

Michigan DOT CAV Update

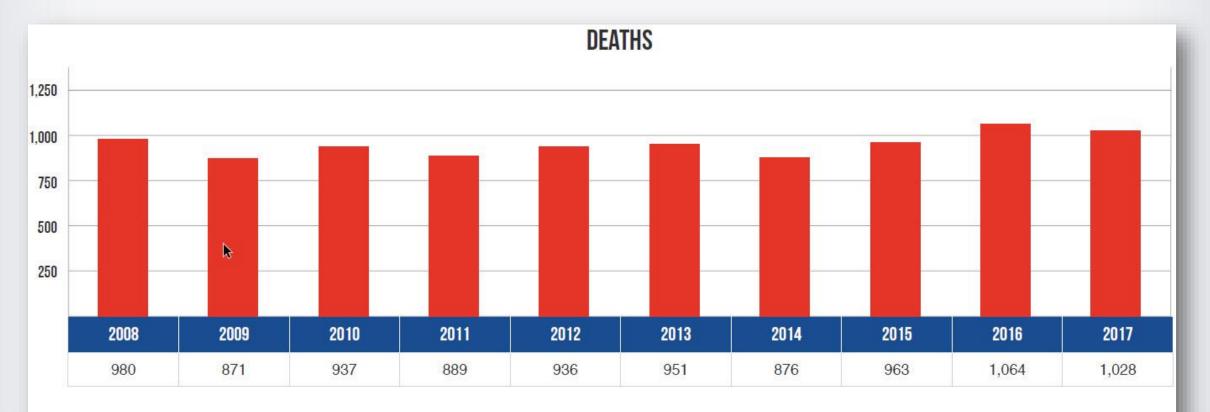
Elise Feldpausch and Kelly Bartlett (MDOT)

MAASTO CAV Summit • October 16th • 2019



Michigan Traffic Deaths

Toward Zero Deaths National Strategy on Highway Safety



In 2017, 1,028 people died in motor vehicle crashes - an increase of 4.9 percent from 2008.

*Image Courtesy of Michigan Traffic Crash Facts: Statewide 2017 Michigan Office of Highway Safety Planning

Connected Automation for Greatest Benefits

Autonomous Vehicle

Operates in isolation from other vehicles using internal sensors

Connected Automated Vehicle

Leverages autonomous and connected vehicle capabilities



U.S. Department of Transportation ITS Joint Program Office

Connected Vehicle

Communicates with nearby vehicles and infrastructure

Infrastructure Support of Automated Vehicles

Digital Infrastructure

- Surveying / Digital Mapping
- **Vehicle-to-Infrastructure Connection**
 - 🗆 SPaT
 - Traveler Info
 - **V2I** Applications

Physical Infrastructure

- Pavement Markings
- Roadway Signage
- **Geometric Design**

Regulatory Frameworks

Senate Bills/Public Acts







MICHIGAN DEPARTMENT OF TRANSPORTATION

Connected and Automated Vehicle Program Strategic Plan



PROGRAM GOALS



Goal 1: Serve as a national model to catalyze CAV deployment



Goal 4: Accelerate CAV benefits to users



Goal 2: Establish Foundational systems to support wide-scale CAV deployment



Goal 5: Exploit mutual benefit opportunities between CAV tech and other department business processes/objectives



Goal 3: Make Michigan the go-to state for CAV research and development



Goal 6: Use Michigan experience to lead dialogue on national standards and best practices



Open Invitation: Michigan's Legislation





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No.

BILL

SENATE

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SENATE BILL No. 995

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May 25, 2016, Introduced by Senators KOWALL, JONES, STAMAS, BRANDENBURG, WARREN, HERTEL, COLBECK, SCHMUT, MARLEAU, HORN and ANANICH and referred to the Committee on Economic Development and International Inventment.

A bill to amend 1949 PA 300, entitled

"Michigan vehicle code,"

by mending sections $2_D,$ 602b, 643, 643a, and 665 (MCL 157.2b, 157.602b, 257.643, 257.643, and 557.653), sections 2b and 665 as added and section 602b as asended by 2013 D& 201, and by adding sections 40c, 606b, and 665a; and to repeal acts and parts of acts.

