



Project Number
BED31-977-06

Project Manager
Raj Ponnaluri, Ph. D., P.E.,
PTOE, PMP
State Traffic Engineering Office

Principal Investigator
Lily Elefteriadou, Ph. D.
University of Florida

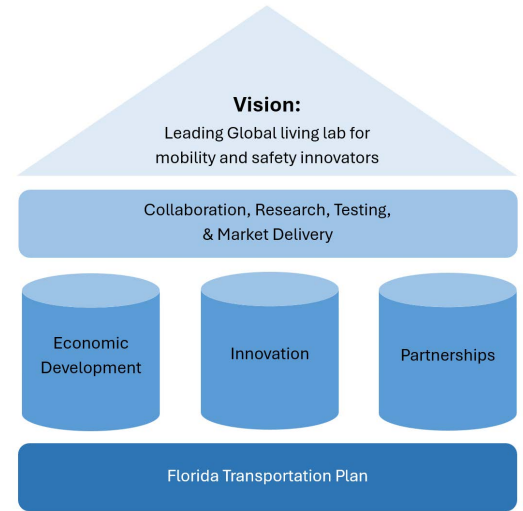
Florida Department of Transportation Research

Support for the I-STREET™ (Implementing Solutions from Transportation Research and Evaluation of Emerging Technologies) Testbed

August 2025

Current Situation

Built on three pillars of economic development, innovation, and partnerships, I-STREET™ is a real-world transportation testbed developed to enhance transportation safety and mobility. The testbed allows researchers to develop, test, and evaluate emerging technologies in a live environment with real traffic, covering a variety of transportation modes like vehicles, pedestrians, and bicycles. The need for advanced technology solutions is crucial due to increasing traffic volumes and the complexity of modern transportation networks. The “Support for the I-STREET™ Testbed” project involves a partnership between the University of Florida (UF), the Florida Department of Transportation (FDOT), and the City of Gainesville (CoG).



Overview of I-STREET Foundation and Pillars.

Research Objectives

The objectives of this project were to expand the capabilities of I-STREET™, develop a research and infrastructure plan, engage with industry and public agencies for collaboration, and create an education and outreach program. The project focused on improving transportation safety and mobility through advanced technologies. Its purpose is to create partnerships with private companies to develop and test new transportation technologies, while supporting public agencies by sharing data and results. Another key objective was to educate professionals and students on the use of these technologies.

Project Activities

The University of Florida research team developed several plans to enhance I-STREET™. They reviewed existing practices and conducted discussions with FDOT and other stakeholders. The team identified five research focus areas: Artificial Intelligence (AI), Autonomous and Connected Vehicle Technologies (ACES), Privacy and Cybersecurity, Multimodal Transportation, and Smart and Resilient Transportation Infrastructure. In addition to these, the team created an industry outreach strategy to engage transportation technology companies, resulting in partnerships, data sharing, and product testing on I-STREET™. The team held industry partner meetings and several showcase events to foster these relationships. The project also emphasized public agency engagement to facilitate data sharing and technology deployments. Educational outreach included developing strategies to target professionals, students, and K-12 learners.

Project Conclusions and Benefits

I-STREET™ can be an essential platform for improving transportation safety and mobility through advanced technologies. The partnerships established through the industry outreach program will yield significant benefits in testing and deploying new transportation technologies. Moreover, the education and outreach plans will help train the next generation of transportation professionals, ensuring that Florida remains at the forefront of innovation in this field. Overall, the project helps address modern transportation challenges while fostering industry collaborations and workforce development.

For more information, please see fdot.gov/research.