

# Connected, Rural, Equitable, and Autonomous Transportation for Everyone (CREATE)

FY 2023 USDOT Advanced Transportation Technology and Innovation Program



## EXECUTIVE SUMMARY

Submitted by:



In partnership with:





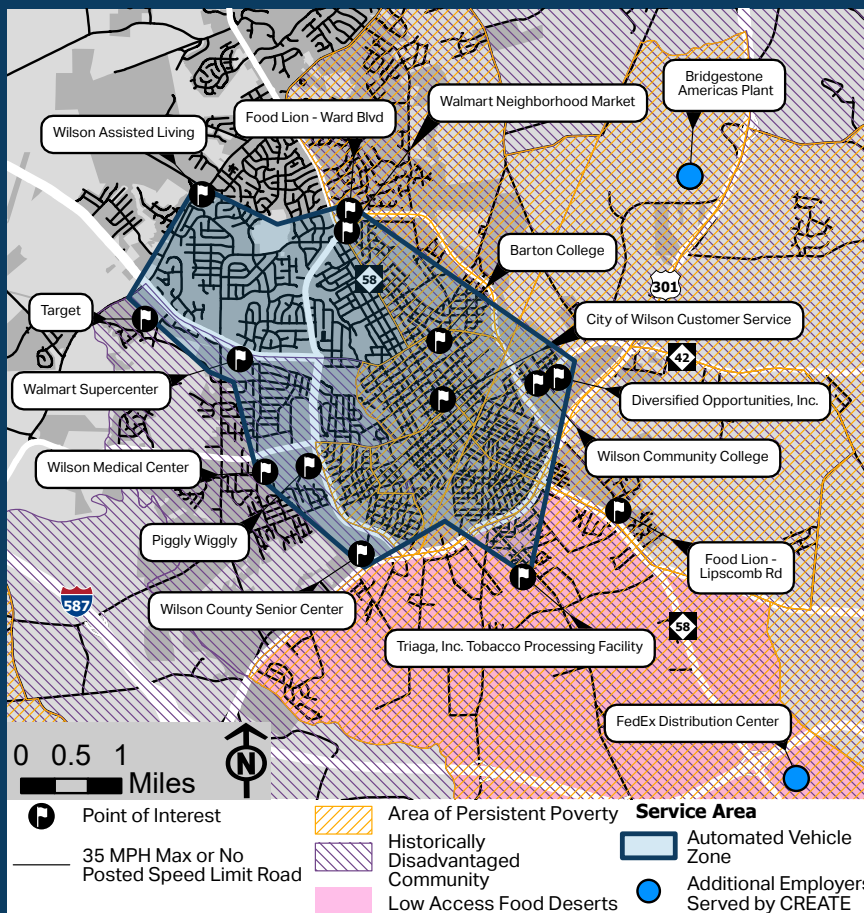
# FY 2023 USDOT ATTAIN Grant Application Summary

## Connected, Rural, Equitable, and Autonomous Transportation for Everyone (CREATE)

**CREATE** will pilot the future of advanced transportation technologies in an on-demand transit service (also known as "microtransit") by leveraging software and automated vehicles (AVs) to provide easier, more reliable, efficient, and equitable access for riders to reach key destinations in the City of Wilson, a rural community in North Carolina.

**CREATE** will build on Wilson's popular RIDE microtransit service and the recently awarded Mobility for Everyone, Everywhere in NC (MEE NC) project to fill in service gaps while also gathering data to understand rider preferences and behaviors related to AVs and on-demand transit services.

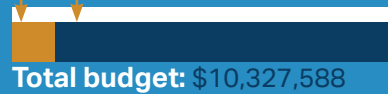
**CREATE** and its findings will inform a reproducible model and guidance for communities in North Carolina and beyond on how to best complement and strengthen their existing transit services using on-demand and automated vehicle technology.



US Census Blocks classified as Areas of Persistent Poverty or Historically Disadvantaged Communities are shown above in orange hatching and purple hatching, respectively.

