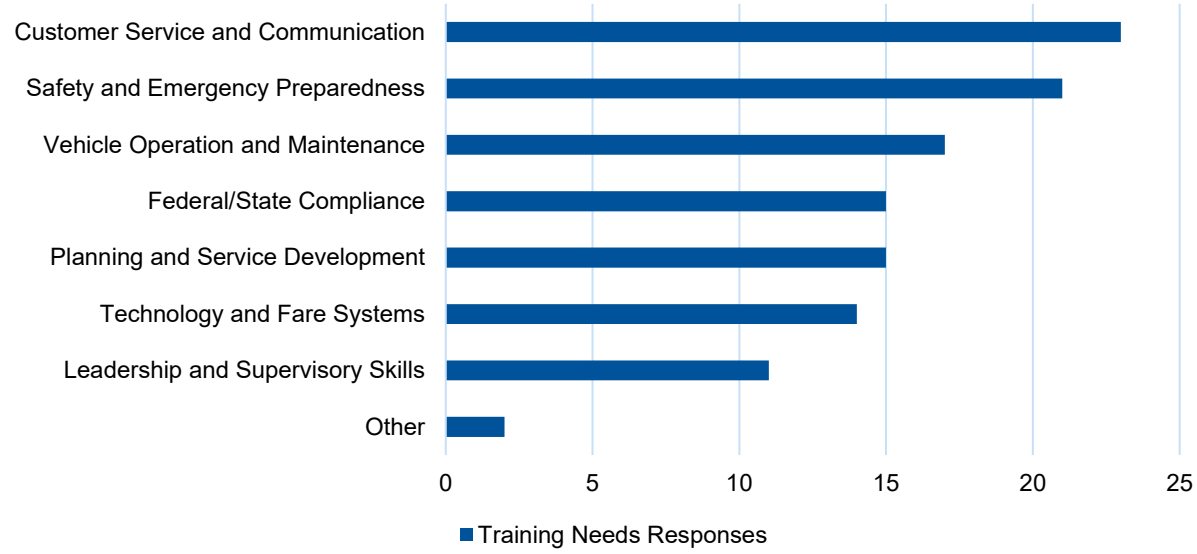
- **Wireless communication policy**
- **Distracted driving**
- **Basic operations and maneuvering (separate from supervised training behind the wheel)**

The analysis did not reveal consistent implementation of innovative practices in Mississippi; however, the collaboration analysis shows one region (SMART) is implementing regional workforce development training for their providers. Innovative training gaps exist in:

- **Targeted retraining based on performance monitoring (accidents/incidents, road calls, equipment failures, etc.)**
- **Real-life scenario training**
- **Regional training consortiums (inconsistency across regions)**

The needs analysis reveals public transportation providers seek training in a multitude of topics, some of which fall into fundamental and advanced categories (**Figure 36**). While not considered overt gaps, training topics that are in high demand reveal areas where opportunities to mitigate risk and improve the SGR and customer experience. These areas include customer service and communication (**66 percent**), safety and emergency preparedness (58 percent), and vehicle operations and maintenance **(47 percent).**

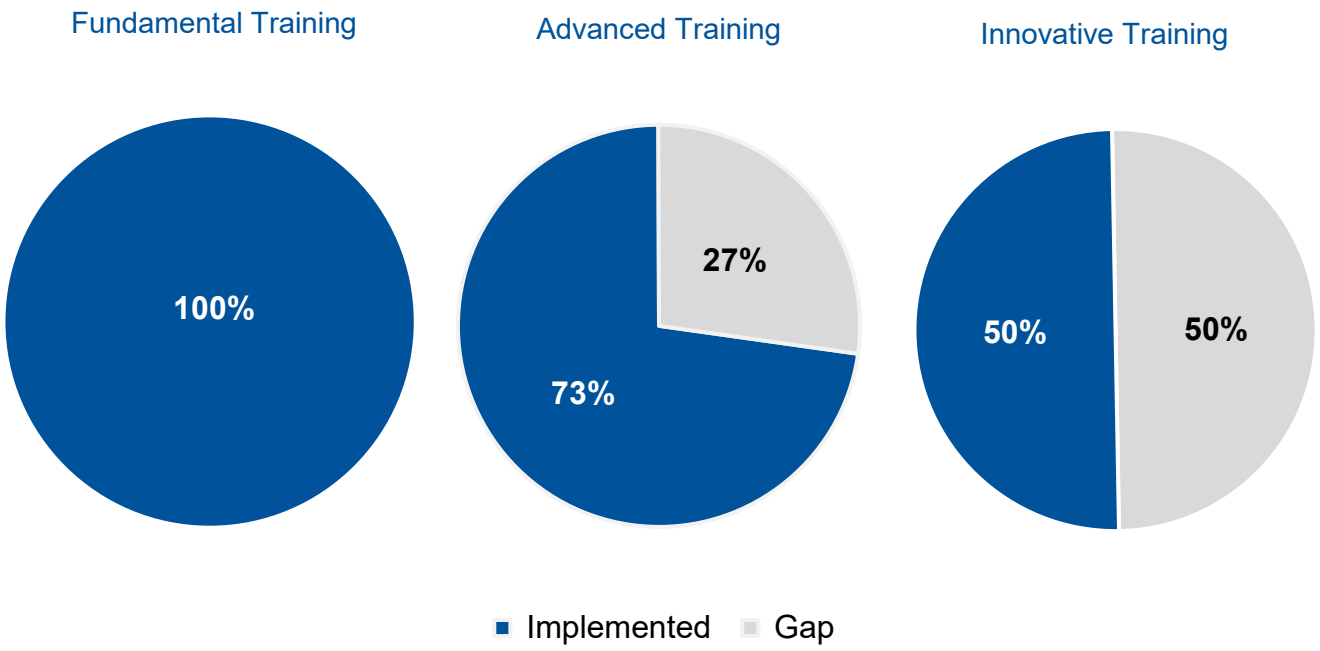
Figure 36. Public Transit Agency Training Needs



The state's training optimization level rates as moderate, with approximately **72 percent** of training elements being implemented (**Figure 37**). **Figure 38** provides the implementation of training strategies by maturity category.

Figure 37. Training Optimization

Figure 38. Training Strategies Optimization by Category



GAP CAUSES

While there are no fatal flaws in the State's transit training program, there are currently **gaps in the approaches to training technical assistance**. More specifically:

- **Underdeveloped policy framework:** State training policies and requirements are outlined in detail in legislative statutes, comprehensive standard operating procedures, or requirement manuals that are publicly available. While MDOT has operating procedures related to managing the Rural Transportation Assistance Program (RTAP), the policies and practices related to how required transit training is determined and provided to transit agencies could be strengthened in administrative documents.
- **Limited accessibility of more advanced or innovative training resources:** Though many state required training resources are made available to providers, there is limited availability of additional advanced or innovative training resources for providers to access. RTAP training opportunities are currently requested in writing on an as needed basis. This process limits topics and resources that can be made publicly available. It can also create some inconsistency in how training funds and resources are applied to transportation providers.

3.2.5 RESOURCES

Resources consider public outreach strategies and regulatory and other support materials that are essential for increasing public awareness of transit options, confirming provider compliance, and improving service quality.

PUBLIC OUTREACH STRATEGIES

This gap analysis evaluated how effectively the Mississippi public transportation providers communicate with the public and promote their services. Providers outreach practices were assessed based on the presence or absence of key communication elements, revealing opportunities to enhance transparency, accessibility, and community engagement. By examining how agencies share information (e.g., through websites, contact details, accessibility features, social media) this analysis identified strengths and gaps in public-facing communications, highlighting strategies to foster a more inclusive and user-friendly experience.

Public outreach strategies were categorized into the following:

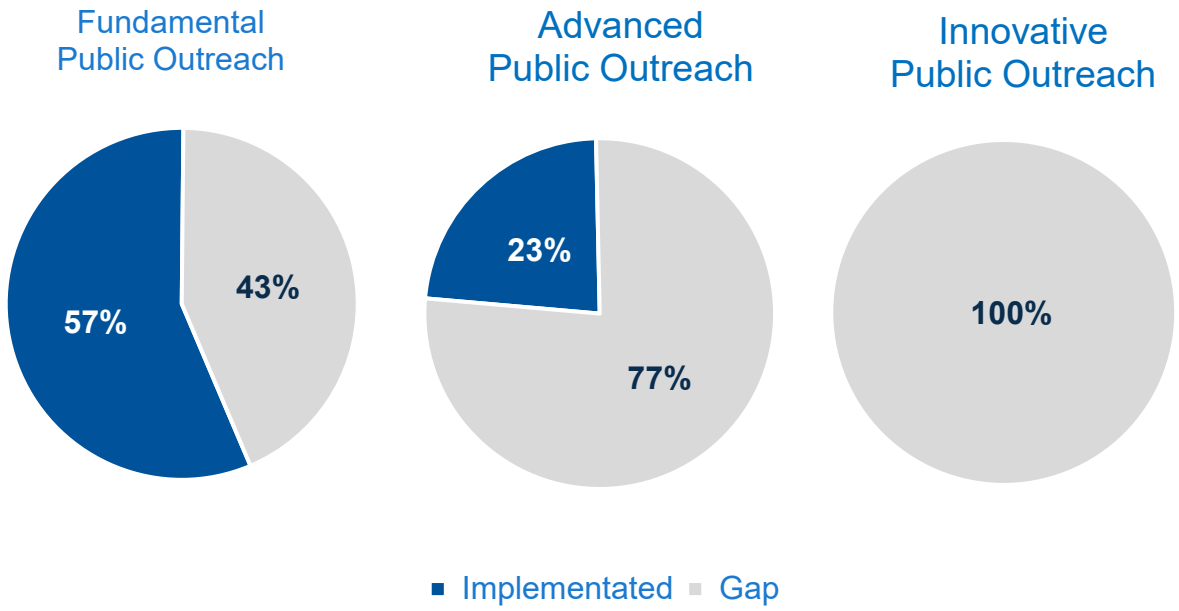
- **Fundamental:** Sharing basic agency information through an active website, availability of contact information, accessibility features, and connections to social media.
- **Advanced:** Includes agency-specific branding (separate from a parent organization like a city or county) and the utilization of modern rider assistance tools that are considered industry-standard.
- **Innovative:** Practices leveraging the latest technology in Artificial Intelligence, augmented reality, and/or geo-location to improve the rider experience. This category also has room to incorporate concepts or approaches considered as industry trendsetting.

