



Michigan is **automobility**

Michigan has always been the leader of the automotive industry, and as vehicle and transportation technologies evolve in amazing ways, Michigan continues to lead the way.



Mobility Industry at a Glance

The automotive industry is evolving rapidly and **Michigan is positioned to lead the world into the next generation of mobility**. Michigan has passed aggressive legislation for connected vehicle technology, along with commitments to investment in infrastructure through the Michigan Department of Transportation (MDOT). Private industry in Michigan continues to develop partnerships across mobility-related technology companies, in addition to leading the nation in mobility-related patents.

Michigan ranks **No. 1** in the nation in connected and automated vehicle projects (49).

5,000 connected and automated vehicles on the road by 2018 in Ann Arbor's Connected Vehicle Test Environment.

An average of **2,044** connected and automated vehicle-related monthly job postings in Michigan in 2016.

350+ miles of freeways and arterials equipped for connected vehicles in Michigan by 2019.

1st in mobility-related patents (data processing—vehicles, navigation, relative location), 2,583 patents awarded over the past five years in Michigan, followed by California with 1,468 patents issued.

Michigan was among one of the **1st** states to legalize self-driving vehicles on public roads.

100+ roadside units (RSU) installed on Michigan roads.

Innovation Ecosystem

Leading the next-generation mobility initiatives in Michigan include not only automakers and the supplier network, but also a well-developed technology, start-up and venture capital community. Accelerators throughout the state provide services to entrepreneurs in mobility activities, while venture capital investments have seen significant growth over the past five years.

22 venture capital firms and **8** angel groups are active in the mobility space in Michigan, another **46** provide entrepreneurial support.

Michigan continues to rank **No. 1** in research spending-to-venture capital investment ratio in the nation.

There are **141** venture-backed companies in Michigan, a 48% increase in the past five years.

More than **20** start-ups and accelerators are actively involved in the mobility industry throughout the state.



MEDC's entrepreneur and innovation team oversees the state's entrepreneurial ecosystem, including Michigan's **17** SmartZones featuring technology business accelerators that provide essential services to the start-up community.

Tech Insurance recently named Detroit one of the best places to live for tech entrepreneurs and **3rd** most surprising cities for tech jobs.

Technology leader Google and ride-sharing company Uber have established **self-driving technology centers** in Michigan. Other tech companies investing in the state include AT&T, Verizon, LG and more.

Michigan's Commitments

Connected and Automated Vehicles

For over a decade, Michigan has led connected and automated vehicle research and projects in both the private and public sector. With the opening of federal test beds or progressive laws legalizing driverless vehicles on public roads, Michigan is the leader in next-generation mobility.



Detroit hosts the 2014 ITS World Congress.



Michigan Department of Transportation (MDOT), partners with General Motors Co., Ford Motor Co. and a University of Michigan consortium to deploy the Smart Corridor, the United States' first smart highway.



Mcity, a one-of-a-kind customizable urban test facility, opens in Ann Arbor and allows industry, government, and academia to come together to test and improve connect and autonomous vehicles.



Michigan announces "PlanetM," an initiative to align all of the state's assets in automated and connected vehicle technology under one banner.



American Center for Mobility (ACM) breaks ground on a \$110 million redevelopment. ACM is a testing and product development facility designed to enable validation of connected and automated vehicle technology, and accelerate the development of voluntary standards in the industry.



The U.S. Army Tank Automotive Research Development and Engineering Center (TARDEC) tested two autonomous trucks, driving them across the Blue Water Bridge from Port Huron to Canada and back.



American Center for Mobility officially opens its state-of-the-art proving grounds for testing.



The North American International Auto Show will be held in Detroit from January 13–28 and includes AutoMobili-D, featuring nearly 57 start-ups from around the world focused on a range of topics such as autonomy, connected vehicles, electrification, fleet management and more.

2007

U.S. Department of Transportation Development and Test Environment in Novi opens.

2009

Michigan hosts Cooperative Intersection Collision Avoidance System (CICAS) project.

Michigan International Speedway (MIS) begins testing connected vehicle technology.

2012

The \$25 million Safety Pilot Model Deployment project in Ann Arbor begins.

2013

The first legislation for driverless vehicles in Michigan passes.

2014

The Detroit Test Bed opens, a unique urban testing environment that features 17 roadside units that collect data on the behaviors of connected vehicles to advance existing technologies.

2015

U.S. Department of Transportation (USDOT) announces \$3 million federal TIGER grant for the Truck Parking Information and Management System (TPIMS) along I-94.

2016

Legislation passes to enable Michigan as a leader in automated vehicle testing and self-driving vehicles, including ride-sharing services on public roads.

U.S. Army tests connected vehicles on I-69 in Michigan.

2017

Smart Belt Coalition is formed as a collaboration in the ongoing development of connected and automated vehicles.

Michigan Council on Future Mobility is formed, made up of business and policy leaders, to advocate for changes related to automated, driverless and connected vehicle technology policy.

2018

Michigan Department of Transportation (MDOT) expects to complete 350+ miles of equipped freeway and major arterial for connected vehicles.

2019

Engineering Talent Pipeline

Michigan's universities and colleges feature **nationally ranked undergraduate and graduate engineering programs**, according to 2016 *U.S. News & World Report*, while powering Michigan's status as a top 10 state for degrees conferred.



Over **500,000** private-sector jobs have been added in Michigan since December 2010.



The University of Michigan offers **19** top 10 ranked undergraduate (9) and graduate (10) engineering programs.



Michigan State University ranks as the **No. 1** university in the world for supply chain management talent.



Michigan ranks 1st in the nation for commercial and industrial designers, employing **6,000** industrial designers across the state.



Michigan has **500+** FIRST Robotics teams, which is more than any other state in the nation.



Michigan is home to more than **123,000** engineers, creating the greatest concentration of skilled and engineering talent in the world.



In 2015, Michigan legislature made a **\$50 million** investment to the Community College Skilled Trades Equipment Program, one of the largest investments of its kind.

MEDC would like to thank the Detroit Regional Chamber and MICHauto for supplying the data in this report. The full report can be downloaded at michauto.org

For more information on Michigan's mobility ecosystem and to get involved, please visit planetm.com or contact Trevor Pawl at pawl@michigan.org.