

MICHIGAN: Global Center of Mobility

Mapping the future of smart mobility is easy – it starts in Michigan. Home to unrivaled automotive R&D and advanced manufacturing assets, Detroit and Michigan are positioned as the global center of connected vehicle technology. The research, design, testing and infrastructure development that is revolutionizing mobility, connecting the automobile and reshaping the world happens here.

Michigan is the place to be for emerging opportunities in smart mobility.



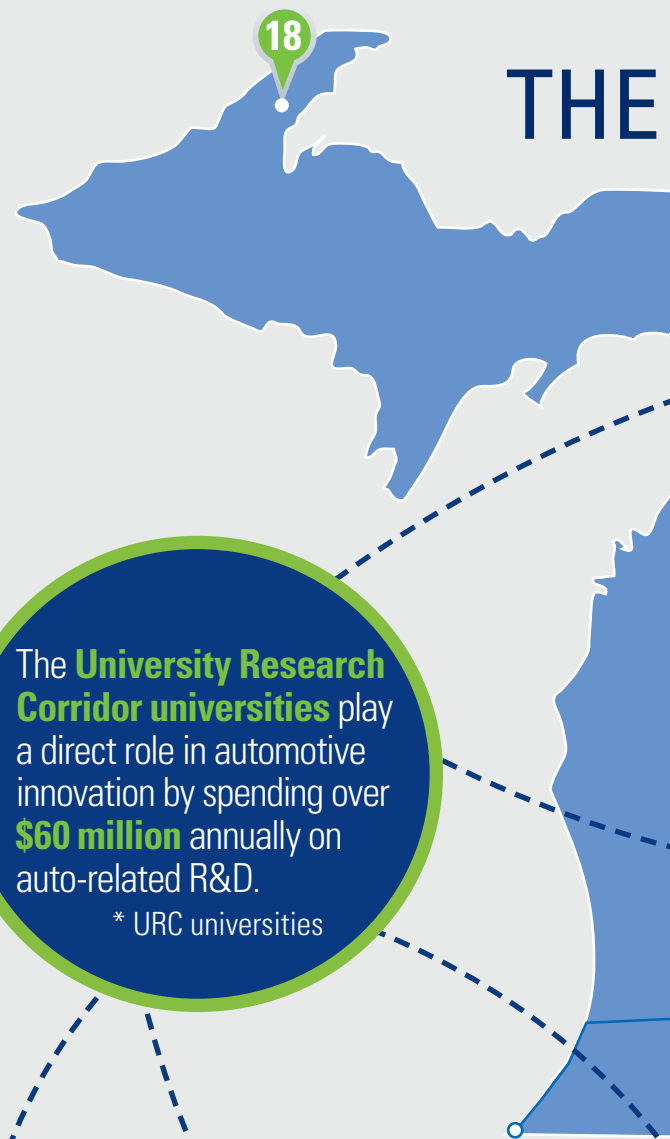


Michigan is the strategic location for emerging technology in connected and autonomous vehicles. It boasts the largest deployment of video imaging for traffic management and most extensive system of test beds worldwide. Home to more than 89,000 engineers, Michigan ranks first in the nation for its concentration of engineering talent. It offers the second largest system of adaptive traffic signals in the United States. Michigan powers innovation like nowhere else.

LOCATIONS:

1. The American Center for Mobility
2. Center for Advanced Automotive Technology (CAAT) - Macomb Community College
3. Coleman A. Young International Airport
4. Connected Vehicle Trade Association (CVTA), Michigan Mobile Technology Association (MMTA)
5. Detroit Innovation District
6. Detroit Test Bed
7. FCA US LLC Headquarters and Technology Center
8. Ford Motor Co. Research and Innovation Center
9. General Motors Co. Technical Center
10. Hyundai America Technical Center Inc.
11. I-94 Truck Parking Information and Management System (TPIMS)
12. Joint Ground Robotics Enterprise - TACOM
13. Kettering University General Motors Mobility Research Center
14. Lawrence Tech University - Autonomous and Interconnected Vehicles Lab
15. Mcity at University of Michigan's Mobility Transformation Center
16. Michigan International Speedway Vehicle Testing Facility
17. Michigan Tech Research Institute
18. Michigan Tech Transportation Institute
19. Monroe, MI PrePass
20. NextEnergy
21. Nissan Technical Center North America
22. Oakland County Connected Car Task Force
23. Robert Bosch LLC — Automotive Proving Ground
24. Roush Building (Google Driverless Cars)
25. The Smart Corridor
26. Southeast Michigan Connected Vehicle Test Bed
27. Southeast Michigan Transportation Operations Center (SEMTOC)
28. Toyota Technical Center
29. Toyota Research Institute (TRI)
30. U.S. Army Tank Automotive Research (TARDEC)
31. Volkswagen Group of America Inc.

