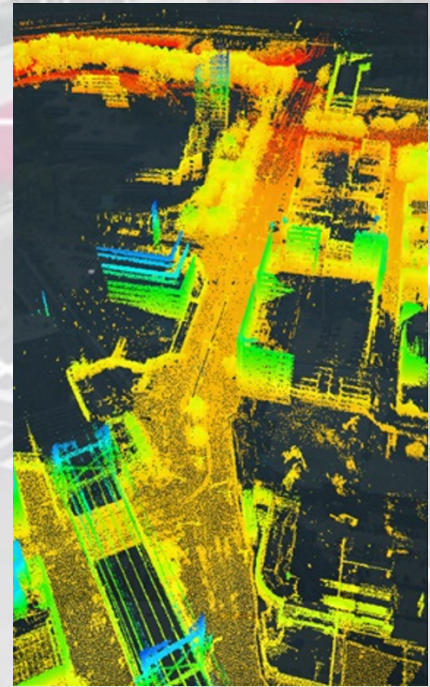


DataCity Smart Mobility Testing Ground

Project Progress and Overview - March 2023

DataCity Overview

The DataCity SMTG is a 3.1-mile multi-modal corridor “living lab” in downtown New Brunswick, NJ, for collecting multi-modal smart-mobility data that will help the region improve safety, congestion, and equity in its transportation systems, while establishing NJ as a hub for R&D in the growing Connected and Autonomous Vehicle industry.



Construction Schedule

The DataCity SMTG project has completed the construction of six out of the planned 14 sites, with each site instrumented with self-driving grade LiDAR and computer vision sensor, state-of-the-art NVIDIA edge computing, and Connected Vehicle V2X technologies. Four more sites will be completed in the spring, and four more by summer 2023.

DataCity Control Center

The DataCity's control center is also under construction and instrumentation supported by Middlesex County. The center includes videowall surveillance system, CAVE environment with curved videowall to visualize 3D models, 1.5PB storage node and other database, application, and analytic servers. The control center is expected to be completed in April. An opening event can be expected in late April and early May, 2023.



DataCity Data Products

Current instrumented sites generate 0.5 TB per site per day. The data is available as live feeds of vehicle and pedestrian locations. A web-based interface is available to visualize safety and mobility data collected from high-resolution sensor data. The interface can be used to query and playback historical nearmiss events and their distribution at each site location.

DataCity CAV Test Platform

The project has a CAV test platform that includes both Verizon Virtual RSU Technologies and Iteris RSU/OBU technologies. Virtual CV technologies from Verizon allow live BSM/PSM feeds to be generated on behalf of all moving objects at each site - enabling CV applications without needing all vehicles and pedestrians to have an expensive OBU to participate.



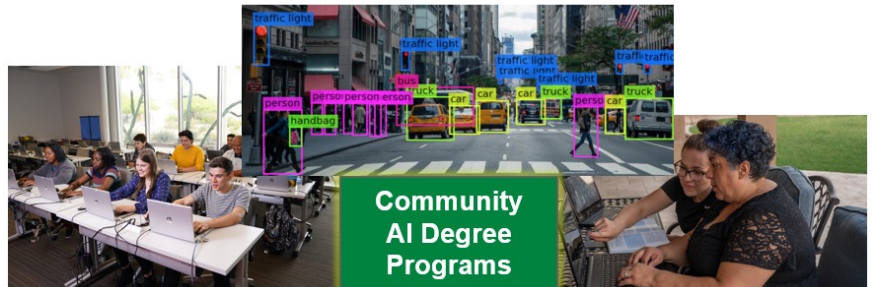


DataCity Digital Twin and CAV Living Lab

Digital twins are the core Living Lab functionality of DataCity SMTG. They will be used to 1) provide virtual testing platforms for early research and development, and 2) converting SMTG sensor data from roadside views to vehicle-based perspectives.

Innovative Alliance

An Innovative Alliance is being built together with various stakeholders, including cities, industry partners, and academic institutions, to develop and implement smart mobility solutions.



Community AI Degree Programs

Business, Marketing & Operation Planning

The project team also develop a comprehensive business plan towards building a Public-Private-Partnership (PPP) non-profit organization with Middlesex County and NJDOT. The PPP will use the following products and services for sustainable operations beyond project years.

Product and Services	Benefits and Tiers	Availability Status
DataCity Alliance Membership	Innovation Hub and Membership company benefits	Under planning
Data Product	<ul style="list-style-type: none"> • Live Trajectory Data • On-demand Test site Data • Historical Archived Data • Deep Learning Training data 	Live and historical archived data (available) Others by September 2023
Data Collection Services	On-Demand Data Collection, Processing and Labeling Services	Two mobile trailer stations under construction.
Application Testing Services	Daily/Hourly rental of roadside and center computing devices and sensor data access Physical and Virtual CV	Pilot testing with CV safety applications
Certification and Grants	Serving as the technology pilot, certification for major national and New Jersey initiatives.	<u>Awarded:</u> Middlesex County Grant, NSF Engineering Research Center, DHS SENTRY Grant. <u>Pending/In prep:</u> USDOT SMART, NSF Civic Grant