

Connected / Automated Vehicles in Michigan and MCity

MATT SMITH

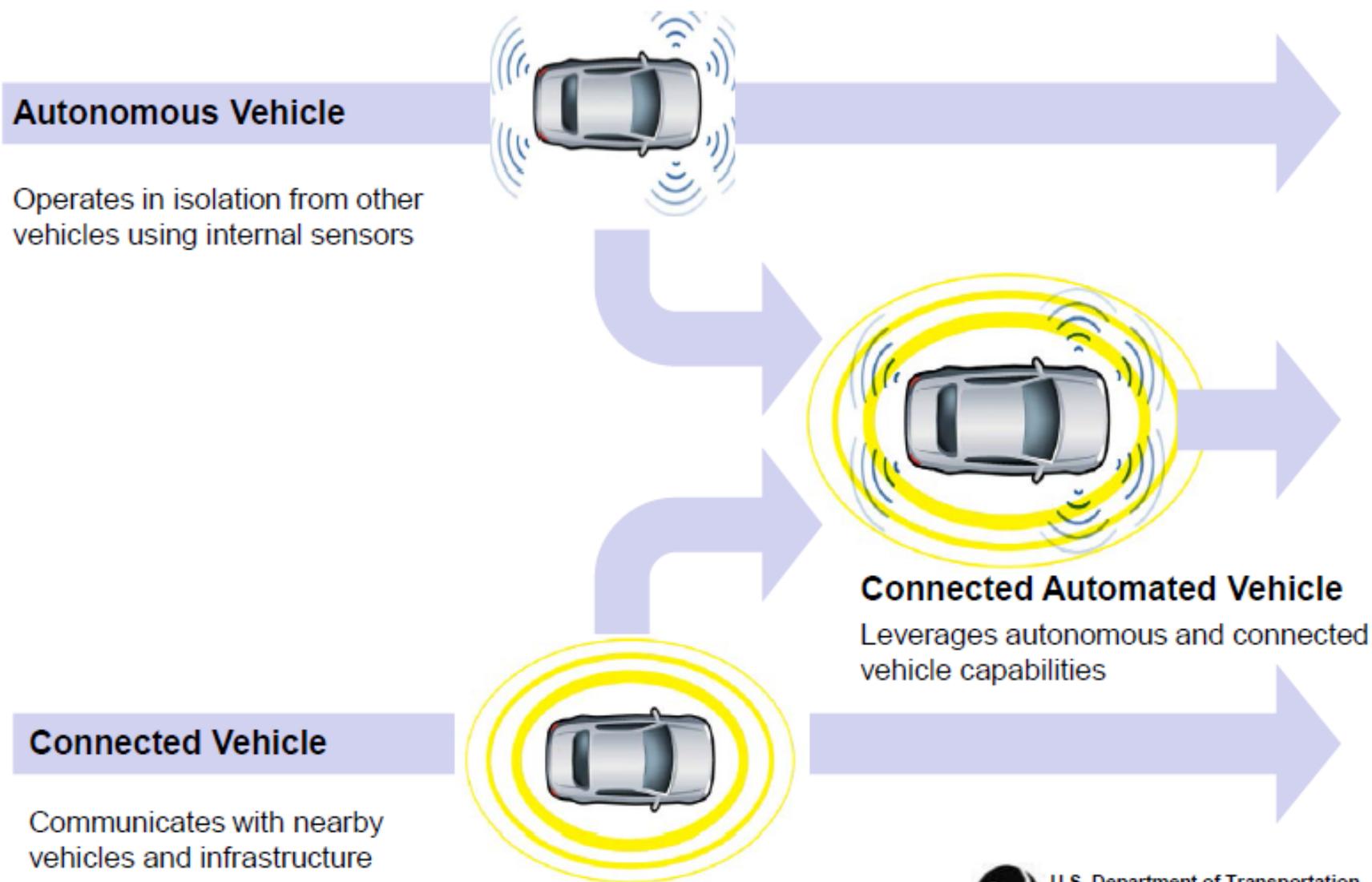
MICHIGAN DEPARTMENT OF TRANSPORTATION

ITS PROGRAM ADMINISTRATOR

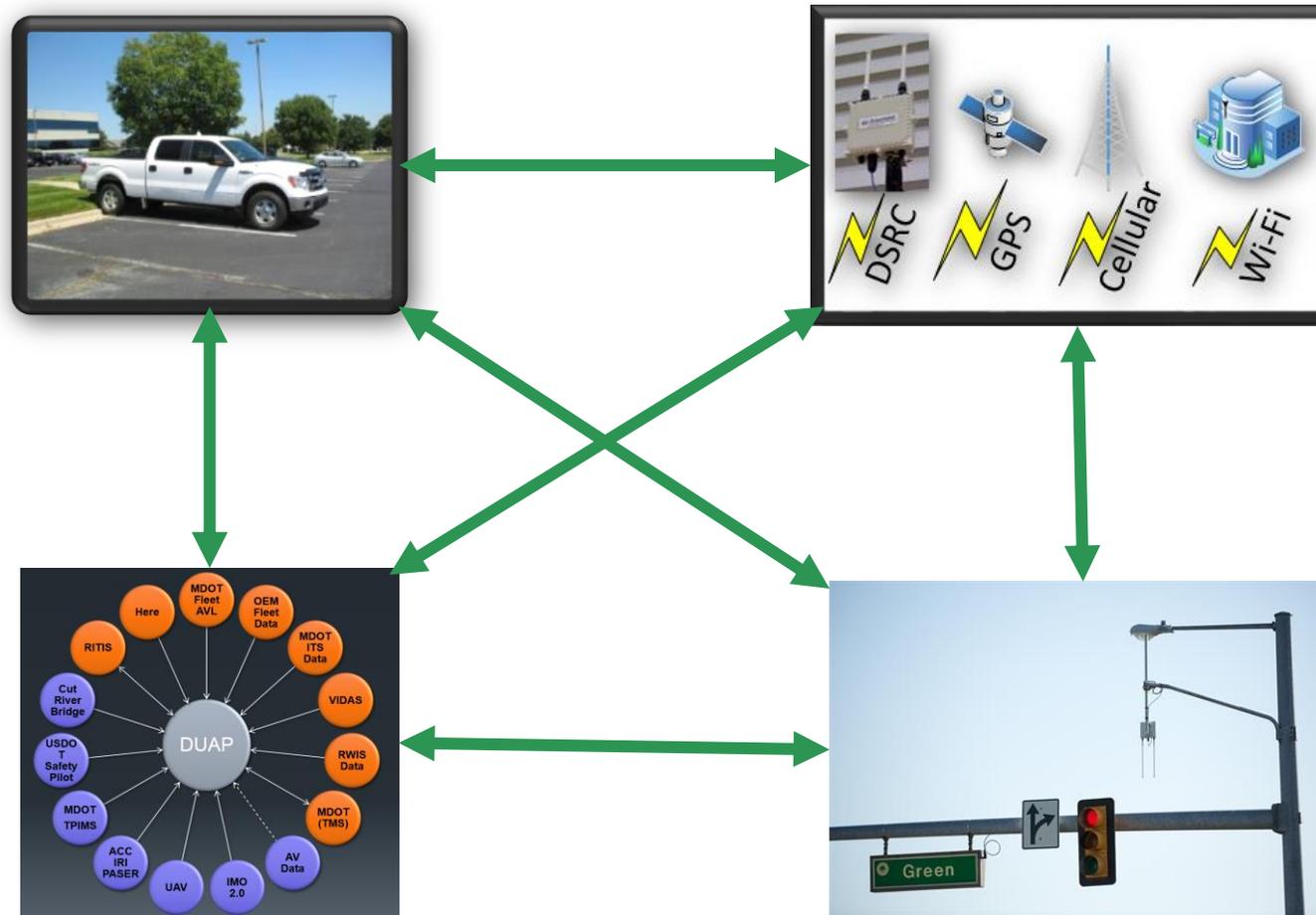
OCTOBER 19, 2016



