

# New Brunswick Innovation Hub Smart Mobility Testing Ground, Data City: A Smart and Autonomous Initiative (NJDOT Contract #21-60168 )

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## Overview and 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

Key figures: Commissioner **DAVID GUTERRES-SCACCI**, County Administrator **JOHN PULOMENA**.

## Corridor Plan

**Middlesex County/SMTG Mobility Management Center**

**Smart Roadside Unit**

**Digital Twin Platform**

**Self-driving Grade AI Sensing**

Corridor: College Ave, Easton Ave, French Street, Route 27, Route 18.

## Instrumentation

**Route 27@George Street (First Instrumented Intersection)**

- Velodyne Alpha Prime VLS-128 Beam
- BlueCity Edge Computing
- Iteris Bosch Camera and Road-Side Unit
- Verizon VZMode

## DataCity Smart Mobility Testing Ground Concepts

1. NJ Mobility Technology Breeding Ground
2. Smart Mobility Management Center
3. Industrial-Grade Smart Mobility Data Hub
4. Digital Twin platform to support early-stage R&D
5. V2X Smartphone-based Community Mobility Applications
6. Self-Driving-Grade Roadside Sensing and Computing Infrastructure

## Smart Mobility Management and Application Test Center

**Option 9 - Conceptual SMTG and Middlesex County Smart Mobility Command Center Floor Plan**

Key areas: TMC Video Wall, SMTG 1x2, SMTG 2x2, SMTG 3x2, SMTG 4x2, SMTG 5x2, SMTG 6x2, SMTG 7x2, SMTG 8x2, SMTG 9x2, SMTG 10x2, SMTG 11x2, SMTG 12x2.

## Smart Mobility Data Services

Car detection: car 0.34, car 0.41, car 0.42, car 0.43, car 0.44, car 0.45, car 0.51, car 0.53, car 0.54, car 0.55, car 0.72, car 0.74, car 0.79, car 0.85, car 0.91.

## Digital Twin Modelling

3D road model, Point cloud map, Self-driving car simulation.

**CV - Nearmiss Detection/ Alerts**

**Autonomous Shuttles**

**Self-Driving Cars**

**Self-Driving Trucks**

**Self-Driving Delivery**

**CV - Pedestrian Safety Applications**

**Community Mobility Applications**

**Proposed RWJ - St. Peter's Hospital Loop**

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