GAP ASSESSMENT

The results of the assessment is provided in **Figure 39**Figure 39 and summarized below:

- **Fundamental.** Most agencies listed a physical office address, which supports transparency and provides an opportunity for in-person customer service. Of the providers with a website, the exceptions included EZTAG and Hub City Transit, which did not provide a transit-specific office address. Other issues discovered included broken links and outdated information. As an example, Aaron Henry Transit's social media links redirected to unrelated pages and NITA's website was found to be unreachable.
- **Advanced.** Eighteen agencies had some level of unique branding to help identify their organization. Four public transportation providers partnered with, and promoted, a third-party mobile app for riders to utilize, including the Transit App (JTran), Transloc (OUT and SMART) and RouteShout (CTA). The agencies utilizing Transloc and RouteShout also offered real-time bus tracking. OUT and SMART provide a trip planning service.
- **Innovative**. At this time, no innovative strategies were discovered.

Figure 39. Public Outreach Strategies Optimized by Maturity Category



REGULATORY & SUPPORT MATERIALS

In addition to detailing available transit services, websites at both the state and provider levels are expected to include essential system information (e.g., civil rights policies, eligibility criteria, and service areas) and meet ADA accessibility standards. Websites also serve as platforms for advancing transit initiatives through sharing grant and planning documents.

This assessment reviewed the MDOT ConnectMS site, the Public Transit Office site, and individual provider websites using the following maturity scale:

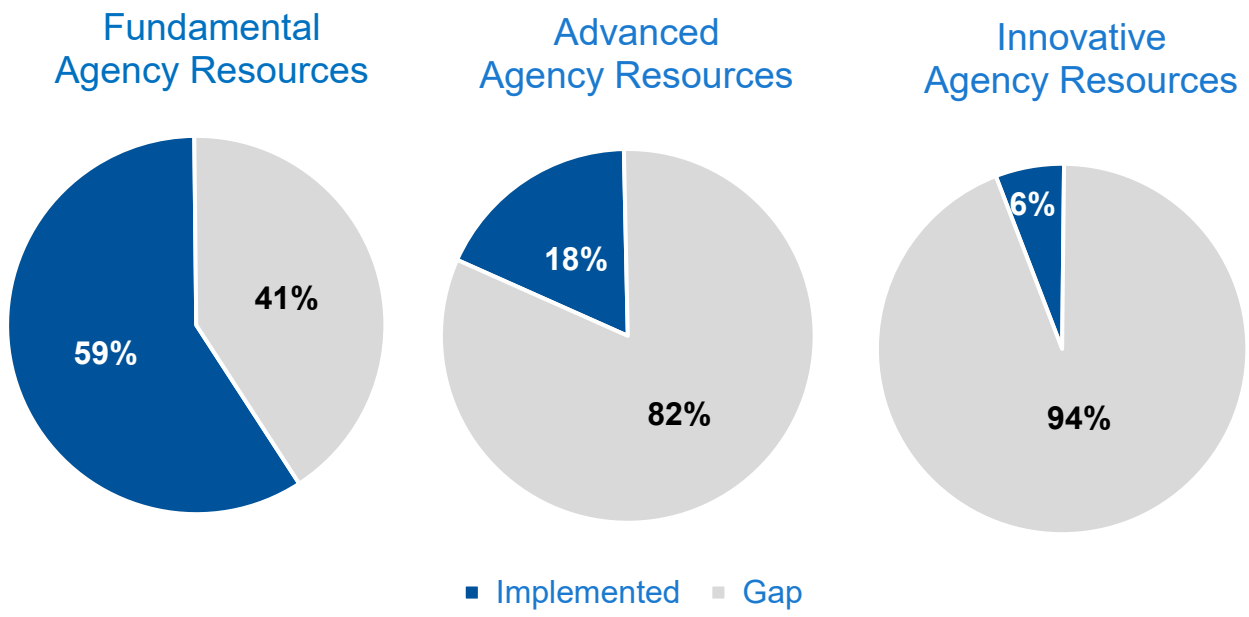
- **Fundamental**: ADA-compliant, user-friendly websites with links to key resources including the State Management Plan, funding programs, provider directories, and Title VI information. Provider sites should also include service details, fare information, staff contacts, and eligibility guidelines.
- **Advanced**: Tools and documents that support planning and coordination, such as grant templates, application timelines, service alters, trip planning software, and performance metrics.
- **Innovative**: Integration of emerging technologies like real-time tracking, mobile apps, digital ticketing, pilot programs, and open data platforms.

GAP ASSESSMENT

The result of the assessment is provided in **Figure 40** and summarized below:

- **Fundamental**: While most Mississippi public transportation websites include basic information such as contact information, many do not meet Section 508 accessibility standards – particularly in providing alternative text for graphics and descriptive text for link. This challenge is consistent with national trends where accessibility remains a perennial challenge. Other missing information includes fare information and eligibility requirements.
- **Advanced**: MDOT websites show one advanced feature: links to the planning documents, i.e., the previous Statewide Transit Plan & Intercity Bus Study. Similarly, there are limited advanced features on the public transit provider website, with only **13 percent** of the items available, with **33 percent** having a public engagement feature and **22 percent** with trip planning and/or reservation.
- **Innovation**: There are no innovative data sharing features on MDOT websites. For the public transportation providers, the five fixed route systems have real-time tracking, mobile apps, and/or digital ticketing.

Figure 40. Agency Resources Optimized by Maturity Category



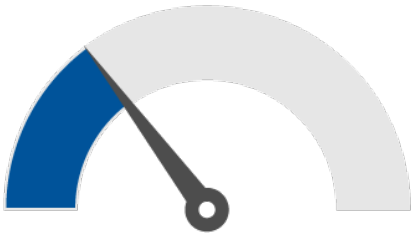
PUBLIC OUTREACH AND RESOURCES GAP ASSESSMENT

The gap assessment for **Public Outreach** and **Regulatory Resources** reveals significant deficiencies in Mississippi's transit provider practices. Fundamental outreach activities, such as maintaining accurate websites and contact information, are only **57 percent implemented**, leaving a 43 percent gap. Advanced strategies including branding and rider tools like trip planners, show moderate progress at **23 percent**, while innovative approaches—such as AI-driven engagement and real-time digital tools—are completely absent. These gaps limit public awareness, reduce rider confidence, and hinder the ability to attract new users.

Similarly, regulatory resources exhibit the same pattern of underperformance. Fundamental compliance features such as ADA accessibility and essential policy documentation are implemented at just over **23 percent,** while advanced features like grant templates and trip planning tools reach **57 percent**. No innovative practices (e.g., open data platforms, integrated digital ticketing) are in place.

Figure 41 provides the overall gap assessment for agency resources. Underdeveloped outreach and regulatory resources underscore systemic challenges in transparency, accessibility, and modernization, which collectively constrain Mississippi's ability to deliver a user-friendly and compliant transit network.

Figure 41. Overall Resources Optimization



GAP CAUSES

The following factors contribute to the gaps in resource availability across Mississippi's transit network.

- **Inconsistent website quality and accessibility**, including broken links, outdated content, and missing ADA compliant features.
- **Limited use of modern rider tools,** such as mobile apps, real-time tracking, and trip planning/reservation platforms.
- **Minimal agency-specific branding**, which reduces visibility and recognition of trip planning platforms.
- **Absence of centralized training and resource hubs,** making it difficult for providers to access best practices and technical assistance.
- **Insufficient state-level guidance or policy** on minimum outreach standards and digital engagement.
- **Resource constraints**, especially among smaller or rural providers, limit capacity to maintain and update public-facing materials.

3.2.6 PASSENGER AMENITIES

The availability and quality of passenger amenities play a critical role in enhancing the transit experience across Mississippi, particularly along state roadways. These amenities including benches, shelters, ADA-compliant boarding areas, and clear signage not only improve comfort and accessibility for riders, but also support broader goals outlined for this project. By assessing

the presence and condition of bus stop infrastructure, MDOT can identify opportunities to integrate transit improvements into roadway projects, confirming that transit-reliant populations have safe, convenient, and equitable access to public transportation. Examples of these amenities are shown can be viewed in the Appendix.

ADA-accessible bus stops along state highways present a unique opportunity for MDOT to collaborate with local transit agencies and incorporate transit infrastructure into roadway design and operations. Since state highways fall under MDOT's authority, they offer direct avenues for coordination and investment. Enhancing bus stop infrastructure along these corridors supports MDOT's mission to promote a reliable and customer-friendly transit network, while advancing its vision of a resilient and inclusive system that connects communities to essential services and opportunities.

A GIS-based analysis was conducted to evaluate the presence and accessibility of passenger amenities at bus stops located within one hundred feet of state highways across five transit systems (CTA, Hub City, JTRAN, OUT, SMART). The analysis utilized GIS shapefiles, geocoded amenity data, Google Street View verification, and information provided directly by transit agencies.

GAP ASSESSMENT

Of the 232 bus stops reviewed, 63 (**27 percent**) were found to meet ADA accessibility standards (**Figure 42**). An example of a non-ADA compliant stop is provided in **Figure 43**. While there is no federal mandate requiring agencies to bring all existing stops into compliance by a specific deadline, transit agencies are required to ensure ADA compliance when stops are newly constructed or altered. Agencies are also expected to identify and address accessibility barriers over time, often through a transition plan that prioritizes improvements based on feasibility and need. These findings also provide opportunities for MDOT to work with local transit agencies to improve these stops through future roadway projects and better integration of transit infrastructure along state highways.

