

**Remarks of Dr. Peter Sweatman**

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**U.S. Senate Commerce Committee Hearing – March 24, 2015**

Chairman Fischer, Ranking Member Booker, and Members of the Subcommittee: thank you for the opportunity to testify today about the 21st Century role of performance measurement in our nation's surface transportation system.

My name is Peter Sweatman, Director of the University of Michigan Transportation Research Institute, or UMTRI.

The University of Michigan created a new transportation ecosystem of global companies to launch the Michigan Mobility Transformation Center (MTC), to help revolutionize mobility through connected and automated vehicle technologies.

I also chair the ITS America Leadership Circle.

## Encouraging Innovation to Meet Performance Management Goals

MAP-21 made reforms to create a more performance-based transportation system. Covering safety, state of good repair, traffic congestion and freight movement.

To implement these reforms, state and local transportation agencies require access to better tools – including ITS - to measure and to operate.

Congress should ensure that ITS technologies are eligible within all the core highway formula programs and that a higher federal match is made available.

As this Committee considers ways to improve the nation's freight network, we encourage funding eligibility and an increased Federal share for projects that incorporate new and innovative technologies - freight-related ITS.

But we must look ahead. The advent of connected vehicles (V2X), automated vehicles and big data will redefine performance

measurement. Success in deploying more powerful technologies will drive the volume and relevance of available data. Metrics therefore need to become less prescriptive, allowing the operator to use the most powerful measures. The technology will ensure that the most powerful measures are also the most available measures.

### Performance, Driven and Measured by 21<sup>st</sup> Century Technology

The starting point for technology-driven performance is safety, with over 33,000 fatalities and 2.3 million injuries on our nation's roads each year.

Transportation Secretary Anthony Foxx has said that V2X technology “represents the next generation of auto safety improvements”. A smart corridor is being deployed in Michigan by the Michigan DOT, Ford and GM. GM CEO Mary Barra announced cars equipped with V2X technology starting in the 2017 model year.

V2X technology will unleash innovation, from crash-avoidance safety, advanced traffic management systems and on-demand services to real-time traffic, transit and parking information and countless new transportation applications.

V2X communication utilizes the 5.9 GHz band of spectrum set aside by the FCC. We need that band for safety. There is no substitute. The FCC should not open up the 5.9 GHz band to unlicensed devices without vigorous, real-world testing.

The 21<sup>st</sup> Century performance of the nation's transportation system depends squarely on V2X. Transportation companies, manufacturers, consumers and agencies will be able to select the most relevant performance data, and take performance measurement to a completely new level.

## Advancing ITS, Big Data and Automated Vehicle Research

How do we get there?

The ITS Joint Program Office must be equipped for deploying V2X, as well as increasing vehicle automation, big data and other next-generation technologies. We propose that the U.S. DOT's ITS research program be authorized at the Administration's requested levels of \$158 million in 2016 and \$935 million over 6 years.

We recommend the authorization of funding for Automated and Connected Vehicle Technology Corridors and pilot programs.

We recommend that a cross-agency Automated Vehicle Research Initiative be established within the ITS Joint Program Office, to conduct collaborative research with private industry, state and local agencies, university research centers and national labs.

We propose that a 21<sup>st</sup> Century Transportation Data Center of Excellence be established in the form of a partnership between

USDOT, the automotive industry and research universities. This center should carry out data fusion and analytics for transportation performance and measurement, concentrating on innovative use of ITS, V2X and automated vehicle data.

We encourage U.S. DOT, as well as the states, to review existing automotive and commercial vehicle safety standards, regulations, and policies – we need to remove unintended barriers to the operation of connected and automated vehicles on public roadways. And we need to ensure that data flowing from the new technology is fully admissible for performance management.

Right now we have the opportunity to shape the future performance of our nation's transportation system. That future is determined by technology, and will be measured by technology.

V2X, automation and 21<sup>st</sup> Century data represent the path to that future.

Thank you again for this opportunity, and I look forward to your questions.