Sections to:, the focus of the state of public of an parts of alls. The Focus of the state of mildithe of mildithe beact. Sec. 2b. (1) "Automated driving system" means hardwake and Soptware that are collectively capable of performing all aspects of the driving criving take for a vehicle on a part-time of full-time basis without mr supervision by a indus operator. As used in their

S SUBSECTION, "DYNAMIC DEIVING TASK" MEANS ALL OF THE POLLOWING, BUT U 6 DOES NOT INCLUDE STRATEGIC ASPECTS OF A DEIVING TASK, INCLUDING, S

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Committee on Economic Development and International Investment

A bill to amend 1949 PA 300, entitled "Michigan vehicle code,"

- (MCL 257.1 to 257.923) by adding section 665b. THE PEOPLE OF THE STATE OF MICHIGAN ENACT.
- 1 SEC. 665B. (1) A MOTOR VEHICLE MANUPACTURER MAY PARTICIPATE IN 2 A SAVE PROJECT IF IT SELF-CERTIFIES TO ALL OF THE FOLLOWING:

SENATE BILL No. 996

May 25, 2016, Introduced by Senators KOWALL, JONES, STAMAS, BRANDENBURG, WARREN, HERTEL COLSECK, SCHMIDT, MARLEAU, HORN and ANANICH and referred to the

- (A) THAT IT IS A MOTOR VEHICLE MANUPACTURER. A PERSON THAT IS
 4 NOT A MOTOR VEHICLE MANUPACTURER MAY NOT PARTICIPATE IN A SAVE
- 5 PROJECT.
- 6 (B) THAT EACH VEHICLE IN THE PARTICIPATING FLEET IS OWNED OR
 7 CONTROLLED BY THE NOTOR VEHICLE MANUFACTORER AND IS EQUIPPED WITH
 8 ALL OF THE FOLLOWING.
 - 9 (i) AN AUTOMATED DRIVING SYSTEM.
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SENATE BILL No. 997

May 25, 2016, Introduced by Senators WARREN, KOWALL, JONES, STAMAS, BRANDENBURG, HERTEL, COLBECK, SCHMIDT, MARLEAU, HORN and AWANICH and referred to the Committee on Economic Development and International International Investment.

A bill to amend 1949 PA 300, entitled "Michigan vehicle code,"

by amending sections 2D and 601m (MCL 257.2D and 257.601m), section 2D as added by 2013 PA 231 and section 601m as amended by 2011 PA 11% and by adding section 665m.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

1 Sec. 2b. (1) "ANTOMATED DEIVING SYSTEM" MEANS HARDWARE AND 2 SOPTWARE THAT ARE COLLECTIVELY CAPARLE OF PREVORMING ALL ASPECTS OF 3 THE DIMANCE DEIVING TARE YOR A VEHICLE ON A FART-THE OR FULL-THME 4 EASIS WITHOUT ANT HORE YOR A VEHICLE ON A FART-THE OR FULL-THME 5 SUBSECTION, "DIMANLE DRIVING TARE" HORAN OPERATOR. AS USED IN THIS 5 SUBSECTION, "DIMANLE DRIVING TARE" AD ARTIVES TARE, INCLUDING, BUT 10 FOR NOT INCLUDE STRATEGIC ASPECTS OF A DRIVING TARE, INCLUDING, 4 ELASIS WITHOUT ANT DETERMINING DRIVING TARE, INCLUDING, BUT 5 SUBSECTION, "DIMANLE DRIVING TARE" AD ARTIVES TARE, INCLUDING, 5 DONE NOT INCLUDE STRATEGIC ASPECTS OF A DRIVING TARE, INCLUDING, 5 DONE NOT INCLUDE STRATEGIC, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE ASPECTS, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC ASPECTS OF A DRIVING TARE, INCLUDING, BUT 5 DONE NOT INCLUDE STRATEGIC, ASPECTS OF A DRIVING TARE, INCLUDING, BUT 5 DONE NOT INCLUDE STRATEGIC, ASPECTS, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC ASPECTS, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC ASPECTS OF A DRIVING TARE, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGIC ASPECTS, INCLUDING, BUT NOT LIMITED TO, 5 DONE NOT INCLUDE STRATEGICS OF A DRIVING TARE AND DRIVES OF ANTONIC DRIVES OF ANTONICULAR ASPECTS OF A DRIVENT ASPECTS OF A DRIVING TARE AND DRIVES OF ANTONICULAR ASPECTS OF A DRIVING TARE AND DRIVES OF ANTONICULAR ASPECTS OF A DRIVENT ASPECT