Figure 42. Passenger Amenities Optimization

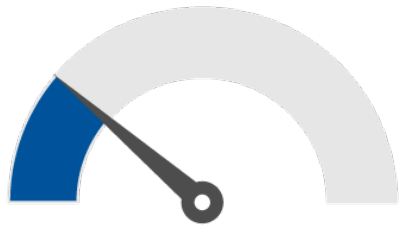
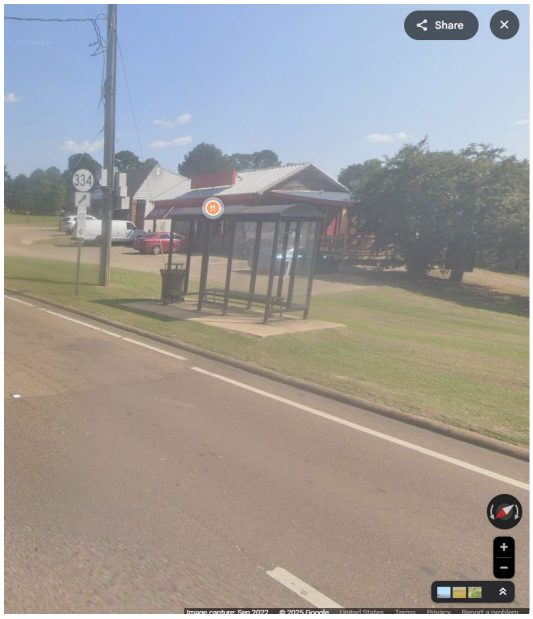


Figure 43. Existing Non-ADA Complaint Bus Stop



GAP CAUSES

The following transit and non-transit causes contribute to the gaps in passenger amenities availability across Mississippi's transit network.

Transit-related causes:

- **Insufficient ADA-compliant infrastructure** at many bus stops.
- **Limited coordination between MDOT and local transit agencies** on integrating transit amenities into roadway projects.
- **Absence of statewide design standards** for transit amenities, resulting in inconsistent implementation.

Non-transit-related causes:

- **Geographic and jurisdictional fragmentation**, which complicates planning and investment across regions.
- **Sparse development patterns** that reduce the perceived need for enhanced stop infrastructure in rural areas.

3.2.7 INTERMODAL CENTERS

Intermodal centers are facilities where multiple modes of transportation—such as local transit, intercity bus, passenger rail, and micromobility—are co-located or closely connected to enable seamless passenger transfers. These centers play a vital role in expanding mobility options, improving travel efficiency, and enhancing the user experience. In Mississippi, intermodal centers

are especially important for bridging gaps between rural and urban systems and connecting residents to regional and national destinations.

To identify opportunities for improved intermodal connectivity, existing transit services were mapped alongside Amtrak, Greyhound, and Delta Bus Lines routes. GIS analysis and aerial imagery were applied to assess infrastructure availability and proximity between modes. The analysis focused on identifying locations where transit services intersect with intercity transportation and where infrastructure investments could support multimodal integration.

GAP ASSESSMENT

A total of twenty-five locations (**Table 2**) were identified in the analysis and assigned an integration level for each of the stops using the following scale:

- **High Integration**: All transit modes are available at one shared location and include amenities and joint services (e.g., covered waiting area, ticketing/fare, local service information, etc.) that support ease of transfers between modes. Union Station in Jackson (**Figure 44**) illustrates this level of integration.
- **Moderate Integration**: Transit modes are available at a shared location with amenities, but joint services are not present, and/or local transit is limited and require transfer at another physical location to access other parts of the service area. The Amtrak Station in Hattiesburg is an example of Moderate Integration (**Figure 45**).
- **Low Integration**: Intercity service and local service are physically separated, or there are no amenities or joint services at a shared intercity/local service stop. The Amtrak Station in Gulfport (**Figure 46**) shows the physical separation between the intercity and local transit modes.

The overall assessment of the Intermodal Center is provided in **Figure 47**.

Figure 44. Jackson Union Station

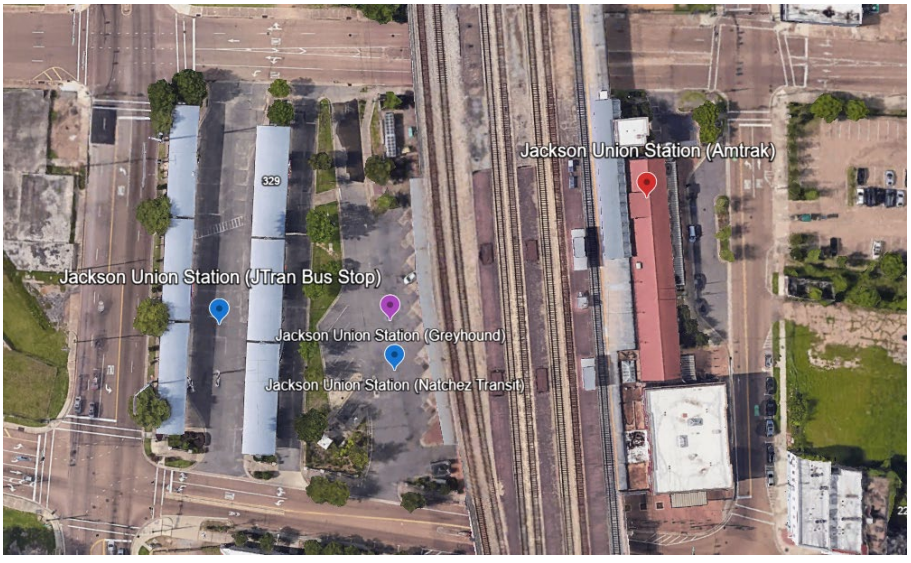


Figure 45. Hattiesburg Depot

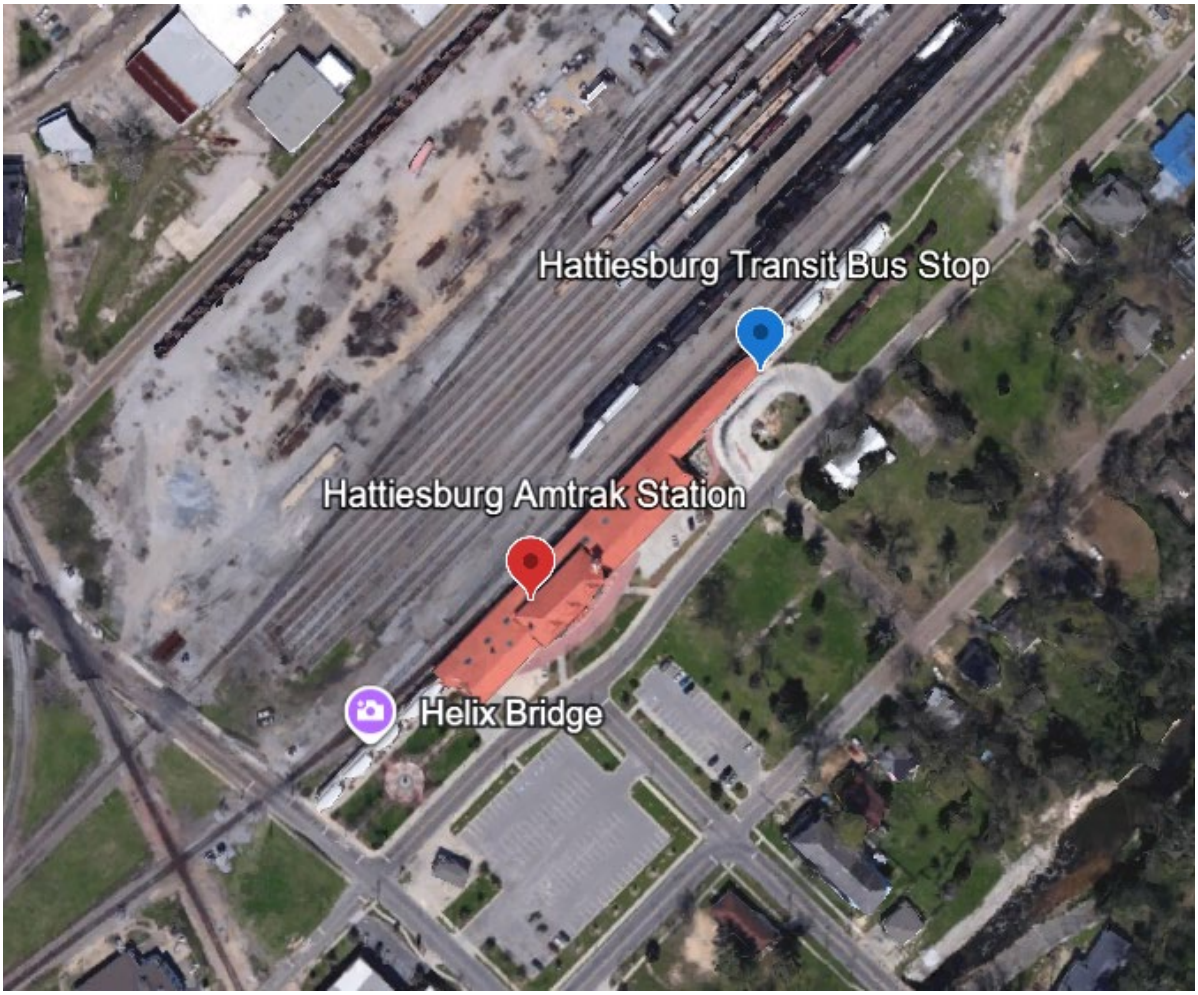


Figure 46. Gulfport Station

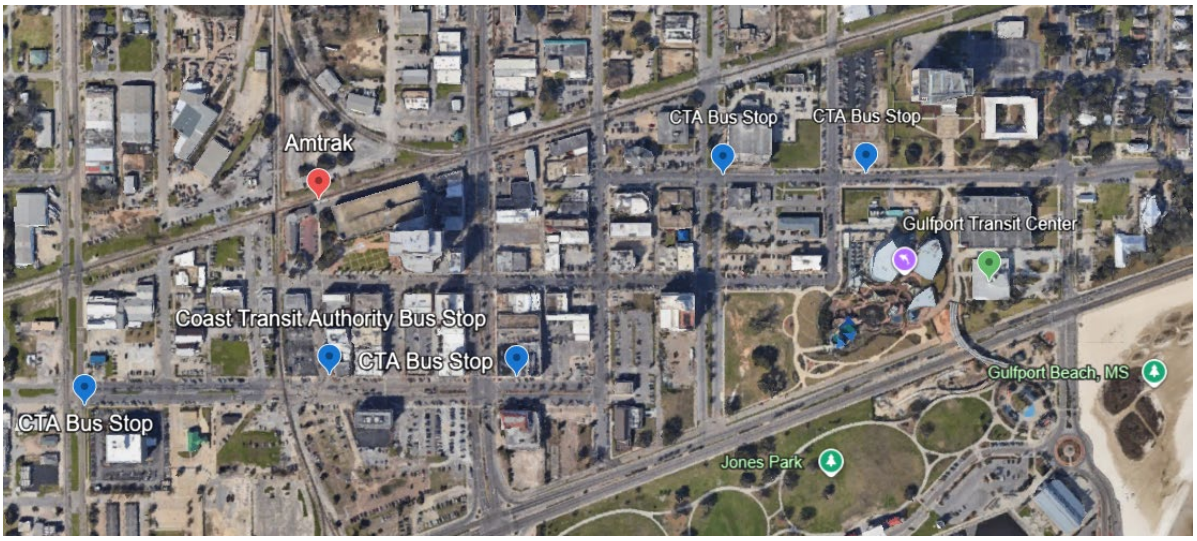
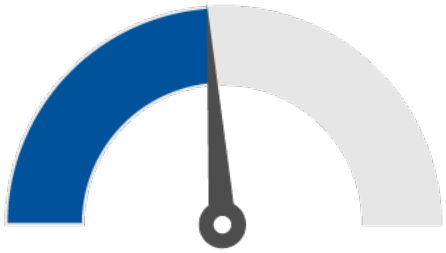