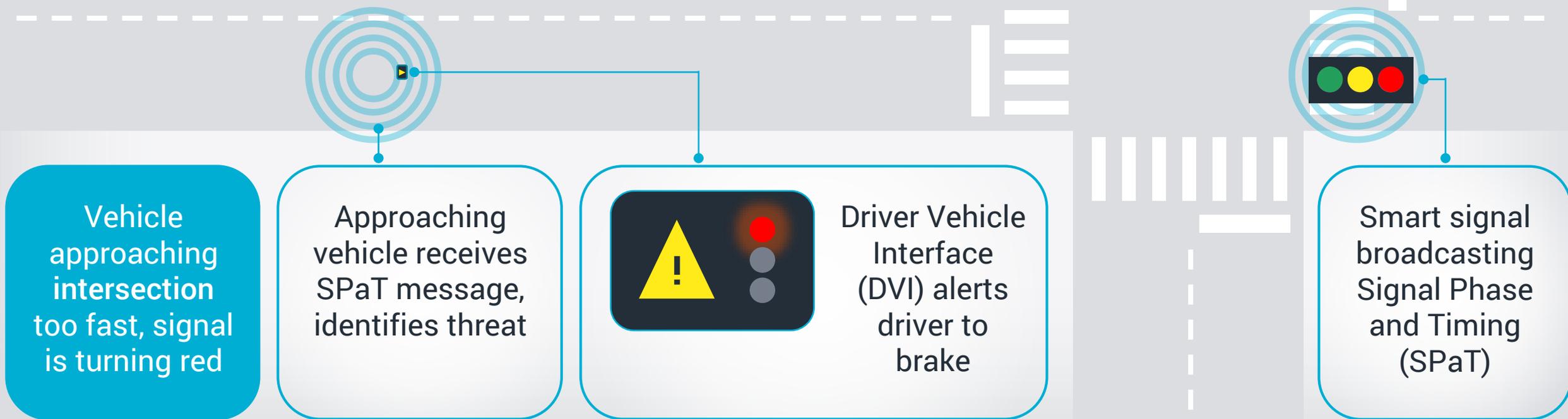
Connected Automation for Greatest Benefits



Components of a V2I System

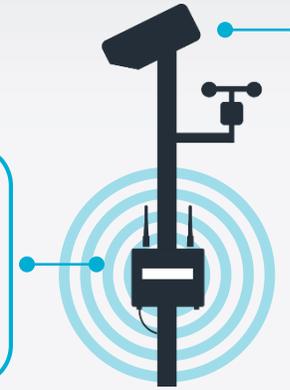


Red Light Violation Warning

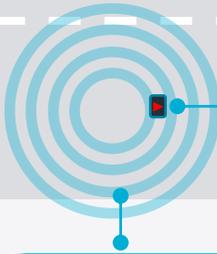


Road Weather Management

Portable Road Side Unit (RSU) sends weather warning to vehicle



Road weather station detects icing conditions, reports conditions to weather office



Approaching vehicle receives message of road ice in area from **RSU and/or cellular network**