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SENATE BILL No. 998

May 25, 2016, Introduced by Senators HORN, KOWALL, JONES, STAMAS, BRANDENBURG, WARREN, HERTEL, SCHMIDT, MARLEAU and ANANICH and referred to the Committee on Economic Development and International Investment.

A bill to amend 1961 PA 236, entitled
Revised judicature act of 1961,"
y amending section 2949b (MCL 600.2949b), as added by 2013 PA 251.
THE PROPLE OF THE STATE OF MICHIGAN ENACT:
Sec. 2949b. (1) The manufacturer of a vehicle is not liable
nd email-MUST be dismissed from any action for alleged damages
esulting from any of the following unless the defect from which
he damages resulted was present in the vehicle when it was
anufactured
(a) The conversion or attempted conversion of the vehicle into
n automated motor vehicle by another person.
(b) The installation of equipment in the vehicle by another

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May 25, 2016, Introduced by Senatro KOWALL, JONES, STAMAS, BRANDENBURG, WARRE HERTEL, COLBECK, SCHMIDT, MARLEAU, HORN and ANANICH and sedered to the Committee on Economic Development and International Investment.

A Bill to send 194 00 MS, entitled "Window which const." Window which const." By mending sections 25, 623, 643, 643 645 005 207 25,

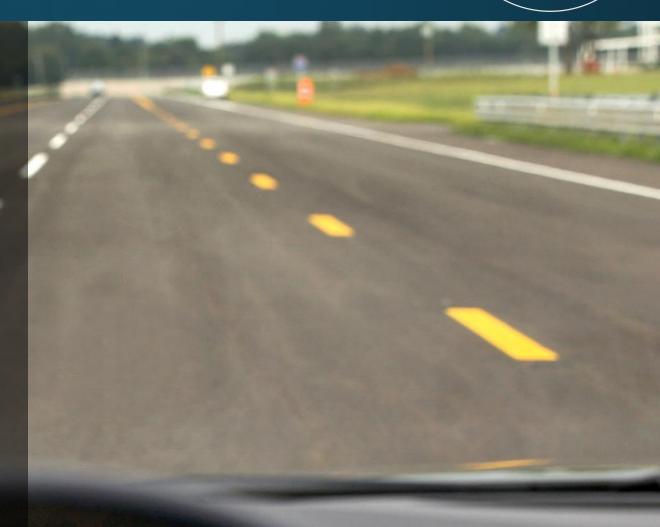
PUBLIC ACT No. 332

Mike Kowall (R-White Lake), Primary Sponsor

Research is in Full Force

Eliminates "test only" restriction

Confidence for researchers



planet

May 25, 2016, Introduced by Senators KOWALL, JONES, STAMAS, BRANDENBURG, WARRE HERTEL, COLBECK, SCHMIDT, MARLEAU, HORN and AVANICH and referred to the Committee on Economic Development and International Investment.

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PUBLIC ACT No. 332

Mike Kowall (R-White Lake), Primary Sponsor



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Platooning of commercial vehicles

Supporting the military, large shipping or logistics companies

May 25, 2016, Introduced by Senature KOWALL, JONES, STAMAS, BRANDENBURG, WARRE HERTEL, COLBECK, SCHMIDT, MARLEAU, HORN and ANANICH and referred to the Committee on Economic Development and International Investment.