Table 2. Intermodal Connection Assessment

Location	Modes Present	Available Infrastructure	Integration Level	Notes
Batesville	Greyhound	No shelters at stops or station	**Low** – proximity only	Shared stops
Bay St. Louis	Amtrak	Shelter, waiting area at Amtrak	**Low** – proximity only	Limited local service
Biloxi	Amtrak, Greyhound, Flixbus	Shelter, waiting area	**Low** – proximity only	No nearby CTA stops
Brookhaven	Amtrak, Five County	Shared depot, waiting room	**High** – fully co-located	Opportunity to connect to Greyhound
Clarksdale	Delta Bus Rides	No shelters at stops or station	**Low** – proximity only	Shared stops
Cleveland	Delta Bus Rides	Delta Bus Line Passenger Station	**High** – fully co-located	Joint ticketing center
Greenwood	Amtrak, Delta Bus Rides	Shelter, waiting area at Amtrak	**Low** – proximity only	Space for Delta Bus Rides pickup/drop-off at Amtrak
Greenville	Delta Bus Rides	No shelters at stops or station	**Low** – proximity only	Shared stops
Grenada	Delta Bus Rides	No shelters at stops or station	**Low** – proximity only	Shared stops
Gulfport	Amtrak, CTA, National Park Ferry	Shelter, waiting area at Amtrak	**Low** – proximity only	Infrastructure gaps limit integration potential
Hattiesburg	Amtrak, Greyhound, Hub City Transit	Shared depot, waiting room (Amtrak); No shelter at Greyhound stop	**Moderate** – partial integration	Opportunity to connect to Natchez Transit; Greyhound is located on north side of town separate from Amtrak station.
Indianola	Delta Bus Rides	No shelters at stops or station	**Low** – proximity only	Shared stops

Location	Modes Present	Available Infrastructure	Integration Level	Notes
Jackson	Amtrak, Greyhound, JTRAN, Natchez Transit	Shelters, waiting area, amenities	**High** – fully co-located	Strong foundation for future expansion; lacks airport link
Laurel	Amtrak	Shelter, waiting area at Amtrak	**Low** – proximity only	Limited local service
Marks	Amtrak, Delta Bus Rides	Shelter, waiting area at Amtrak	**Low** – proximity only	Space for Delta Bus Rides pickup/drop-off at Amtrak
McComb	Amtrak	Shelter, waiting area at Amtrak	**Low** – proximity only	Limited local service
Meridian	Amtrak, Greyhound	Shared depot, waiting room	**High** – fully co-located	Shared office space with Choctaw transit
Natchez	Amtrak, Delta Bus Rides	Shared depot, waiting room	**Moderate** – Partial Integration	Limited local service
Pascagoula	Amtrak	Shelter, waiting area at Amtrak	**Low** – proximity only	Limited Local Service
Picayune	Amtrak	Shelter, waiting area at Amtrak	**Low** – proximity only	Limited local service
Port Gibson	Delta Bus Rides	No shelters at stops or station	**Low** – proximity only	Shared stops
Rolling Fork	Delta Bus Rides	No shelters at stops or station	**Low** – proximity only	Shared stops
Tunica	Delta Bus Rides	No shelters at stops or station	**Low** – proximity only	Shared stops
Vicksburg	Amtrak, Delta Bus Rides	Shelter, waiting area at Amtrak	**Low** – proximity only	Shared stops
Yazoo City	Amtrak, Delta Bus Rides,	Shelter, waiting area at Amtrak	**Moderate** – Partial Integration	Space for Delta Bus Rides pickup/drop- off at Amtrak

Figure 47. Intermodal Center Optimization



GAP CAUSES

Mississippi's limited intermodal connectivity is influenced by a combination of infrastructure, planning, and operational challenges. While the Jackson Union Station serves as a successful model, most other locations do not have the physical and institutional capacity to support seamless multimodal transfers.

Transit-related causes include:

- **No multimodal design standards:** No statewide guidelines for co-locating transit, intercity, and micromobility infrastructure.
- **Inconsistent facility ownership and operations:** Varying ownership models (city, county, private, and non-profit) complicate shared use and investment.
- **Funding constraints**: Capital investments needed for intermodal centers – such as multimodal hubs or transfer facilities – are often deprioritized due to limited resources.

Non-transit causes include:

- **Land use misalignment:** Intermodal centers are often located in areas with inadequate pedestrian access or disconnected from activity centers.
- **Jurisdictional fragmentation**: Coordination across city, county, and state agencies is limited, complicating efforts to develop shared infrastructure.
- **Policy and planning disconnect:** Local and regional plans rarely prioritize intermodal integration or include funding strategies.
- **Accessibility barriers**: Physical separation between modes often exceeds walkable distances, especially for seniors and individuals with disabilities.

3.2.8 KEY TAKEAWAYS – PROVIDER NEEDS

Mississippi's transit providers face a range of operational, infrastructure, and institutional challenges that limit their ability to deliver reliable, accessible, and coordinated services. The following key takeaways summarize the most critical gaps identified across the seven subcategories:

- **Limited systemwide collaboration**: Fundamental collaboration practices are widely implemented, but advanced and innovative activities, such as shared infrastructure and operations, remain underutilized, limiting system-wide efficiency and integration.
- **Capital funding deficiencies**: There is a persistent and growing capital shortfall across both rural and urban systems. Providers rely heavily on federal formula funds, with limited access to advanced or innovative funding sources, constraining their ability to maintain a State of Good Repair and invest in modernization.
- **Staffing shortages**: Mississippi's transit workforce operates below national staffing averages, with minimal implementation of joint recruitment or regional workforce development strategies. Wage competitiveness and applicant shortages are major barriers to hiring and retention.
- **Missing statewide training framework**: While providers meet basic compliance requirements, advanced and innovative training practices, such as scenario-based retraining and regional training consortiums, are inconsistently applied. This could lead to gaps in safety, reliability, and service quality.
- **Limited resources & information sharing**: Public-facing materials are inconsistent in quality, accessibility, and branding. Many provider websites have insufficient ADA compliance, real-time tools, and trip planning features, limiting public awareness and engagement.
- **Passenger amenity deficiencies**: Only 27 percent of bus stops along state highways meet ADA standards. Infrastructure gaps—such as missing shelters, signage, and boarding areas—reduce comfort and accessibility, especially for transit-reliant populations.
- **Underdeveloped intermodal centers**: Of twenty-six identified opportunities, only four locations are fully integrated. Most sites do not have the infrastructure, coordination, and planning needed to support seamless multimodal transfers.

3.3 READINESS

-

The readiness of Mississippi's public transportation providers is a critical determinant of their ability to pursue and manage discretionary grant funding, particularly from federal sources such as the FTA. Readiness reflects an agency's capacity to implement projects effectively, maintain compliance, and demonstrate competitiveness in grant environments. High readiness ensures providers can secure funding, deliver improvements, and meet statewide mobility goals.

Mississippi agencies have shown strong examples of readiness through successful grant awards and modernization initiatives. JTRAN, for instance, received $13.7 million under the Low or No Emission Vehicle Program to advance fleet electrification, while Claiborne County Human Resource Agency partnered with MDOT and other providers to secure $650,000 through the Areas of Persistent Poverty Program. These achievements underscore how proactive planning and collaboration can position agencies for success in competitive funding programs.

This section evaluates readiness through two primary lenses: **compliance** and **competitiveness**. Compliance focuses on meeting federal and state requirements, including procurement documentation, maintenance oversight, and safety standards. Competitiveness examines project development maturity, technical capacity for grant writing, and alignment with federal priorities. Using document reviews, survey data, and structured rubrics, the analysis identifies gaps and opportunities to strengthen readiness, forming the foundation for strategies that enhance grant competitiveness and implementation capability statewide.

3.3.1 COMPLIANCE

Compliance with federal and state requirements is essential for agencies seeking discretionary grant funding. State DOTs and transit agencies must demonstrate sound financial management, compliance with requirements, and the capacity to deliver successful projects. Providers that consistently maintain compliance with various requirements not only maintain eligibility for formula funding but are better positioned to pursue and potentially secure discretionary grants in a highly competitive marketplace due to demonstrating accountability in grant funding programs.

To evaluate compliance gaps in a statewide context, the study team scanned FTA Triennial Reviews, MDOT's Annual Monitoring Visit reports, and FTA's 2024 State Management Review of MDOT to identify recurring compliance and oversight deficiencies, as well as trends and potential root causes across key regulatory domains for both MDOT and a sampling of public transportation providers. The seven public transportation providers included in the screening were:

- JTRAN
- CTA
- Bolivar County Council on Aging, Inc.
- City of Oxford—Oxford University Transit
- East Central Planning and Development District
- Starkville-MSU Area Rapid Transit (SMART)
- Mississippi Band of Choctaw Indian/Choctaw Regional Transportation

GAP ASSESSMENT

The analysis showed that while most agencies are meeting baseline compliance requirements, some continue to be challenged with maintaining sufficient documentation for **procurement** and **vehicle maintenance activities**. This indicates some additional technical assistance, oversight, and training **(Figure 48**) may be beneficial. Regardless, MDOT, direct or designated recipients, and subrecipients are meeting FTA's expectations for program administration. Note that the identified deficiencies for MDOT overlapped with transit provider findings in ADA and EEO compliance. These topics may be addressed with minimal commitment of resources by MDOT.

