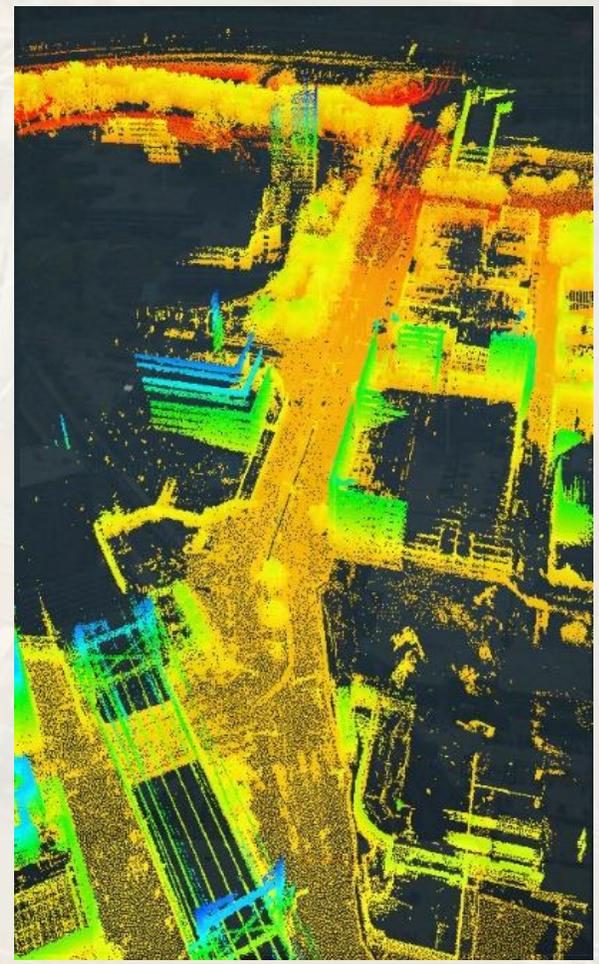


DataCity Smart Mobility Testing Ground: Empowering Roadside Infrastructure toward Connected and Automated Transportation



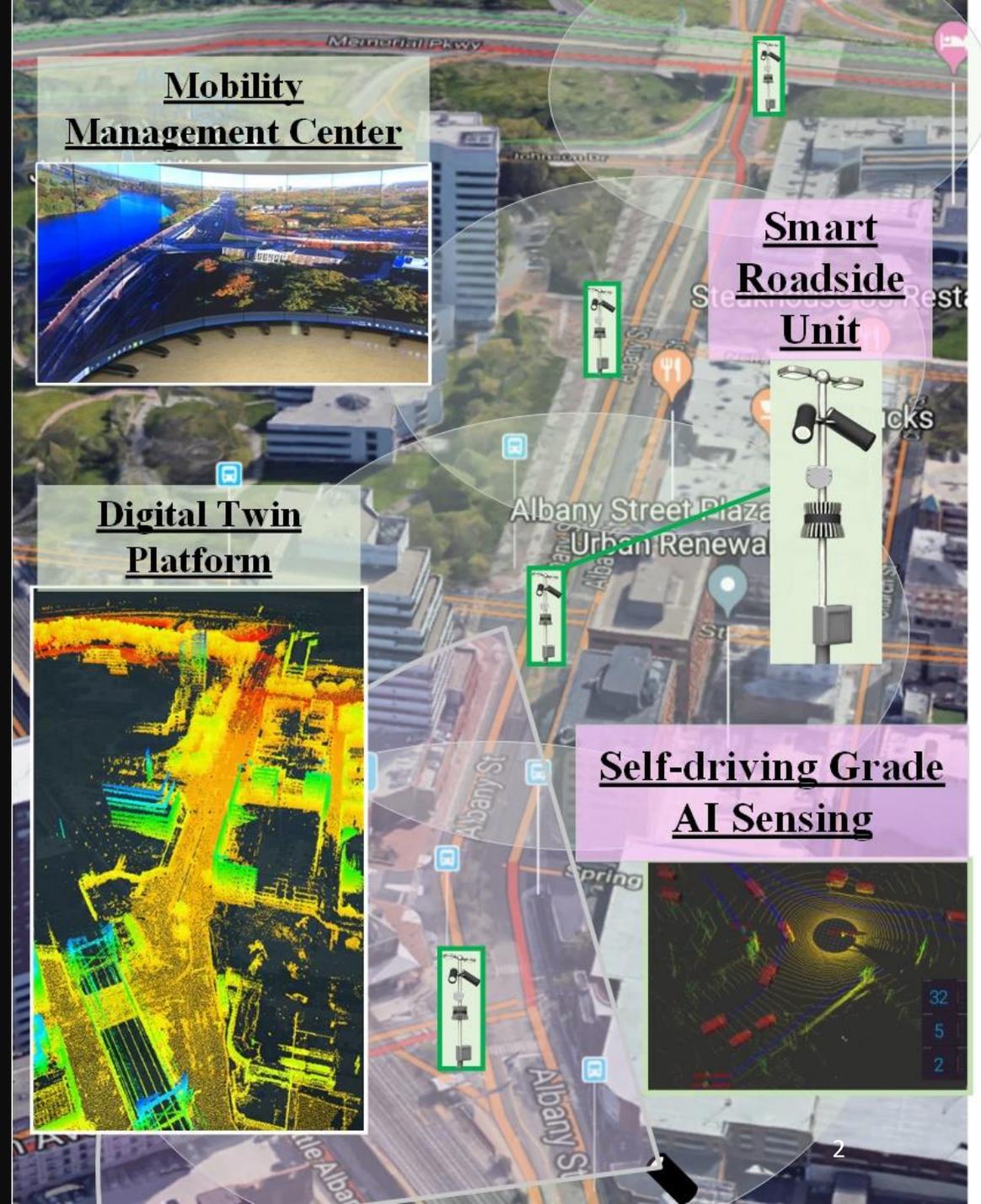
Center for Advanced Infrastructure
and Transportation