Driver Vehicle Interface (DVI) example

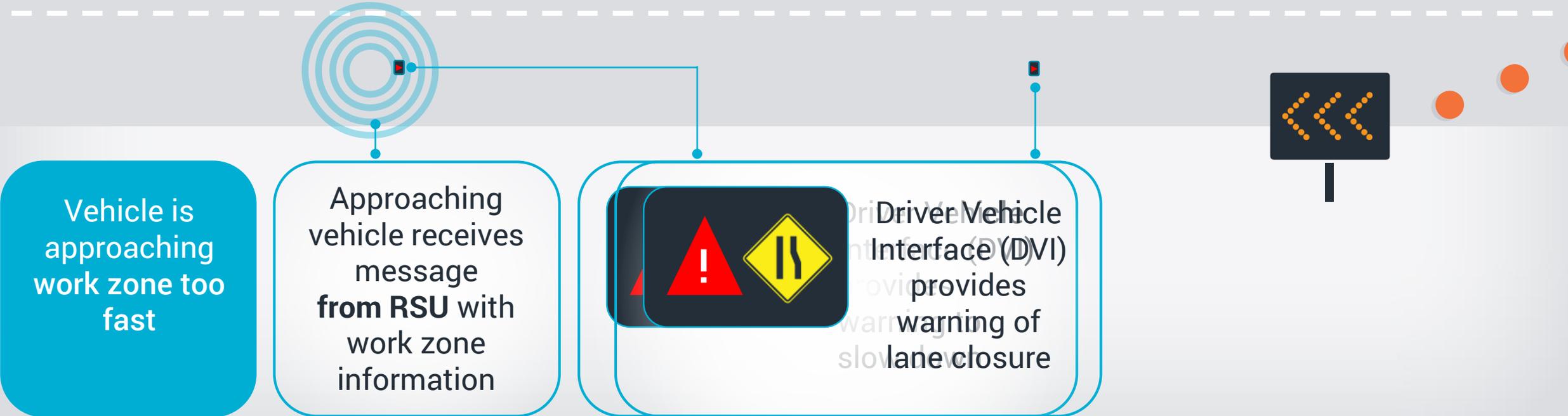
Vehicle is approaching hazardous weather conditions area

Driver reduces speed in response to warning

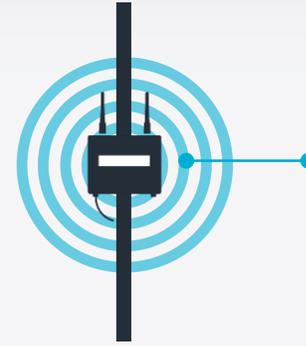
Work Zone Warning/Management



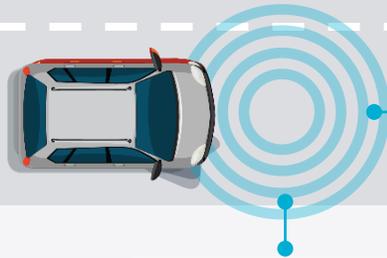
Portable RSU sends work zone info to vehicle



Pavement Condition Monitoring



roadside unit sends pothole data to operations center

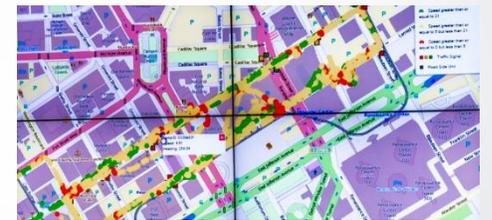


Vehicle drives over pothole in pavement

Sensors in vehicle detect sharp acceleration at location from the pothole strike, stores data