Figure 48. Compliance Optimization Level

GAP CAUSES

Compliance gaps in Mississippi's public transportation system are shaped by both transit-specific and broader institutional factors. Causes include the following:

- **Some procurement documentation gaps**: Agencies have inconsistent access to standardized templates, guidance, and training for required federal clauses.
- **Limited compliance resources**: Smaller agencies with limited staff have reduced technical capacity, which is exacerbated by limited access to centralized resources, training, and technical assistance.

3.3.2 COMPETITIVENESS

This section identifies strategic gaps in statewide readiness and capacity, offering insight into the factors that influence Mississippi's ability to compete effectively for federal discretionary transit funding.

Mississippi's public transportation providers operate within a complex and evolving funding landscape, where securing discretionary federal grants is essential to advancing infrastructure, expanding access, and fostering innovation. Federal discretionary programs administered by the FTA and other U.S. DOT agencies—such as the Low or No Emission Vehicle Program, Better Utilizing Investments to Leverage Development (BUILD) grants, and Integrated Mobility Innovation grants—offer substantial opportunities for Mississippi to modernize its transit systems.

Central to competitiveness is the ability to align proposed projects with federal priorities, particularly those emphasizing accessibility, connectivity, resilience, and technological advancement. Transit agencies across the state exhibit varying levels of alignment and therefore readiness to compete for these funds.

This analysis assesses the state's capacity to compete effectively for such funding by examining:

- The availability of **non-federal match funding**
- Technical capacities in **grant writing** and **project delivery capabilities**
- Overall project readiness

GAP ASSESSMENT

Mississippi's public transportation providers face notable strategic gaps in grant competitiveness, reflected in a composite score of **45 out of 100** (**Figure 49**) as shown in **Figure 50**. The most significant challenges include capital and infrastructure project readiness, insufficient local match funding, and limited technical capacity for grant writing and benefit-cost analysis. Agencies also struggle to document stakeholder engagement practices and often adopt a reactive approach to discretionary funding opportunities, which undermines their ability to align with federal priorities.

Figure 49. Competitiveness Rating

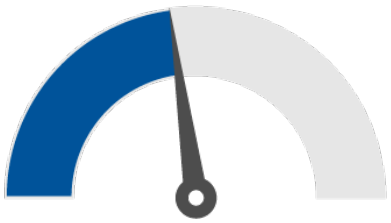
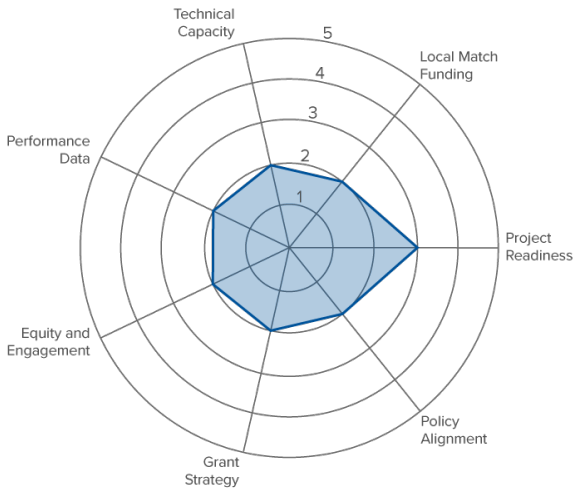


Figure 50. Grant Competitiveness Assessment



GAP CAUSES

Mississippi's competitiveness for discretionary transit funding is constrained by a combination of internal agency limitations and external structural barriers.

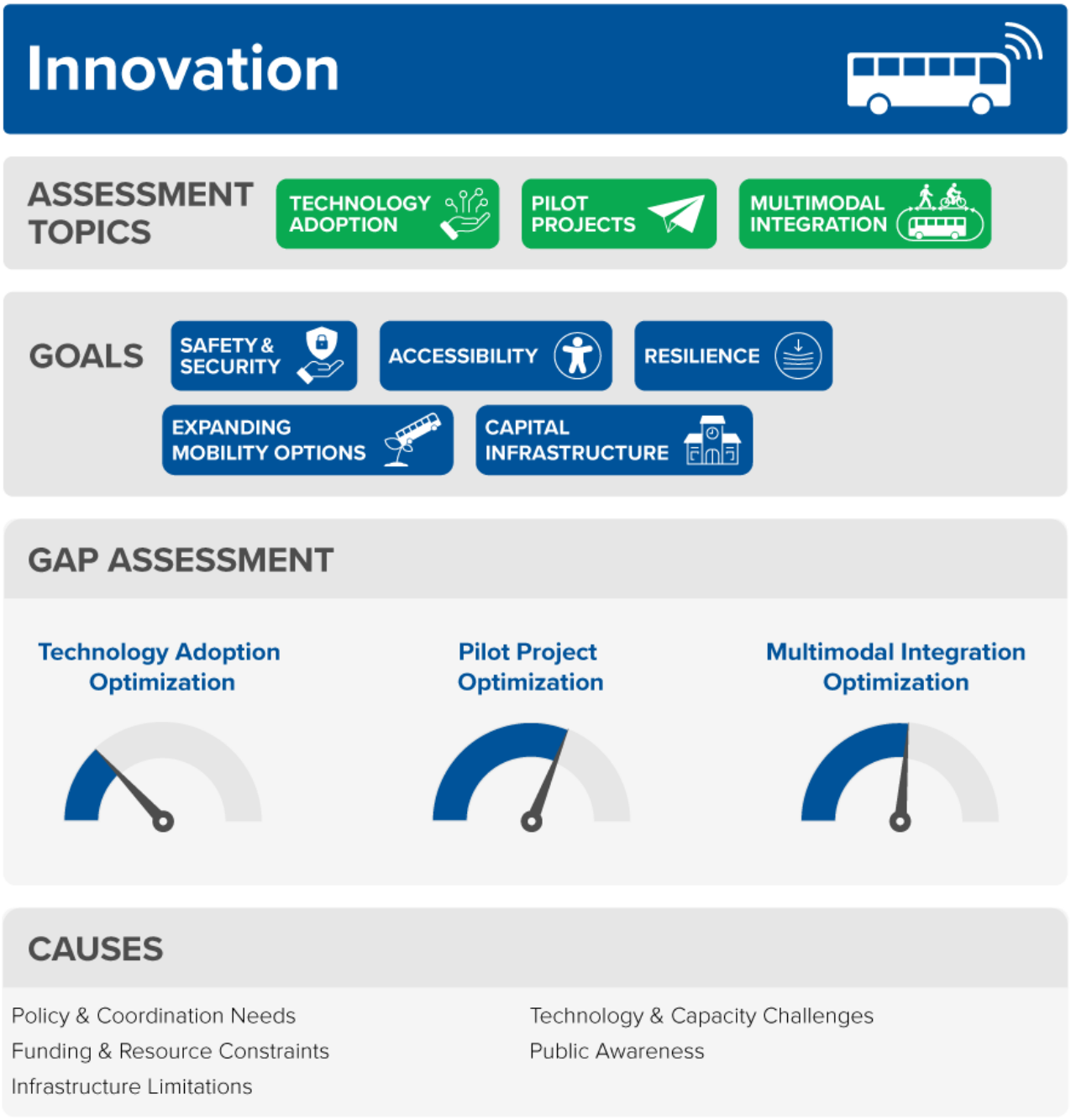
- **Project readiness deficiencies**: Not pre-planning or assessing capital and infrastructure projects, cost estimates, and detailed scopes reduce grant viability.
- **Limited grant writing capacity**: Smaller agencies do not often have staff with experience in preparing competitive applications.
- **Data gaps**: Inconsistent use of performance metrics and benefit-cost analysis weakens project justification.
- **Insufficient non-federal match funding**: Many communities struggle to provide non-federal match, limiting eligibility.
- **Reactive grant strategy**: Agencies often respond to opportunities rather than proactively preparing projects.
- **Policy misalignment**: Projects may include elements that are no longer prioritized in federal evaluations.

3.3.3 KEY TAKEAWAYS – READINESS

Mississippi's public transportation providers face notable challenges in demonstrating readiness for discretionary funding opportunities and maintaining consistent compliance with federal and state requirements. The following key takeaways summarize the most critical gaps identified:

- **Continued strengthening of compliance performance**: While the reviewed agencies meet FTA's expectations, as indicated in the high compliance score, deficiencies were identified in procurement documentation, maintenance oversight, and ADA/Equal Employment Opportunity compliance. Additional technical assistance, training, and enhanced monitoring should resolve these concerns.
- **Limited matching funds availability:** Funding remains the primary barrier to grant readiness. Most agencies have limited local match funds available for formula grants, while discretionary grants could be unattainable due to funding constraints.
- **Reactive grant strategy**: Agencies often respond to funding opportunities without proactive planning, resulting in underdeveloped scopes, weak alignment with federal priorities, and missed chances for innovation.
- **Project readiness hurdles**: Many proposed projects do not include essential components such as cost estimates, stakeholder engagement documentation, and performance metrics, reducing their viability in competitive grant environments.
- **Grant competitiveness potential untapped**: Mississippi's overall competitiveness score reflects foundational compliance but insufficient strategic readiness. Due to insufficient local match funding, the state has not prioritized pre-planning for capital and infrastructure projects or developed the technical capacity for grant writing and benefit-cost analyses.

3.4 INNOVATION



Innovation in public transportation refers to the adoption of emerging technologies, service models, and operational practices that improve efficiency, accessibility, and user experience. For Mississippi transit providers, innovation includes implementing advanced scheduling platforms, exploring autonomous vehicle pilots, integrating real-time trip planning tools, and transitioning to clean energy fleets. Embracing innovation is essential for modernizing systems, reducing costs, and meeting evolving mobility needs.

Mississippi agencies have already taken notable steps toward innovation. SMART partnered with Beep Inc. to launch the state's first autonomous shuttle pilot, while Claiborne County Human Resource Agency introduced an AI-based dispatching system and a shared online portal for on-demand services. CTA invested $1 million in planning and scheduling technology upgrades, improving operational efficiency and customer service. These examples demonstrate how targeted investments and partnerships can position agencies at the forefront of transit modernization.