Proposed DataCity Testing Ground Concept

Concepts:

- **Mobility Technology Breeding Ground** for State, Middlesex County, and the City of New Brunswick
- **Smart Mobility Management Center**
- **Industrial-Grade Smart Mobility Data Hub**
- **Digital Twin** platform to support early-stage R&D
- V2X Smartphone-based **Community Mobility Applications**
- **Self-Driving-Grade Roadside Sensing and Computing Infrastructure**



DataCity Smart Mobility Testing Ground - Timeline



August 2019

NJEDA Innovation Challenge

November 2019

Proposal Discussion with NJDOT

December 2019

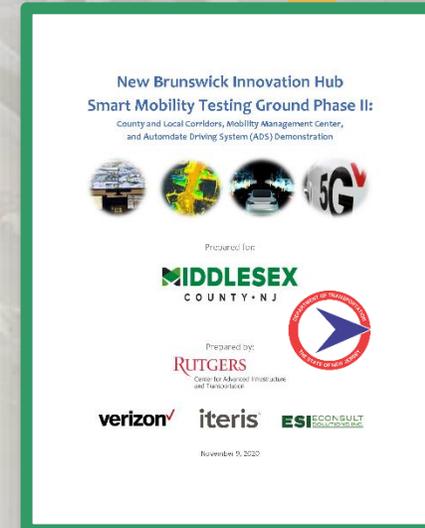
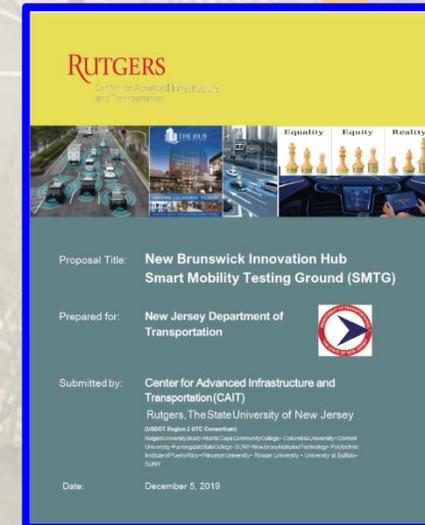
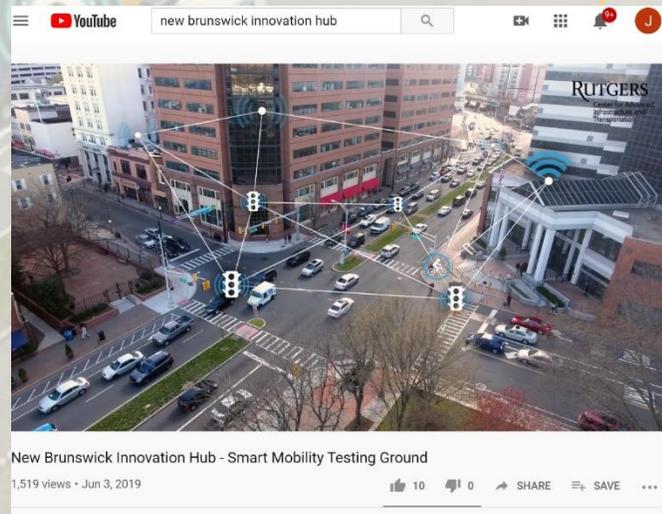
Innovation Hub Video and Pilot Testing