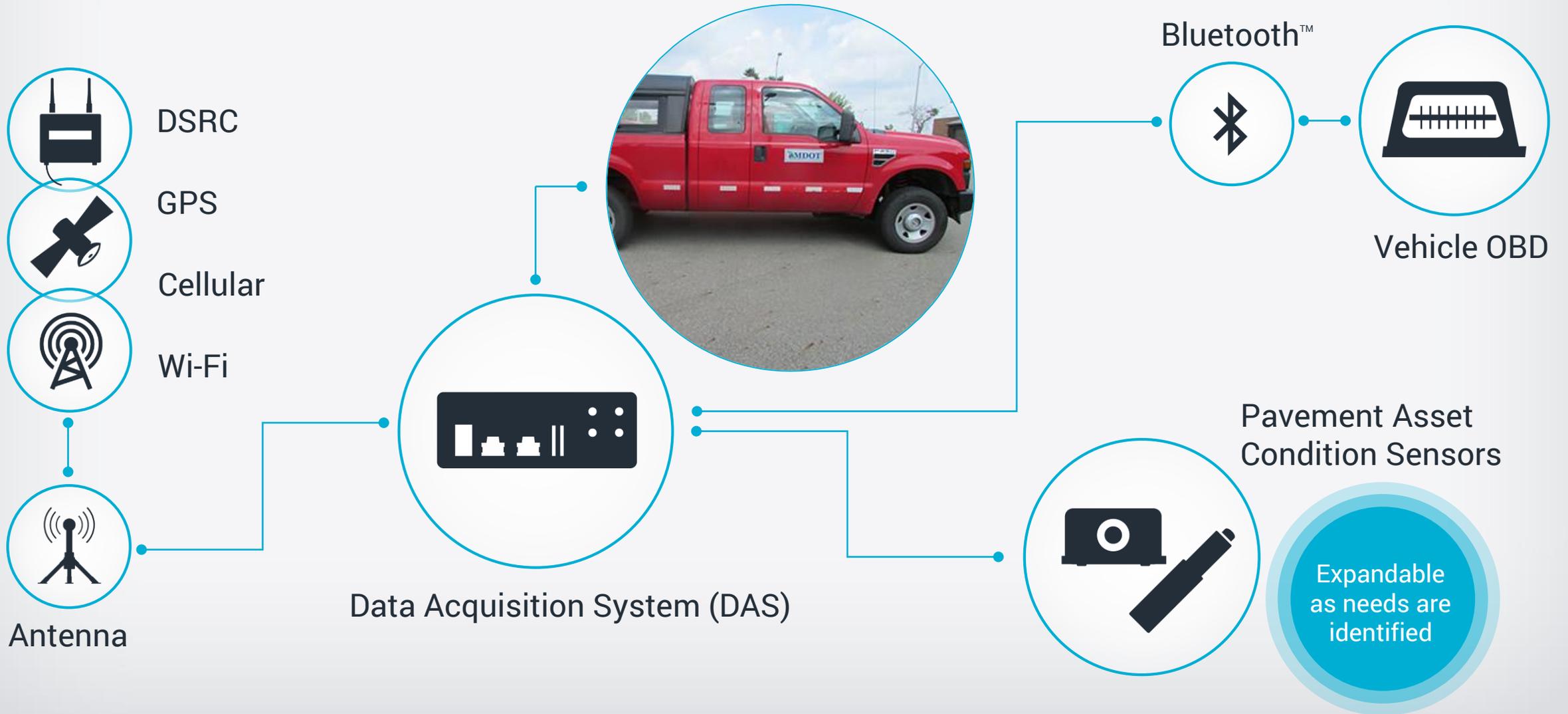
Maintenance crews respond to fix pothole

Vehicle broadcasts data (and dots of others), nearby roadside unit dispatches maintenance crew as it drives past