## FUNDING

State and Private Match: \$2,100,500  
**ATTAIN Funding Request:**  
 \$8,227,088



## SCHEDULE



**DEPLOYMENT:**  
**3 YEARS OF SERVICE**

## LOCATION

Wilson,  
 North Carolina (Rural)



## READINESS & RISK

Leveraging NCDOT's extensive experience in managing federal funds, transit planning, and technical support, **CREATE** reduces risk and accelerates delivery while collaborating with transportation partners to meet unmet community needs.

## PURPOSE

**CREATE** will:

- Expand the existing microtransit service area to major employment centers with over 2,000 employees, including the Bridgestone Americas Plant, a new FedEx Distribution Center, and Triaga, Inc.
- Increase service hours to provide equitable access to employment for shift workers.
- Improve accessibility for riders with disabilities including those that work at Diversified Opportunities, Inc.
- Pilot a prescheduling option for rides to employment, medical appointments, and other preplanned trips.
- Deploy five (5) hybrid electric automated vehicles (AVs) and allow riders to select between an AV or conventional vehicle when booking their trip.
- Analyze qualitative and quantitative data and feedback to understand rider choices and AV performance as part of an on-demand transit service.

**CREATE** supports the following project outcomes and benefits:

**25,400\***

PEOPLE SERVED BY EXPANDED SERVICE AREA

**64%**

BLACK, INDIGENOUS, PEOPLE OF COLOR (BIPOC) ON AVERAGE IN CREATE SERVICE AREAS

**9**

HISTORICALLY DISADVANTAGED COMMUNITIES SERVED

\* including 9,000 people living below the poverty line



**Safety**

**CREATE** advances safe, efficient transportation by expanding on-demand mobility for populations that rely on transit to reach employment, healthcare, education, and other opportunities. The Project will also deploy five (5) AVs with onboard Autonomous Vehicle Operators (AVOs) that will educate riders on the technology, provide customer service, and assist riders using mobility devices. Public engagement will incorporate safety education and training for the public, first responders, AVOs, and other stakeholders. **CREATE** will provide a safer option for residents without access to vehicles who would have walked.



**Equity**

**CREATE** improves access to transit for populations with unique transportation needs, including zero-vehicle households, shift workers, low-income residents, and individuals with disabilities. **CREATE** will deploy accessible AVs with ADA-compliant wheelchair ramps for riders using mobility devices. The Project will also offer payment options for unbanked riders, booking options for those without internet access, and an option to preschedule trips, which can help individuals who require assistance when booking a ride.



**Climate Change and Sustainability**

**CREATE** reduces greenhouse gas emissions (GHG) emissions by deploying hybrid electric AVs that will maximize the pooling of trips and dynamically route riders to their destinations. The Project will reduce emissions associated with idling during traffic backups that can occur because of shift changes at employment hubs like the Bridgestone Americas Plant.



**Workforce Development, Job Quality, and Wealth Creation**

**CREATE** promotes workforce development and economic growth in Wilson through reliable, seamless, and affordable transit access to employment centers. The Project will expand coverage to reach new employers and extend service hours to accommodate those employees with work schedules outside of traditional hours. The AVs will also require in-vehicle AVOs, creating new employment opportunities.

**CREATE** combines the **proven usefulness of microtransit with AVs** to pilot and evaluate the **future of automated, on-demand shared mobility**.



**Useful**

- More dynamic, responsive service with shorter wait times
- Reaches underserved populations not served by existing transit options or unable to access a personal vehicle



**Inclusive & Safe**

- Public, subsidized form of rideshare with flexible service hours
- Accessible vehicles with ADA-compliant wheelchair ramps offer more personal freedom to seniors and individuals with disabilities



**Affordable**

- Decreases service and maintenance costs in low density areas
- Creates flexible and scalable service that complements existing transit options without requiring new infrastructure

**CREATE** is the result of a partnership that leverages the expertise and experience of government, non-profit, academic, and industry leaders to deliver the benefits of automated, on-demand transit service to the City of Wilson, a rural community in North Carolina.