May 2020

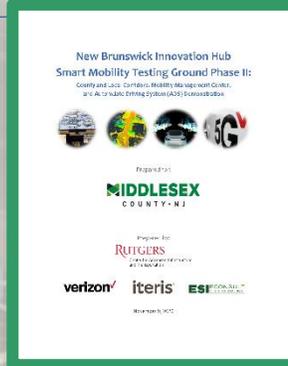
Phase I Deployment Confirmed

July 2020

Phase II Proposal Development



DataCity Smart Mobility Testing Ground – Timeline



May 2021

Project Kickoff

July 2021

LiDAR Acquisition Completed

August 2021

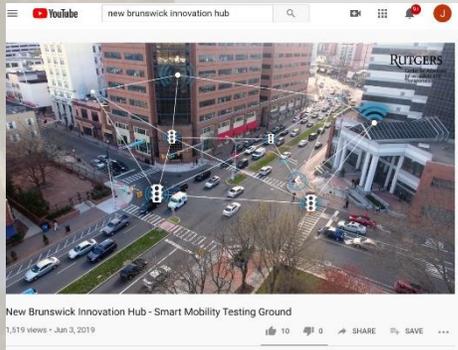
Middlesex County Phase II Started

Sep. 2021

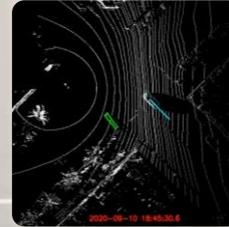
Hub Breaking Ground
First Intersection: Albany@George Site

Feb. 2022

4 Sites Completed. (10 Sites expected by April)



DataCity Smart Mobility Testing Ground Timeline (Ongoing - Planned)



April
2022

- 5 Site Completed
- Live Data Streaming

June
2022

- 6 sites + 3 fiber nodes completed
- Live Data Archiving

Sep.
2022

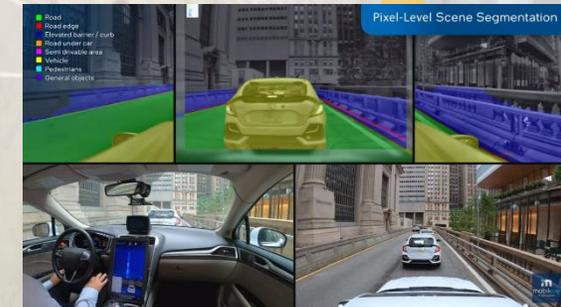
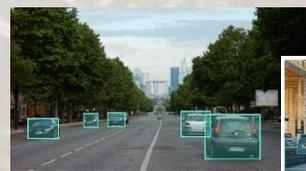
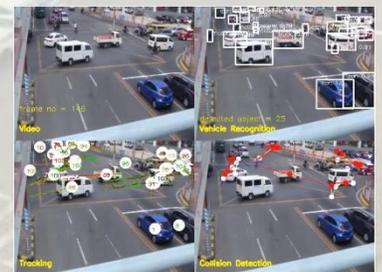
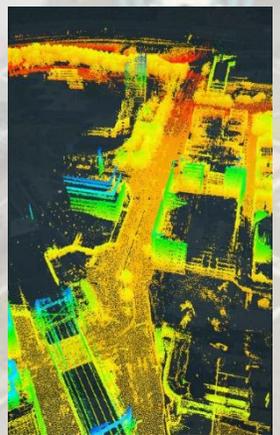
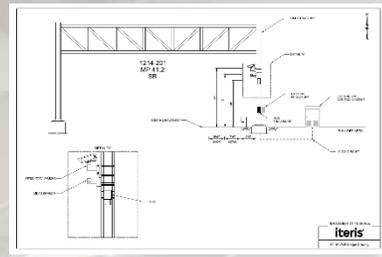
- NSF ERC Award Streetscape
- Digital Twin Modeling
- Community mobility app