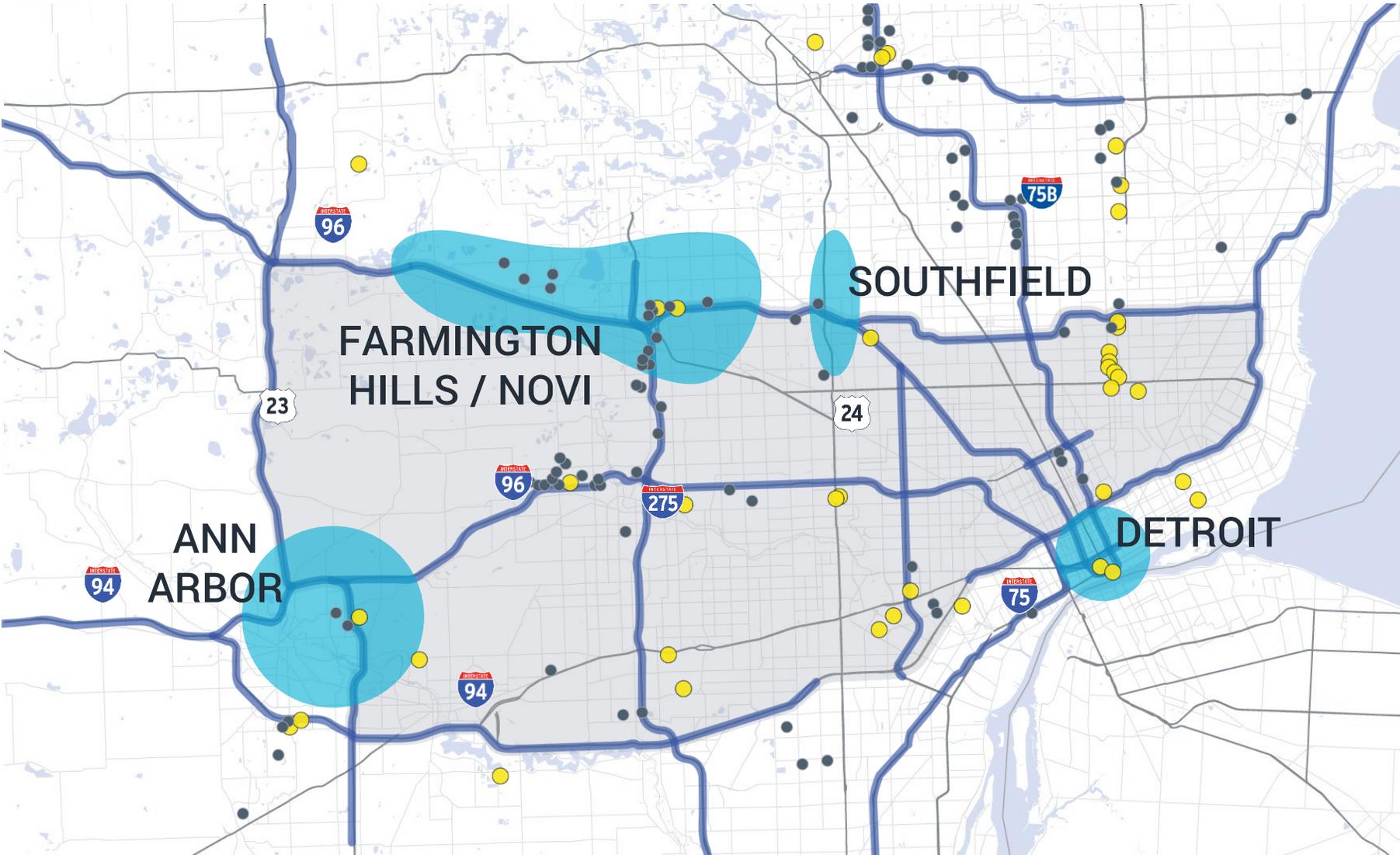


Heat map of pavement conditions

MDOT Fleet Deployment



Southeast Michigan



- Connected Vehicle Environment
- Connected Vehicle Test Beds
- Tier 1 Automotive Suppliers
- Major OEM Facilities
- MDOT Roadway ITS Coverage

Mobility Transformation Center (M-City)



