

# Ford is first to test self-driving cars at fake Michigan city



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(Photo: Ford)

SAN FRANCISCO – Ford shifts its autonomous car program into a higher gear Friday, announcing it will become the first automaker to test its self-driving cars at a new Michigan compound.

While the Detroit manufacturer has been working on both connected- and autonomous-car technologies for a decade, the new testing program at Mcity – a 32-acre faux metropolis in Ann Arbor, Mich. – reflects Ford's recent move to upgrade its self-driving efforts from pure research to advanced engineering.

"We've been testing (autonomous) cars in the real world, but using a place like Mcity will allow us to refine our algorithms and better calibrate car sensors by repeating specific situations in a reliable way," says Raj Nair,

Ford's vice president of global product development.

Mcity opened this past summer and is a joint project of the University of Michigan and the state's Department of Transportation. Ford is one of a few large automakers contributing \$1 million over three years to Mcity, which features storefronts, traffic lights, pedestrian zones and other real-world infrastructure to better train autonomous cars on how they need to react in a range of scenarios.

With the reality of streets humming with self-driving cars now more a matter of when than if, automakers and technology companies are looking for ways to accelerate their respective efforts.



Mcity is a 32-acre compound in Ann Arbor, Mich., that replicates the look and transportation feel of real-world streets, crosswalks and onramps, all of which help engineers working on self-driving car technology to tweak sensors to react to given situations the same way time after time. (Photo: Ford)

Google has been testing autonomous cars since 2008, both on the city streets (in Mountain View, Calif., and now Austin) as well as at a closed facility in California. The company has repeatedly said it hopes to bring such cars to market in five years, and recently announced a CEO for its program, auto industry veteran John Krafcik.

The search company's Silicon Valley neighbor Tesla recently upgraded its cars' software to include an Autopilot function, which allows its cars to steer and change lanes themselves. And ride-hailing juggernaut Uber seems bent on removing drivers from its financial equation through a new research and development program that it is starting in Pittsburgh, staffed largely with robotics experts from nearby Carnegie Mellon University.



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[\(http://www.usatoday.com/story/tech/2015/10/14/teslas-new-software-helps-models-drive-itself/73942116/\)](http://www.usatoday.com/story/tech/2015/10/14/teslas-new-software-helps-models-drive-itself/73942116/)

Meanwhile, reports continue to pile up that Apple is going to get into the electric and presumably self-driving car game. The Cupertino, Calif. company has been hiring automotive engineers by the bushel and, according to some reports, has inquired about using a closed test facility similar to Mcity just east of San Francisco ([/story/tech/2015/08/14/apple-self-driving-car--reality-according--guardian-documents/31731359/](http://www.usatoday.com/story/tech/2015/08/14/apple-self-driving-car--reality-according--guardian-documents/31731359/)).

Mcity has at least one thing on any autonomous car testing area in California. Terrible winters.

Most experts agree that making self-driving cars truly ready for the real world will include making sure they don't go blind in blizzards or other weather that might throw off a car's radar, lasers or cameras – the three main ways a vehicle can find its way around the world without a driver helping out. Snow often removes depth perception from sensors, which requires the cars to rely on other spatial detection techniques.



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[Google self-driving car project names CEO](http://www.usatoday.com/story/tech/2015/09/14/google-self-driving-car-project-names-ceo/72238412/)

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"A few people have joked (about Mcity) saying, 'Where are the Michigan potholes?' We were thinking of adding them, but this coming winter might just do that for us," says Peter Sweatman, director of the University of Michigan's Mobility Transformation Center, which oversees Mcity.

Sweatman says that since opening in July, the facility already has amassed a steady roster of users that range from students doing research to companies that want to sort out parts and tech for connected cars. Ford's new commitment to routinely run a version of its Fusions that are self-driving through the simulated town takes advantage of the reason the facility was built in the first place.

"The goal of Mcity is simply to get the technology off our fake streets and on to real streets as quickly as possible," says Sweatman.

University of Michigan engineering professor Ryan Eustice, who has been helping Ford since 2006 on its self-driving car program, says Mcity "allows us to be maximally evil to the technology we're testing" because errors won't impact the public.

"The public tends to think that self-driving cars are here, but the reality is that some of the (environment) sensing tech isn't fully baked yet," says Eustice. "To truly have this roll out nationwide, these cars would have to be ready for all sorts of weather and situations."



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[Ford's new Silicon Valley outpost seeks tech talent](http://www.usatoday.com/story/tech/2015/01/22/ford-opened-new-silicon-valley-offices-searching-for-auto-tech-talent/22178545/)

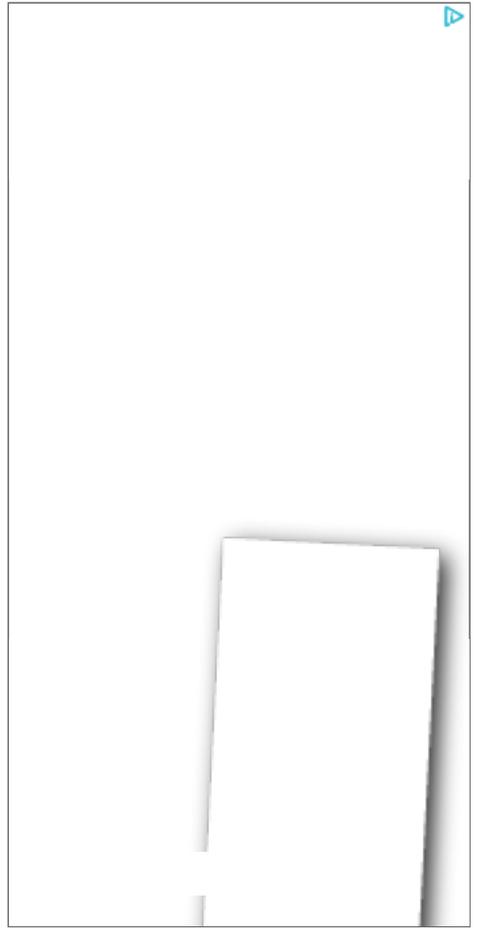
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Ford's new Mcity program does not mean the automaker is planning to focus all its efforts on turning its expansive fleet into autonomous machines. The company's so-called Ford Smart Mobility plan is anchored to a "top-down and bottom-up approach," says Nair, meaning it will continue to add safety-focused driver-assist features to its models –such as warnings for lane departure and imminent collisions - while also perfecting autonomous tech.

"It's important for the market that we continue to advance our driver-assist tech," says Nair. "But we also very much think a consumer Level 4 car (the National Highway Traffic Safety Administration's designation for a car that can complete a trip by itself) is possible, and Mcity will help us in that effort."

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