Nov.
2022

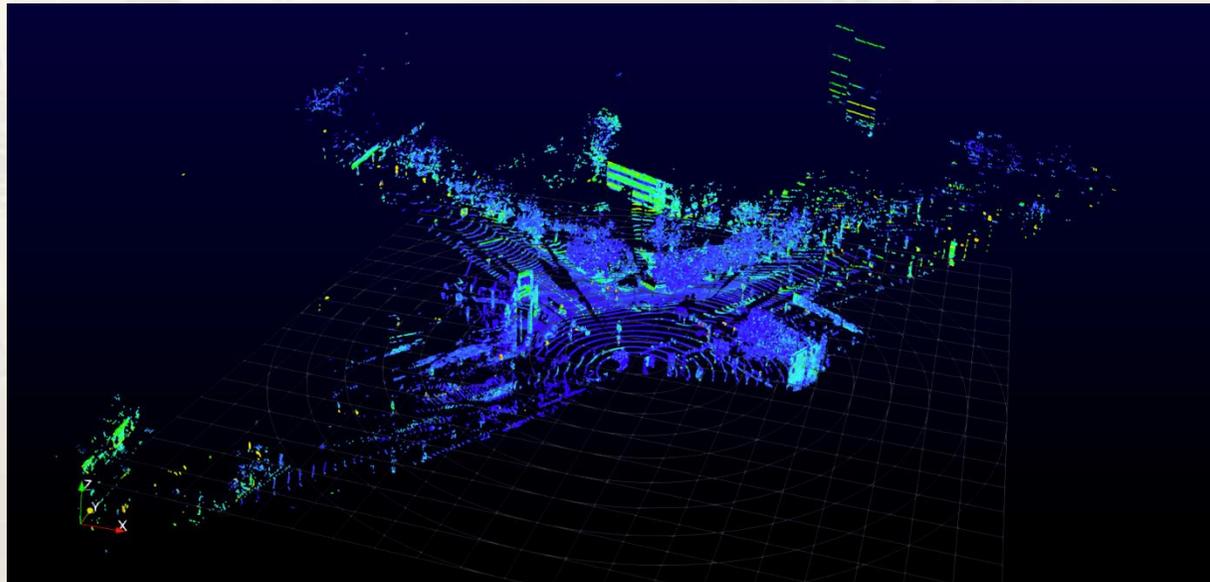
- 8 Sites to be completed
- Roadside Edge Living Lab

Mar.
2023

- 10 Sites to be completed
- Full Data sharing and testing services



Albany @ George – Data/Video Streaming and Analytics



DataCity: Smart Mobility Management Center

- Video Walls
 - 6x2 Video Monitoring Wall
 - CAVE 12x2 Curved Wall
- Servers:
 - Video servers
 - Database servers
 - Computing servers
- Connectivity
 - Video/Da



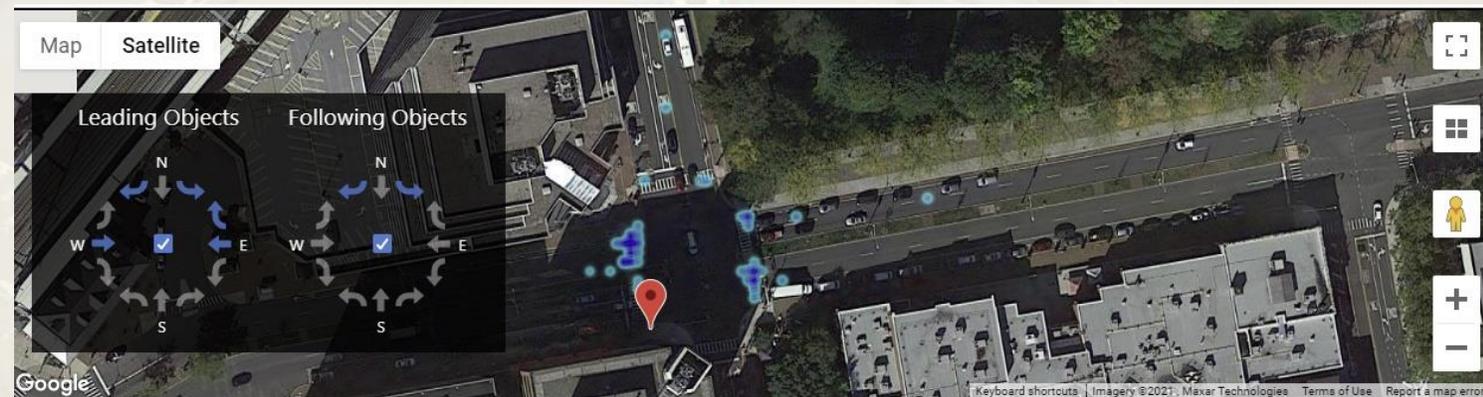
Mobility Management Center Opening - Application Demonstration

CAV Application

- Autonomous Shuttle Demonstration.
- BSM/PSM Illustration.
- Intersection Safety Application.
- Virtual RSU to Vehicle Messaging