A hill to small 344 B JMB, estilled Windigun values one." Dy amoning sections 20, 452, 454, 464, and 465 DCL 207.20, 57.4529, 577.452, 397.452, and 274.451, sections 26 and 454 and added and pection 4529 and amonded by 2013 B 2011, and by adding actions 450, 4550, and to repeat a strat and periods and the strate of the strate of pections makers. The Herick of the strate of pections makers for the strate of the strate of the strate of a stratege strate strategies of the strate of the strate strate information that the strategies and and and the strate of the theory and the strategies of a start-time of the strate information makerstrate. Fourther strategies and a store of the strate information to strategies with the strategies of the strategies of the strate tost strate information that the strategies of the strategies of the strategies instance information that the strategies of the strategies of the strategies to strategies of the strategies of the

PUBLIC ACT No. 332

Mike Kowall (R-White Lake), Primary Sponsor

A New Way to Ride

Automated vehicle networks connected to consumers

Creates array of travel options for consumers



May 25, 2016, Introduced by Senatro KOWALL, JONES, STAMAS, BRANDENBURG, WARRE HERTEL, COLBECK, SCHMIDT, MARLEAU, HORN and ANANICH and sedered to the Committee on Economic Development and International Investment.

A bill to seemed 1940 NA 300, entitled Michigun vahilde code," by anoming sections 20, 6210, 6410, 6434, and 663 (McL 207.20, 277,620, 207.643, 207.6434, and 297.6601, ascillant 20 and 663 as added and section 6216 as anymotic by 2210 N 231, and 194 adding sections 40, 6660, and 654, and 50 repeat acts and parts of stars. In Provide 97 met Bertz 197 Michigun 2016 and 198 Provide 101 Michigan 2016 (Stars 100, 199 Provide 101 Michigan 2016) (Stars 100,

Public Act No. 332

Mike Kowall (R-White Lake), Primary Sponsor

State of Michigan Support

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Council on Future Mobility reports to the legislature annually; recommends new laws or revisions are needed

What new policies would help enhance safety, mobility and the state's economy through this technology

May 25, 2016, Introduced by Senators KOWALL, JONES, STAMAS, BRANDENBURG, WARRE HERTEL, COLBECK, SCHMIDT, MARLEAU, HORN and AVANICH and seferred to the Committee on Economic Development and International Investment.

A bill to seemed 1949 18, 301, entitlet
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PUBLIC ACT No. 333

Mike Kowall (R-White Lake), Primary Sponsor

Supports Manufacturers

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Provides specific standards for SAVE projects

Vehicle networks started and controlled by vehicle manufacturers

May 23, 2016, Introduced by Senature WARPEN, KOWALL, JONES, STAMAS, BRANDENBURG HERTEL, COLBECK, SCHMIDT, MARLEAU, HORN and ANANICH and referred to the Committee on Economic Development and International Investment.

A bill to seend 1949 BA 300, entitled "Michigan Vabios code," by mending exclose 32 and 614 (MCL 207.26 and 207.601a), section 2b as added by 2013 PA 211 and section 601a as mended by 2011 PA 115, and by adding section 640a. The books of entry of the Virginia books.

PUBLIC ACT No. 334

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Rebekah Warren (D-Ann Arbor), Primary Sponsor

World Class Destination

Creates the American Center for Mobility (ACM)

The mission of the ACM is still evolving and will include vehicle testing in real world conditions

- May 25, 2016, Introduced by Sentrers HORN, KOWALL, JONES, STAMAS, BRANDENBURG WARREIN, HERTEL, SCHMIDT, MARLEAU and ANANICH and referred to the Committee Economic Development tural International Investment.
- A bill to annuel 1941 74 236, entities "Neveload judicature set of 1861," by annuing evention 28400 (MC 630.2486), as added by 2013 70.2 TH FROSCA OF MR STATE OF ACCURAN RARCT. 18.502.1949, 10.1378 annualement of a vahicle is not liable 21 and enabl-MBTE be distincted from Any Action for alloyed damages remaining from any of the following unlass the defect from which 41 the damages remained was present in the vehicle when it was sementatured.

(a) The conversion or attempted conversion of the vehicle int an automated motor vehicle by another person.

(b) The installation of equipment in the vehicle by anothe

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PUBLIC ACT No. 335

Ken Horn (R-Frankenmuth), Primary Sponsor

Protection for Mechanics

Ensures that a mechanic, acting in compliance, will not be exposed to liability when working on autonomous technology.

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Contact Information

Elise Feldpausch, CAV Technical Specialist feldpausche1@Michigan.gov

Kelly Bartlett, CAV Policy Specialist Bartlettk@Michigan.gov

PLANET M Website <u>www.planetm.com</u>

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