THE



The **University Research Corridor universities** play a direct role in automotive innovation by spending over **\$60 million** annually on auto-related R&D.
* URC universities

In 2015, Michigan led the United States in connected vehicle projects (**49**), followed by California (**35**), a growth of **63 percent** since 2013.

MOBILITY STATE

Ranked **No.1** nationally for the number of automotive industry jobs (**173,342**) in Michigan, positioning the state to lead the nation in connected and autonomous vehicle research and technology.

The region's freeways are instrumented with **450** closed circuit TV cameras, **200** dynamic messaging signs and **500** microwave vehicle detector sites.

NEW TO THE MOBILITY STATE

Kettering University General Motors Mobility Research Center
Kettering University
Flint, Michigan

4G wireless infrastructure and autonomous vehicle test facility.



LEADING MOBILITY

The Michigan Mobility Initiative strives to maintain the state's position as the global center for automotive and showcase the strategic opportunities in smart technology and next-generation mobility. The initiative, led by MICHauto, in partnership with Business Leaders for Michigan, Michigan Department of Transportation, Michigan Economic Development Corporation and University Research Corridor, is working to leverage Michigan's assets and grow opportunities in smart mobility in the industry.

LEAD PARTNERS



SMART MOBILITY PROJECTS:

Detroit Innovation District *Municipal*

A cluster of innovation resources, including NextEnergy, for the benefit of the region, the Detroit Innovation District is envisioned to harness collective power to accelerate job growth, commercialize new technologies and enhance quality of life for people and businesses.

Detroit Test Bed *Federal*

The Detroit Test Bed is the only urban test bed environment in the United States providing features such as an "urban canyon" and building tunnels, both of which will challenge existing technologies.

FCA US LLC Headquarters and Technology Center *Automotive OEM*

Fiat Chrysler Automobiles (FCA US LLC) headquarters is the only automotive facility that brings together cutting-edge scientific research, industry-leading creative design, vehicle development, engineering, manufacturing, marketing and corporate leadership.

Ford Motor Co. Research and Innovation Center *Automotive OEM*

The Ford Motor Co. Research and Innovation Center uses advanced technologies to better understand and improve driving habits. Its research focuses on advanced electronics, human-machine interface, materials science, big data and analytics.

General Motors Co. Technical Center *Automotive OEM*

General Motors Co. is leading intelligent mobility efforts in Michigan with the first V2V-equipped car – the 2017 model year Cadillac CTS.

Hyundai America Technical Center Inc. *Automotive OEM*

Designers and engineers apply design and development technology at the center to create the next generation of safer, more efficient vehicles.

NextEnergy *Public and Private Partnership*

NextEnergy Center hosts vehicle-to-X program development within the \$20-million living laboratory in midtown Detroit, additionally offering incubation spaces and testing services to energy and transportation startups and project teams.

Nissan Technical Center North America *Automotive OEM*

Nissan Technical Center North America's headquarters is responsible for blending technology and engineering to create cars that deliver total customer satisfaction.

Southeast Michigan Connected Vehicle Test Bed *Federal*

The most extensive test bed in the nation provides companies the capability to test safety, mobility, environmental applications and components, led by the U.S. Department of Transportation's vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) research program.

The Smart Corridor *Public and Private Partnership*

Expected to be in place by 2017, General Motors Co. is joining forces with the Michigan Department of Transportation, the University of Michigan's Mobility Transformation Center and other automakers to create V2I-enabled corridors on 120 miles of metro Detroit roadways, the largest deployment of V2I technology in the United States.

Toyota Technical Center *Automotive OEM*

Responsible for North American engineering design and development, and research and development, including the Collaborative Safety Research Center (CSRC).

Mcity at University of Michigan's Mobility Transformation Center *Public and Private Partnership*

The \$6.5-million connectivity test facility developed with the Michigan Department of Transportation has a 32-acre track, allowing researchers to test connected and autonomous vehicles in a simulated urban environment. Mcity is set to transfer results to a 20,000-vehicle demonstration system in Ann Arbor and two other locations in Southeast Michigan by 2021.

The American Center for Mobility *Public and Private Partnership*

335-acre Willow Run site transforming into a world-class connected and automated vehicle development center.

Keitering University General Motors Mobility Research Center

Keitering University's GMFARA is a \$7-million test facility consisting of a 21-acre track and road course with a 3.1-acre pad area, sited within the coverage area of the nation's only university owned and operated 4G LTE advanced and WiMAX wireless network. This unique facility is designed to develop and test autonomous and connected vehicles under a wide range of conditions within a next-generation private mobile communications environment.

Get involved by visiting: michauto.org/smartmobility

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MICHauto is a strategic initiative of  Detroit Regional Chamber