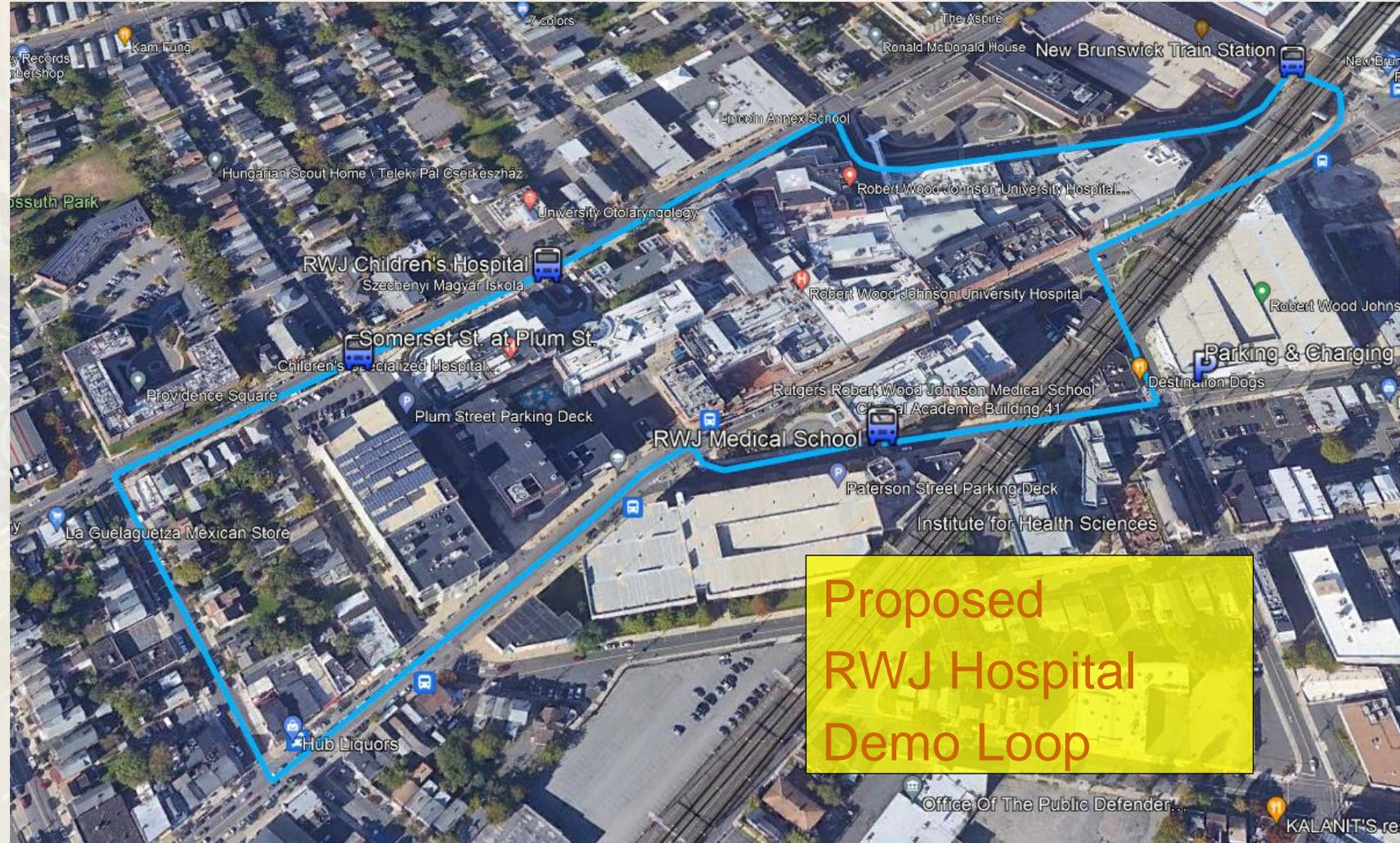
Digital Twin and Data Platform

- Digital Twin model illustration
- Nearmiss event archiving and playback
- Inclusive data-ecosystem (Planned)

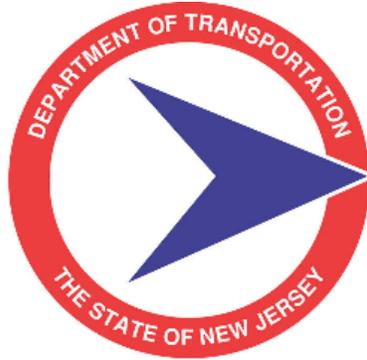


SMTG- Verizon 5G Autonomous Shuttle Program

5G^v



Thank you!



RUTGERS

Center for Advanced Infrastructure
and Transportation

verizon[✓]

iteris[®]