To evaluate innovation readiness, this analysis examines provider capacity to adopt and scale new technologies. Key indicators include technology adoption levels, funding availability, technical expertise, and statewide policy frameworks. The assessment uses provider surveys, interviews, and structured rubrics to identify gaps in innovation maturity and opportunities for strategic investment. Findings will make recommendations for creating a statewide innovation framework that supports scalable solutions and equitable access to modern transit tools.

3.4.1 TECHNOLOGY ADOPTION

Technology adoption is an enabler of modern, efficient, and responsive public transportation systems. For Mississippi's public transportation providers, implementing digital tools and intelligent systems can enhance operational performance, improve customer experience, and support data-driven decision-making. As agencies seek to modernize their services and remain competitive for discretionary funding, the integration of fundamental and advanced technologies becomes increasingly important.

This gaps analysis offers insight into the current state of technology adoption, identifies areas of opportunity, and highlights systemic barriers that may hinder progress toward a more modern and connected transit system. The assessment included identifying ten core technologies that are foundational to supporting transit planning, operations, capital asset management, and customer experience. Public transportation providers offered input via survey indicating whether each technology was currently in use, planned for future implementation, or desired but not yet planned. The survey also included open-ended questions to capture interest in emerging and innovative technologies.

GAP ASSESSMENT

Figure 51 shows the average current adoption rate across the network is on the lower end of the optimization scale (**30 percent**). An additional **26 percent** of providers plan to implement these technologies in the future, and **3 percent** expressing interest without formal plans (

Table 3)**.** These figures suggest that technological adoption remains a lower operational priority for many agencies due to resource constraints and competing demands.

Figure 51. Technology Adoption Optimization Level

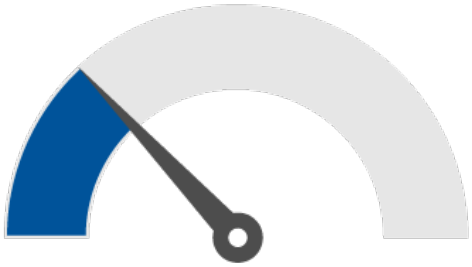


Table 3. Provider Survey Technology Response Assessment

Adoption Tier	Technology Type	Currently in Use	Planned	Desirable but not planned	Overall
Highest	Automated Vehicle Location	56%	19%	3%	**78%**
	Computer Aided Dispatch	53%	22%	6%	**81%**
	Real-Time Passenger Information Systems	50%	33%	3%	**86%**
Moderate	Computerized Maintenance Management Systems	33%	28%	0%	**61%**
	Online Trip Planner, Reservation System	28%	42%	3%	**72%**
	Fare Collection Systems	28%	36%	8%	**72%**
Lowest	Closed Circuit TV System	19%	28%	3%	**50%**
	Automated Passenger Counters	11%	28%	0%	**39%**
	Mobile Data Terminals	11%	8%	0%	**19%**
	On-Board Automatic Stop Announcers	8%	19%	0%	**28%**
	Average Adoption Rate	**30%**	**26%**	**3%**	**59%**

Source: Mississippi Public Transportation Provider Survey Results (Summer 2025)

While there is no federal mandate for technology adoption, national trends show that urban transit agencies typically achieve adoption rates above 80–90 percent for core technologies. In contrast, rural and small urban providers often fall below 50 percent, reflecting disparities in funding, infrastructure, and technical capacity. Mississippi's current adoption rate aligns with these rural trends but underscores gaps in targeted investment and support.

- **Highest Adoption Tier**: Automated Vehicle Location, Computer-Aided Dispatch, and Real-Time Passenger Information are currently used by half of the provider network to support core functions like fleet tracking, dispatch coordination, and real-time service updates. Their interoperability enhances system reliability and customer satisfaction. Notably, **78 percent of providers** anticipate implementing these technologies, indicating strong readiness for modernization.
- **Moderate Adoption Tier**: Tools such as Computerized Maintenance Management Systems, Online Trip Planners, and Fare Collection Systems show moderate adoption but high growth potential. These technologies are essential for improving internal efficiency, asset oversight, and customer convenience, and their planned expansion reflects a growing commitment to digital transformation.
- **Lowest Adoption Tier**: Technologies with the lowest adoption rates include Closed Circuit TV, Automated Passenger Counters, Mobile Data Terminals, and On-Board Automatic Stop Announcers. These systems support safety, accessibility, and data collection but face barriers such as high costs, integration complexity, limited technical capacity, and competing priorities.

Mississippi agencies are aware of **advanced** and **innovative technologies** and willing to adopt them, but progress remains incremental and reflects alignment with national transit modernization trends and reveal broader themes about how Mississippi's public transportation providers view the role of technology. These themes include:

- **Gradual expansion of data-driven tools:** Agencies seek to adopt planning and optimization software, automated maintenance tracking, and online reservation platforms to improve scheduling accuracy and asset management. QRyde, for example, was explicitly identified as potential scheduling and trip management solutions.
- **Growing interest in predictive capabilities:** Respondents expressed interest in technologies that use real-time or historical data to anticipate maintenance needs, streamline dispatching, and reduce downtime.

GAP CAUSES

Technology adoption gaps in Mississippi's public transportation system are shaped by both operational and institutional challenges. Key causes include:

- **Funding constraints**: Over 60 percent of providers report inadequate or very inadequate capital funding, restricting investments in new technologies or innovative solutions.
- **Limited technical expertise and capacity**: Many agencies have limited in-house expertise and staffing to manage procurement, integration, and maintenance of digital systems.
- **Legacy system barriers**: Outdated software platforms often conflict with newer tools, creating interoperability issues and hindering system-wide integration.

- **Insufficient support for modernization deployment**: Advanced technologies that enhance rider experience remain underutilized due to insufficient support for implementation.
- **Incremental innovation readiness**: While agencies express interest in advanced tools—such as predictive maintenance, automated scheduling, and online reservation platforms—progress remains slow due to cost and complexity. Without dedicated innovation or pilot funding streams, innovative technologies remain conceptual rather than actionable.

3.4.2 PILOT PROJECTS

Pilot projects serve as essential platforms for testing innovative service models, technologies, and operational strategies in real-world conditions. These initiatives allow agencies to evaluate feasibility, scalability, and user impact before committing to full-scale implementation. In Mississippi, the environment for pilot projects has evolved positively in recent years, supported by targeted discretionary grants and growing interest in modernization.

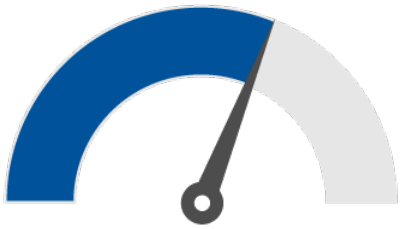
GAP ASSESSMENT

Several noteworthy pilot efforts have emerged across the state:

- **Aaron E. Henry Community Health Center's ICAM Grant** supported a pilot integrating healthcare access with mobility services using mobile booking apps and real-time vehicle tracking. This project aligned transportation with health outcomes and demonstrated scalable digital solutions.
- **Bolivar County Council on Aging's Microtransit Pilot** addressed food access in rural food deserts using HBSS QRyde technology for scheduling and dispatch. This project highlighted the potential of mobility solutions to address social determinants of health.
- **Claiborne County Human Resource Agency's Area of Persistent Poverty Grant** launched a two-part pilot to evaluate AI-based dispatching and a transportation portal for on-demand services. This initiative explored operational efficiencies and community-based ride management.
- **CTA** piloted real time passenger information systems and digital fare media to enhance rider experience and operational efficiency.
- **Hub City Transit** demonstrated flexible routing and microtransit scheduling to improve service coverage and responsiveness in underserved areas.
- **South Central Community Action Agency's HOPE Program** evaluated a universal fare payment system across seven rural agencies, enabling unbanked riders to pay fares via cash, mobile, or web platforms. This pilot demonstrated successful interagency coordination and technology integration.
- **Starkville-MSU SMART System** introduced Mississippi's first autonomous shuttle pilot in partnership with Beep Inc., displaying the state's willingness to explore innovative mobility solutions.

These examples reflect a growing capacity and interest in pilot projects, particularly among rural and health-focused agencies. While most pilots remain localized and grant-dependent, they demonstrate a shift toward innovation and cross-sector collaboration. As a result, pilot projects get an overall rating of **65 percent** (**Figure 52**) in providing a supportive atmosphere.

Figure 52. Pilot Project Optimization Level



GAP CAUSES

Despite recent progress and successful pilot initiatives across Mississippi, several systemic and operational challenges continue to limit the scalability and sustainability of pilot projects. These causes help explain why innovation remains localized and why broader adoption has yet to materialize:

Transit-related causes:

- **Missing statewide pilot framework:** While individual agencies have launched promising pilots, there is no centralized structure to guide, evaluate, or replicate these efforts. This absence of coordination reduces the potential for scaling successful models across regions.
- **Limited technical capacity:** Many transit providers, especially in rural areas, may not have the staff expertise and planning bandwidth to design, implement, and assess pilot projects. This includes gaps in data collection, performance monitoring, and reporting.
- **Funding constraints:** Most agencies rely heavily on formula funding (e.g., Sections 5310, 5311), which is consumed by daily operations. Without dedicated innovation or pilot-specific funding streams, agencies struggle to allocate resources for experimentation.
- **Short-term grant dependency:** Existing pilots are often tied to one-time discretionary grants. Once funding ends, projects are rarely sustained or expanded, limiting long-term impact and institutional learning.

Non-transit-related causes:

- **Fragmented regional planning**: Jurisdictional boundaries and limited interagency collaboration hinder the development of regionally coordinated pilots. This fragmentation makes it difficult to align goals, share resources, or pursue joint funding opportunities.

- **Low awareness and demand**: Many pilot efforts are not well-publicized or formally documented, reducing visibility and limiting opportunities for peer learning or replication.
- **Policy misalignment**: Local and state planning documents do not include explicit support for pilot projects, making it harder to justify innovation within traditional funding and regulatory frameworks.

3.4.3 MULTIMODAL INTEGRATION

Integration reflects the degree to which Mississippi's public transportation systems are seamlessly connected with other modes – such as pedestrian pathways, bicycle infrastructure, roadways, and micromobility networks – to create a cohesive and accessible travel experience. Rather than functioning in isolation, transit becomes part of the broader, multimodal mobility ecosystem to enhance safety, connectivity, and user convenience across communities. This concept also serves as the underlying thread across the preceding analysis – spanning access, demand, coordination, connectivity, infrastructure (individual stops to intermodal centers), grant readiness, and technology. Together, these elements support the development of an integrated system to reduce barriers for both transit-reliant individuals and choice riders. Analysis of this gap builds of the previous sections, factoring in the policy review completed as part of Tech Memo 1.