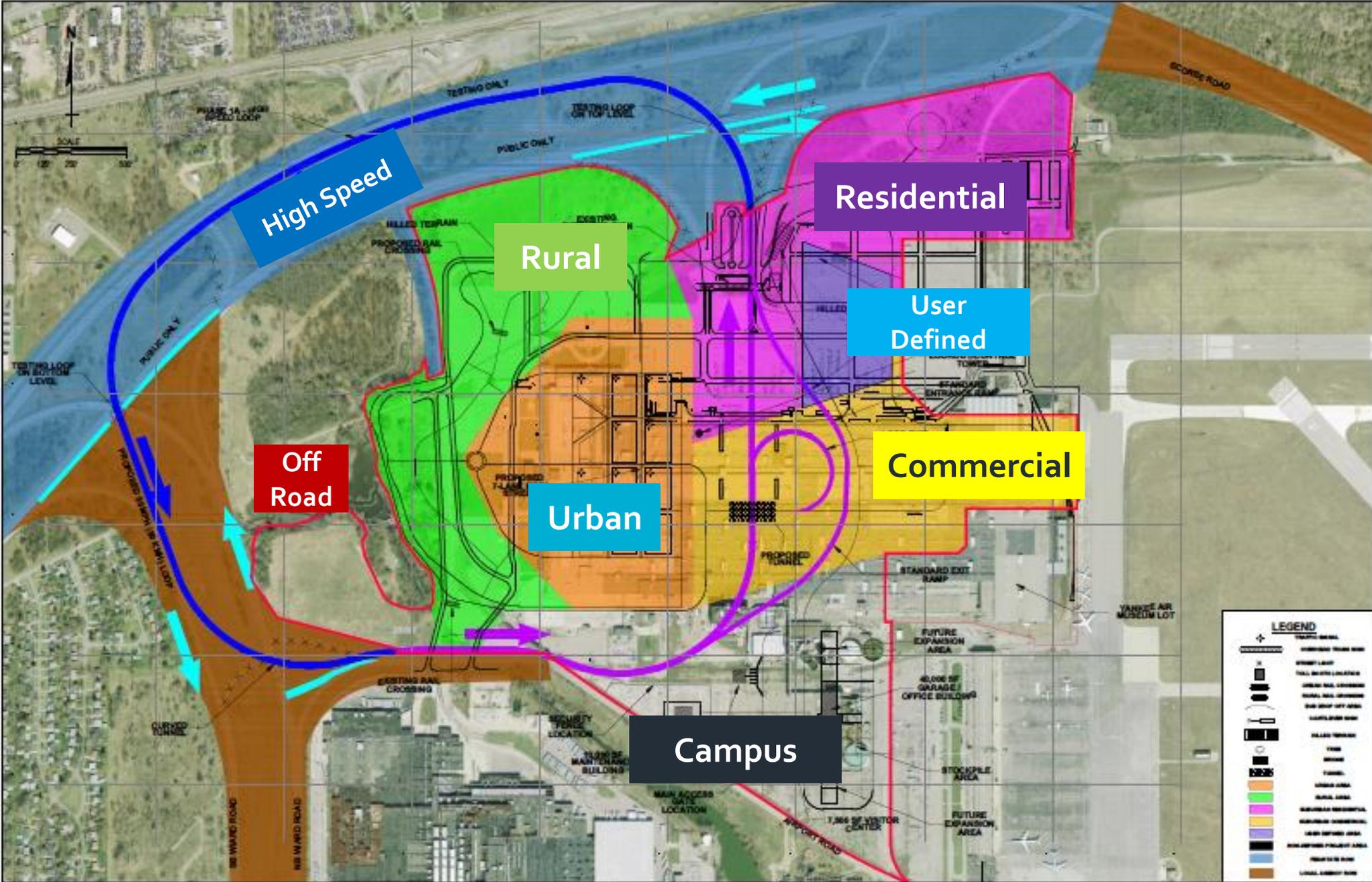
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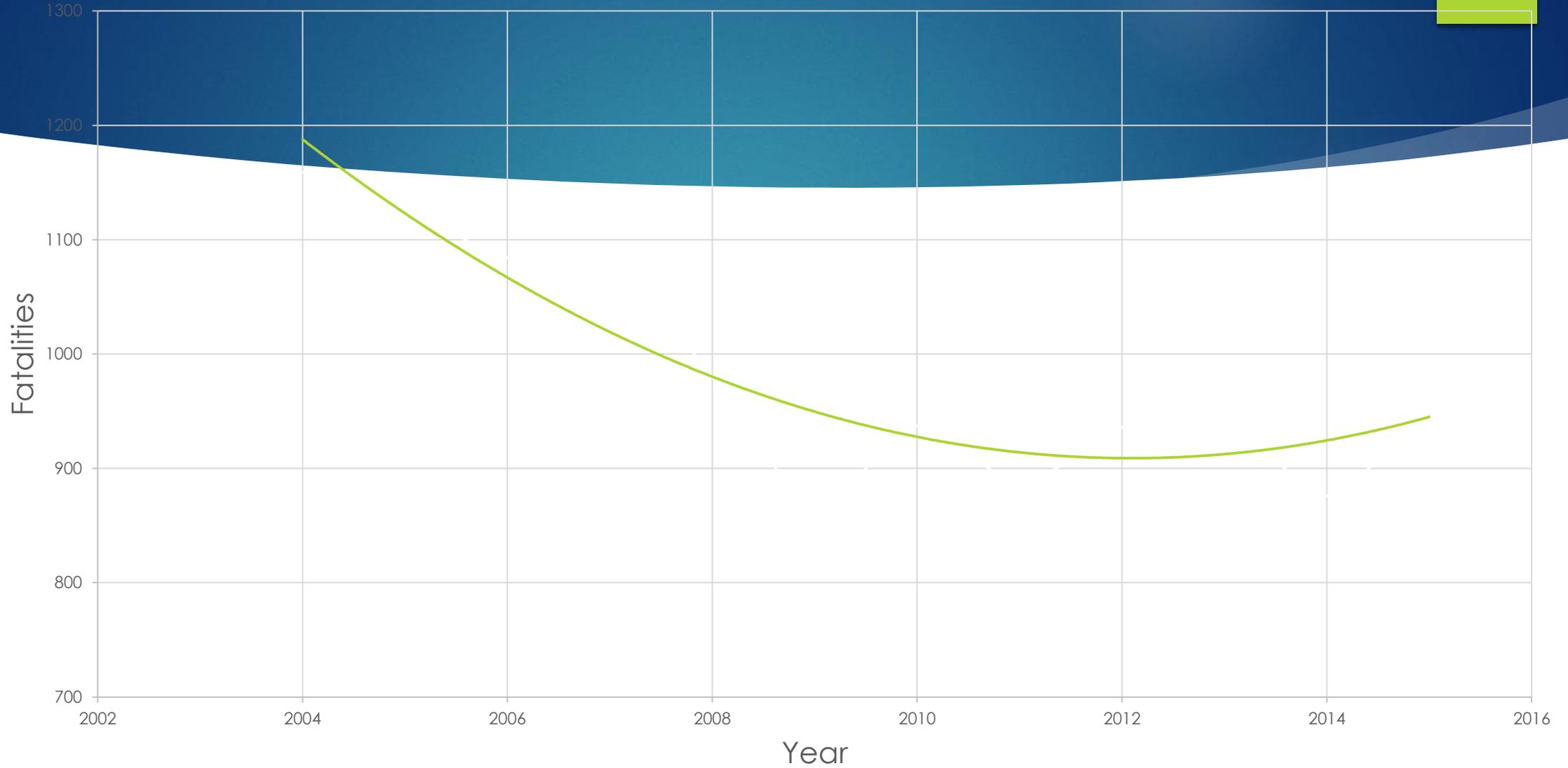
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Michigan Traffic Fatalities



The logo features the word "planet" in a green, lowercase, sans-serif font, followed by "m" in a white, lowercase, sans-serif font inside a dark blue circle. Below the logo is the tagline "Michigan. Where big ideas in mobility are born." in a white, sans-serif font. The background is a dark blue gradient with various white icons representing transportation and technology, such as a car, a train, a truck, a helicopter, a traffic light, a smartphone, a location pin, a speedometer, a tank, and a hand pointing at a screen.

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Michigan. Where big ideas in mobility are born.

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