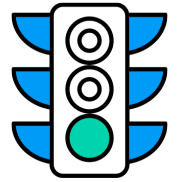




GRANTS PROGRAM



Community-driven Regional Mobility Engine for Accessible and Equitable Multimodal Public Transportation in Central Alabama

Regional Planning Commission of Greater Birmingham

PROJECT PARTNERS

University of Alabama
Rice University
City of Birmingham
Birmingham Jefferson County Transit Authority
Cooper Green Mercy Health Services

ClasTran Paratransit
Children's of Alabama
Senior Services
M4A



PROJECT CHALLENGE

The SMART project aims to revitalize public transportation in Central Alabama by creating an integrated mobility system with Bus Rapid Transit (BRT), fixed routes, on-demand shuttles, and demand responsive services. It will focus on community needs. The project will follow a staged approach, involving community engagement, system planning, and real-world piloting. By the end, a self-sustained ecosystem will be established, featuring transparent demand communication, data-sharing infrastructure, and a workforce training program for transit workers to ensure effective operation and maintenance.

IMPACT

The project consists of all of Jefferson and Shelby Counties in Alabama, which includes the City of Birmingham. This regional project has a population of approximately 898,000 people and contains a large urban area and rural areas, with 104 tracts identified as Historically Disadvantaged Communities (HDCs), 84 as environmentally disadvantaged, and 29 Opportunity Zones. Over 41.6% of the total population and over 39.7% of senior citizens (age 65 and up) live in HDCs, among which 119,159 people are impoverished and over 20,000 households do not own vehicles.

CURRENT STATE OF THE ISSUE

The study area's population has become more diverse, with a 14.4% rise in the Black population and a 345.3% increase in other minorities. However, local public transportation hasn't updated since the 1990s, leaving many in HDCs underserved. The COVID-19 pandemic worsened this, reducing service hours by 61.9% and revenue miles by 53.2%, primarily impacting low-income households. There's an urgent need to revitalize and realign public transportation to meet community mobility needs and ensure equitable access.

POLICY QUESTIONS

The project will evaluate how large-scale multisource trip and trajectory data can be integrated to enable reduced-fare transit for low-income groups, enable flexibility and efficiency of demand response services with proactive, data-driven trip scheduling and route optimization, and improve travel equity, accessibility, and service responsiveness through a fully integrated multimodal transit service.

STAGE 1 OUTCOMES

The Stage 1 will develop a simulation-based regional mobility engine to quantitatively assess the impacts of a multi-modal regional transportation services to improve the system efficiency, level of service, accessibility and equity of the transit services, and being able to strengthen the connection across different transit modes through connectivity-based and data-driven solutions.

STAGE 2 VISION

The expected outcomes for Stage 2 include: (1) acquiring more transit vehicles and establish flexible stops; (2) conducting a year-long real-world pilot of integrated transit services; (3) implementing a functional transit signal priority corridor; (4) developing a workforce training program for transit workers; and (5) creating a sustainable stakeholder group for lasting project impact.