

Connected, Automated, Shared, Electric

Connected: Public Infrastructure

Traffic systems interface

R

Electric Vehicle Charging

Motor Fuel Tax impact?

8

Electric: Propulsion

Stations

- Road/Air "navigation aids"
- Data for traveler information / traffic management

Automated: Vehicle Technology Revolution

- Sensors
- Wireless communications
- Information • technology
- Vehicle guidance systems



Shared: Vehicle Ownership

- **Transportation Network** Companies (Uber, Lyft)
- Autonomous vehicle • services
- Fewer vehicles per household?



The Future of Smart Mobility

- Autonomous vehicle testing
- Develop standards for vehicle-to
 - infrastructure communications
- Assessing roadway *impacts*
- Management systems for real-time vehicle data
- Assess travel demand impacts
- EV charging infrastructure development
- *Evaluate EV revenue* impacts
- *Insurance industry* considerations
- *Legal and regulatory* changes
- Workforce development

Ohio Mobility Technology **Ecosystem**

Proven disruptive technology assets and expertise to drive innovation as we deploy new, integrated transportation systems.



Smart Mobility Projects

Self-Driving Shuttle on the Scioto Mile Unmanned Traffic Management Pilot Connected Marvsville Smart Columbus Uber Movement, Cincinnati Mobility Lab Project Dublin Connected Roundabout Smart² FlyOhio: SkyVision 9 Deploying Automated Technology Anywhere

Connected Corridors

- 1 U.S. 33 Smart Mobility Corridor and UTM Research Ohio Turnpike Corridor Future Ohio Turnpike Corridor Expansion Cincinnati/Dayton Workforce Corridor Lake Effect Corridor SmartLane
- Initial Managed UTM / UAM Corridors
- SkyVision and Brush Creek Test Areas
- US Air Force Airworthiness Authority
- - Air Force Research Laboratory



NASA Glenn Research Center and Plum Brook Station

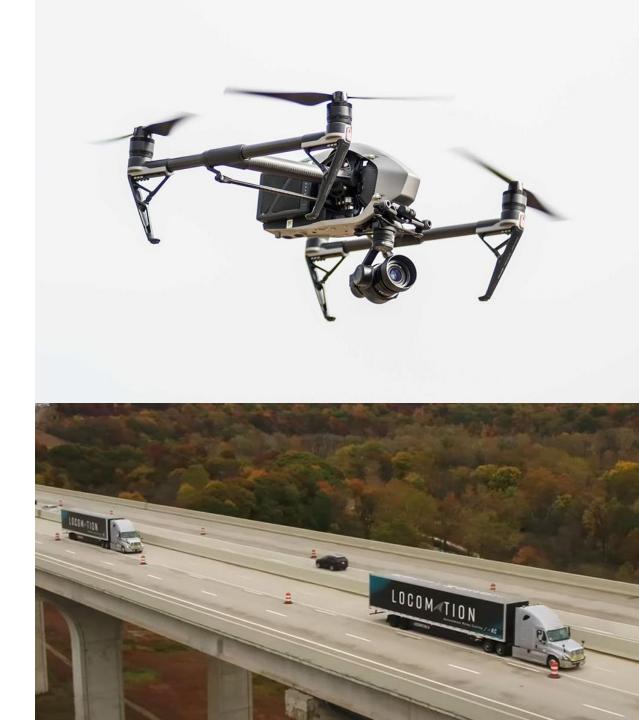


- Camp James A Garfield Joint Military Training Center and Camp Perry UAV Test Site
- TRC Transportation Research Center (TRC)



Programs

- Ohio Autonomous Vehicle Pilot Program
- C.A.S.E. Research and Development
- Ohio Unmanned Aerial Systems (UAS) Center
- Economic and Workforce Development Program



Ohio Autonomous Vehicle Pilot Program

- Smartbelt Coalition Truck Platooning Demonstration
- AV Shuttles
 - 2 SmartColumbus deployments
 - Youngstown AV shuttle grant (pending)
- I-70 Truck Automated Vehicle Demonstration: \$8.9 Million
- Southeast Ohio Rural AV Demonstration: \$17.8 Million

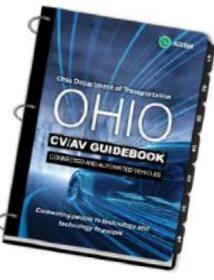


C.A.S.E. Research & Development



- US 33 Smart Mobility Corridor
 - Smart Marysville
 - Smart Dublin
- Connected/Automated Vehicle Statewide Engineering Analysis
- Electric Vehicle Policy, Planning, and Deployment







- The US 33 Smart Mobility Corridor is one of the world's largest integrated smart mobility test corridors on the ground and in the air.
- 35 miles of connected + automation-ready roads
- Low-altitude air traffic management testing
- Industry, academic, and research collaborations



Ohio Unmanned Aerial Systems Center

- Drone operations: More than 1,800 flights for ODOT and state agency partners
- Leading research in Remote Tower airspace monitoring
- SkyVision Airspace Monitoring Services: beyond-line-of-sight unmanned aircraft operations
- Partnerships with industry, research, and federal agencies foster business attraction



Workforce Economic and Development Program

JobsOhio

- Smart Mobility Workforce Development
 - K-12 STEM
 - Upskilling workforce
 - Higher education and capstone programs
- University R&D Coordination
- DriveOhio-JobsOhio Partnership
- Outreach and engagement with smart mobility companies

Economic Development Collaboration

- World-class R&D, talent, and customer base
- Strategy:
 - Design
 - Test
 - Deploy



UAS Research & Development





"FlyOhio is really a statewide initiative. They do everything, move heaven and earth to get drones in the commercial space. You have aerospace in your blood."

Beth Flippo, TELEGRID

Growing Smart Mobility in Ohio



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