GAP ASSESSMENT

While Mississippi's public transportation network faces significant integration challenges, several local agencies have implemented promising practices that demonstrate the potential for multimodal coordination:

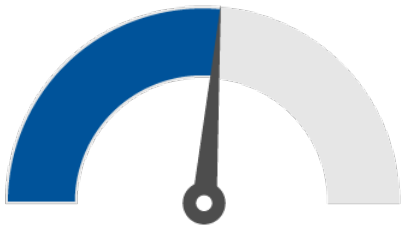
- **Hub City Transit** has taken a proactive approach to first- and last-mile connectivity by using federal funding to install sidewalks, crosswalks, and pedestrian signals near bus stops. These improvements enhance safety and accessibility for riders, particularly in areas with high pedestrian activity.
- **CTA** has invested in pedestrian infrastructure that connects Biloxi Transit Center with Amtrak and key downtown destinations, supporting multimodal transfers for improving access to regional and intercity services.
- **OUT** has aligned its transit operations with the University of Mississippi's pedestrian corridors and downtown Oxford's walkable environment. This coordination enhances the user experience for students and residents by confirming that transit stops are conveniently located along high-foot traffic areas.
- **Gulf Regional Planning Commission** has adopted a Complete Streets policy, promoting the design of roadway that accommodate all users – including pedestrians, cyclists, and transit riders.

Despite these examples, the broader assessment illustrates the following gaps.

- **Limited first/last-mile connectivity**: Many transit stops, particularly in rural areas, do not have sidewalks and/or have inadequate ADA-compliant infrastructure. This disconnect discourages transit use and disproportionately affects transit-reliant populations.
- **Fragmented Infrastructure Investment**: Multimodal infrastructure is often planned and implemented in silos with little coordination between transit agencies, local governments, and state entities. This leads to missed opportunities to co-locate or enhance facilities to support multimodal travel.
- **Underdeveloped Intermodal Network**: Of the twenty-one potential intermodal centers identified across the state, only Jackson Union Center demonstrates full integration. Most other locations do not have the physical infrastructure, service coordination, or institutional support needed to facilitate seamless transfers between local transit, intercity bus, and rail services.
- **Technology and Information Gaps**: Real-time trip planning tools that integrate multiple modes are limited in availability and functionality. Inconsistent public-facing information across agencies further reduces the ability of users to plan efficient, multimodal trips.
- **Policy and Planning Misalignment**: Integration is not consistently prioritized in local or regional transportation plans. Without a shared vision or coordinated strategies, investments in transit, pedestrian, and bicycle infrastructure often occur independently, limiting collective input.

Figure 53 provides the overall optimization rating for Integration. This score reflects the localized success in multimodal coordination as well as the statewide need for improved multimodal infrastructure, policy alignment, and connectivity.

Figure 53. Multimodal Integration Optimization Level



SURVEY RESULTS

The public and provider surveys both support this assessment, as indicated by the following results:

- Bus stop infrastructure ranked among the **top five capital priorities,** with agencies citing needs for shelters, lighting, and sidewalk connections to improve safety and accessibility.
- Over **60 percent of agencies** rated their capital funding as inadequate, and several noted that multimodal as inadequate, and some noted that multimodal improvements are difficult to coordinate without roadway project partners. Open-ended responses emphasized the

need for better connections to trails, employment centers, and medical facilities—highlighting user demand for more seamless travel chains.

- Residents indicate the top deterrents to using public transportation include **lack of service coverage (27 percent)** and **insufficient amenities (14 percent)** such as benches, shelters, and safe access routes.
- Residents expressed interest **in real-time information, trip-planning tools, and digital fare systems**, reinforcing the need for integrated infrastructure and technology.

GAP CAUSES

Mississippi's integration challenges stem from both transit-specific limitations and broader contextual factors. The key causes behind these gaps range from funding and planning silos within transit agencies to land use patterns, policy misalignment, and infrastructure fragmentation. This highlights the need for more coordinated, multimodal solutions.

Transit-related Causes:

- **Transit infrastructure planning is not coordinated:** Transit agencies often operate independently of roadway and active transportation planning processes, resulting in missed opportunities to co-locate sidewalks, bike lanes, and transit stops.
- **Limited capital funding for multimodal enhancements**: Most transit funding is directed toward operations and vehicle replacement, leaving few resources for investments in pedestrian infrastructure, bike amenities, or intermodal facilities.
- **Underdeveloped intermodal facilities**: Only one of the twenty-six identified intermodal centers demonstrates full integration. Most others do not have the infrastructure or coordination needed to support seamless transfers between local and intercity services.
- **Gaps in technology availability**: Few agencies offer integrated trip planning tools that combine transit with walking, biking, or micromobility options. This limits the ability of users to plan efficient, multimodal trips.
- **Inconsistent adoption of best practices**: While some agencies (e.g., Hub City Transit, CTA, OUT) have implemented multimodal features, these practices are not standardized or scaled statewide.

Non-transit-related Causes:

- **Dispersed development patterns**: Low-density land use and car-centric development reduce the feasibility and cost-effectiveness of integrated multimodal infrastructure, especially in rural areas.
- **Jurisdictional fragmentation**: Coordination across city, county, and state agencies is limited, complicating efforts to align transit with pedestrian, bicycle, and roadway investments.

- **Policy misalignment**: Integration is not consistently prioritized in local or regional transportation plans. Without a shared vision, multimodal investments remain siloed and reactive.
- **Inadequate first/last-mile infrastructure**: Many communities have inadequate basic pedestrian and bicycle infrastructure, such as sidewalks, crosswalks, and bike lanes, making it difficult for users to access transit safely and conveniently.
- **Limited public awareness and demand**: In areas where multimodal options are not visible or well-promoted, public demand remains low, reinforcing a cycle of underinvestment in integrated solutions.

3.4.4 KEY TAKEAWAYS – INNOVATION

The Innovation Focus Area evaluates Mississippi's capacity to adopt emerging technologies, pilot new service models, and modernize transit operations. The following key takeaways summarize the most critical findings from the Needs and Gap Analysis:

- **Low to moderate technology adoption**: Core technologies like Automated Vehicle Locators and Computer Aided Dispatch are in use by about half of providers, but advanced tools such as APCs, mobile data terminals, and stop announcers remain underutilized.
- **Incremental progress, limited scalability**: Agencies express interest in modernization, but progress is constrained by funding, technical capacity, and legacy systems.
- **Isolated pilot projects**: Public transportation providers have demonstrated growing interest and capacity for innovation through localized pilot projects, but the absence of a statewide framework, limited technical capacity, and short-term funding constraints hinder scalability and long-term impact.
- **Innovation readiness is constrained by capacity**: Small staff sizes and limited planning bandwidth hinder the ability to manage new technologies or pursue pilot programs.
- **Funding gaps**: Over 60 percent of providers report inadequate capital funding, and no agencies currently access discretionary or innovation-focused grants.
- **Opportunities for strategic investment**: Public transportation providers are interested in predictive maintenance software, online reservation platforms, and integrated trip planning tools.
- **Need for a statewide innovation framework**: Coordinated procurement, technical assistance, and pilot funding could help scale successful practices and provide equitable access to modern transit solutions.

3.5 OVERALL SUMMARY

This Tech Memo evaluated Mississippi's public transportation system across four focus areas: User Needs, Provider Needs, Readiness, and Innovation. Each area provided critical insights into the system's current performance, structural limitations, and areas for improvement.

User Needs analysis identified significant gaps in service coverage, particularly in rural and small urban areas. High transit propensity in underserved regions, low trips per capita compared to peer

states, and limited access to essential destinations underscore the need for expanded service delivery. Public feedback reinforced these findings with strong demand for service to more destinations, both intercity and life-sustaining activities.

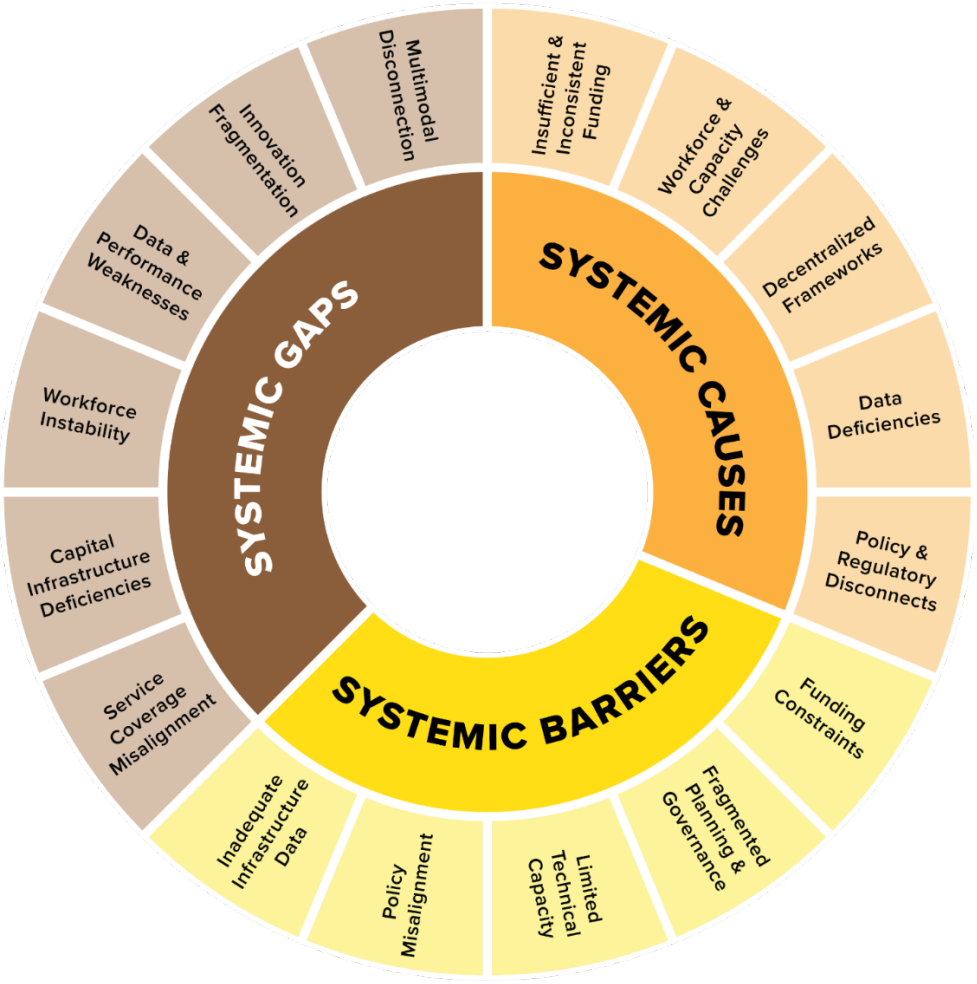
Provider Needs highlight operational and institutional challenges that limit service quality and system resilience. Key issues include persistent capital funding shortfalls, staffing shortages, inconsistent training practices, and limited collaboration across agencies. Infrastructure gaps – such as non-ADA compliant bus stops and missing intermodal centers – further constrain the ability to deliver reliable and integrated transit services.

Readiness assessments revealed that while most agencies meet baseline compliance requirements, gaps in procurement documentation, maintenance oversight, and grant competitiveness persist. Many providers have limited technical capacity, local match funding, and project readiness to pursue discretionary federal grants, limiting their ability to modernize and expand services.

Innovation findings show that technology adoption is uneven, with core systems like Automated Vehicle Location and Computer Aided Dispatch in place at some agencies, but advanced tools and pilot projects remain rare. Agencies face challenges related to funding, staffing, and legacy systems. Though there is a framework for statewide coordination and support for innovation, these obstacles continue to limit progress in adopting innovative solutions.

Together, these findings point to a system that is committed to improvement but constrained by structural, financial, and institutional barriers. Findings also reveal that gaps identified in this analysis are not isolated; they are systemic, interrelated, and rooted in structural limitations. **Figure 54** summarizes systemic causes, barriers, and gaps**.**

Figure 54. Systemic Gaps, Barriers, and Causes



3.5.1 SYSTEMIC CAUSES

These are the underlying conditions that perpetuate both the gaps and barriers:

- **Insufficient and inconsistent funding**: Limits the ability to expand, modernize, and maintain services.
- **Workforce and capacity challenges:** Agencies have limited human capital and technical skills to innovate and scale.
- **Decentralized frameworks:** Decentralized frameworks and regional practices preclude system-level innovation, alignment, and integration.
- **Data deficiencies:** Weak performance measurements and reporting reduce competitiveness and hinder strategic decision-making.
- **Policy and regulatory disconnects:** Misalignment between local initiatives and broader funding or compliance requirements.

3.5.2 SYSTEMIC BARRIERS

These are recurring obstacles that inhibit agencies from addressing the gaps efficiently:

- **Funding constraints**: Chronic underfunding for both capital and operations, especially in rural areas.
- **Fragmented planning and governance:** While current regional planning has fostered a more collaborative approach statewide, progress toward shared regional infrastructure and coordinated operations remains a significant challenge.
- **Limited technical capacity:** Insufficient expertise in grant writing, project development, and technology implementation**.**
- **Policy misalignment:** Local projects are often misaligned with federal funding priorities and state-level strategic goals**.**
- **Inadequate infrastructure data:** Missing inventories and inconsistent standards impede effective planning and investment.

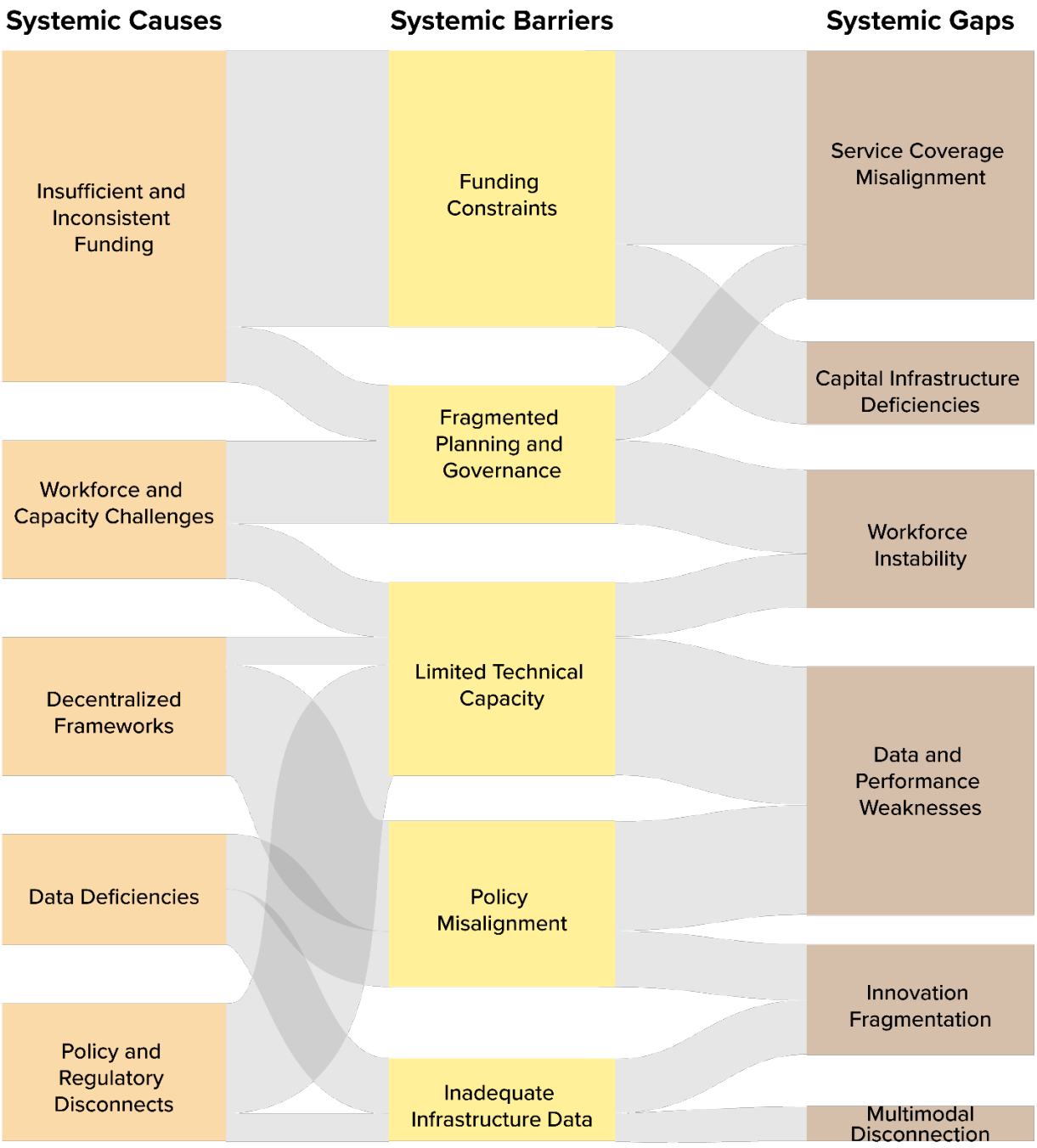
3.5.3 SYSTEMIC GAPS

These are the most persistent and widespread gaps that cut across the four Focus Areas:

- **Service coverage misalignment**: Transit services do not align with areas of highest need, particularly in rural and underserved regions.
- **Capital infrastructure deficiencies**: Inadequate investment in ADA-compliant stops, intermodal centers, and digital tools.
- **Workforce instability**: High turnover, limited recruitment pipelines, and inconsistent training standards.
- **Data and performance weaknesses**: Inconsistent data collection, reporting, and performance tracking.
- **Innovation fragmentation**: Challenges exist with piloting and scaling new technologies or service models due to funding constraints and readiness for discretionary grants.
- **Multimodal disconnection**: Poor integration between transit, pedestrian, bicycle, and intercity modes.

Figure 55 depicts interdependence among these areas of issue. Addressing gaps will require a comprehensive approach to coordinated and strategic investment, policy reform and alignment, and strategic planning so that Mississippi's transit network is accessible, resilient, and future-ready.

Figure 55. Interdependencies of Systemic Causes, Barriers, and Gaps



4 Next Steps

Tech Memo 2 provides a comprehensive understanding of Mississippi's public transportation system, identifying service gaps, institutional challenges, and opportunities for innovation. These findings form the foundation for the next phase of the Statewide Transit Plan and Intercity Bus Study: developing future scenarios and strategic recommendations.

In the next phase, **Tech Memo 3**, the Project Team will use identified gaps to model investment and policy alternatives. These scenarios will address the most pressing gaps across four focus areas and be evaluated on their ability to improve performance, accessibility, and resilience.

Key elements of the next phases will include:

- **Scenario development**: Using data from the gap analysis, the team will construct future scenarios that explore different levels of investment, service expansion, technology adoption, and coordination strategies. These scenarios will reflect varying assumptions about funding availability, demographic trends, and policy priorities.
- **Strategy formulation**: For each scenario, targeted strategies will be developed to address specific gaps. Examples include:
    - Expanding fixed-route and demand-response service in high-propensity areas.
    - Establishing regional intermodal centers to improve intercity connectivity.
    - Implementing statewide training and technical assistance programs.
    - Developing an innovation fund for pilot projects and technology adoption.
    - Enhancing first/last-mile infrastructure through coordinated investment.
    - Creating a statewide mobility management framework.
    - Leveraging advanced data tools for trip planning and service optimization
- **Performance evaluation**: Each scenario will be assessed against the KPIs established in Section 2. This will provide for proposed strategies that are data-driven and aligned with MDOT's long-term goals for an integrated, accessible, and sustainable transit system.
- **Stakeholder engagement**: The Project Team will continue to engage with transit providers and regional mobility managers along with the public to refine scenarios and develop strategies responsive to local needs and priorities.

The outcomes of **Tech Memo 3** will directly inform **Tech Memo 4**, which will outline actionable steps, funding strategies, and timelines for advancing Mississippi's public transportation system. Together, these next phases will translate the findings of the Needs and Gap Analysis into a clear, achievable roadmap for improving mobility across the state.

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