

SUMMARY

U.S. DOT Public Listening Summit on Automated Vehicle Policy Thursday, March 1, 2018

Overview

On March 1, 2018 the U.S. Department of Transportation (DOT) held a widely attended public listening summit in an effort to seek stakeholder input to provide a framework for the Department's *Federal Automated Vehicles Policy (FAVP) 3.0*. The document, aimed to be released in the summer of 2018, will provide a framework for automation in the surface transportation system and describe DOT's multimodal approach to the safe rollout of AVs. The objectives of the public meeting were to: (1) Get feedback on the draft AV 3.0 Framework; and (2) identify priority Federal and non-Federal activities that can accelerate the safe rollout of AVs. The meeting featured distinguished panels comprising of the Department's top officials as well as industry, tech, state government, and consumer group leaders who discussed the most pressing issues they are facing and how all parties can work together to streamline adoption and boost American competitiveness.

Opening Remarks: The Hon. Elaine L. Chao, Secretary of Transportation

Secretary Chao opened up the summit echoing much of the sentiment shared across all sectors by highlighting the societal and safety benefits of automated vehicles. However, while AVs promise to increase safety across all modes of transportation, many challenges remain; such as public concerns of safety, security, and privacy. As a former Secretary of Labor, Secretary Chao emphasized the complex workforce issue and the difficulty this will cause for many dislocated workers. Workforce development and training must be factored into the transition and DOT is taking a major initiative to gathering data information to address the issue.

FAVP 3.0 will seek to address the following six basic principles:

1. Safety will continue to be DOT's number one priority.
2. DOT's approach to AV policy will be completely tech neutral and not top down. DOT will not pick winners and will let the market decide on the safest and most adoptable technologies.
3. When regulations are needed, they will be non-prescriptive and performance-based. Regarding all regulatory actions moving forward, DOT will not assume the driver is a human.
4. DOT will work the states and other authorities to avoid a patchwork approach to policy that will inhibit innovation.
5. DOT will provide stakeholders with guidance, best practices, pilot programs, etc. in order to prepare for complimentary technologies including but not limited to V2V and V2X.
6. DOT recognizes that there will always be the need to operate side-by-side with traditional manned vehicles in both rural and urban settings and DOT will not assume universal implementation.

Overview of AV 3.0: The Hon. Derek Kan, Under Secretary for Transportation Policy

The Honorable Derek Kan, Under Secretary for Transportation Policy at DOT further detailed some of the key issues DOT is rapidly pursuing in FAVP 3.0. He began by affirming DOT's commitment to embracing the enabling ecosystem of tech and users and creating legal and regulatory structures that will foster even more innovation. He further stressed the need for using the massive amounts of data being collected to optimize the ability for widespread adoption of AVs. Key highlights from Under Secretary Kan's remarks regarding AV 3.0 include:

- FAVP 3.0 will discuss intermodal transportation in more detail, particularly commercial trucks, rail, and ports.
- Voluntary safety assessment levels will remain the same
- FAVP 3.0 will seek to once and for all clarify any ambiguous terminology (autonomous, automated, etc.) and will create a standard vocabulary for shared understanding.
- FAVP 3.0 will seek to clarify for states the rules of surface transportation. Ex. What happens when operations are done by a computer?
- FAVP 3.0 will outline 10-15 key questions that need to be answered by lawmakers regarding issues such as the exchange of data, privacy, and cybersecurity.

Panel I: Impacts of Automation on Smart Logistics: From Freight to Front Door

Panelists: **Marjorie Dickman (Moderator)**, *Associate General Counsel, Global Director, Internet of Things & Automated Driving Policy, Intel Corporation*

The Honorable Shane Karr, *Vice President, External Affairs, Fiat Chrysler Automobiles*

Michael Newcomb, *Associate Vice President, Transportation Systems Development, Union Pacific Railroad*

The Honorable Chris Spear, *President and CEO, American Trucking Associations*

Marjorie Dickman kicked off the first panel giving Intel’s perspective on the transportation revolution. She stated that connected and autonomous vehicles and the data they will create (4TB/Day) is probably the greatest revolution in our lifetime, and Intel predicts AVs will save .5 million lives from 2035-2045. The opportunities to increase mobility for elderly and disabled as well as increasing productivity among consumers will create an entire new economic sector. However, society will not realize these benefits without scalability and mass adoption. Intel believes this adoption can be achieved through:

1. Consumer acceptance and transparency by proving safety benefits to consumers as well as formalizing what it means for AVs to operate safely.
2. Innovative tech solutions to lower costs and improve precision and refresh rates of high definition mapping.
3. Erasing policies that will inhibit competition and innovation which will be the building blocks of AV 3.0.

Chris Spear of ATA dominated the panel speaking on the immense impact and role the trucking industry will have on transportation technology; indicating that trucking is most likely to see more widespread adoption first. 71% of tonnage moved in America is done through freight and 1 of every 16 jobs in America is trucking related. However, the growth has created a 50k shortage in drivers – a number that will double over the next five years despite the average trucking job paying \$56k/year with benefits and retirement. The challenge for the trucking industry is attracting new talent while not isolating older workers more skeptical of new technology. Mr. Spear believes that innovation can supplement some of the new jobs that need to be filled but there are issues with the press and public that must be addressed, including:

1. The narrative that automation will displace 3.5 MM jobs is ludicrous and is impeding the trucking industry from attracting talent.
2. The term “driverless” needs to be dropped and replaced with “driver assist” especially when referring to trucking.

Mr. Spear does believe, though, that these issues are easy fixes and that there is incredible economic opportunity that new technology can provide within in the trucking industry. Ex. \$64.3 billion/year is spent sitting in traffic and the impact advancements such as platooning can have on the supply chain is exponential.

Shane Karr of Fiat Chrysler expressed the need for a consistent road map provided at the federal level to ensure that consumers know who's in charge, especially since the industry is still at such an early stage. There is an amazing coalition of groups working on the issue and policy must be in place to allow for continued innovation that allows the U.S. to be a leader. Mike Newcomb of Union Pacific Railroad echoed Mr. Karr's and Mr. Spear's comments saying that rail will go through the same steps of automation as the automotive and commercial trucking industries. There are, however, different challenges that rail faces including the need for full crews to be sent out if an autonomous train breaks down, the effect of weather on tracks, etc. It is imperative to remember that the future of transportation will intersect all modes and leaders from all industries must continue to collaborate, discuss, and address challenges together.

What are the major challenges each industry has faced as systems have become more automated and how have they been addressed?

The universal argument was that regulatory uncertainty has been the biggest challenge and that federal leadership is needed to ensure consumer acceptance. Transparency and voluntary safety assessments will continue to help give consumers confidence in tech, but this will take time and effort from all sectors. The trucking industry is dealing with an aging workforce reluctant to adopt new technology and a need to attract new young talent. Industry and regulators need to work together to cultivate what tech does and doesn't do to allow the public to understand the narrative and not get caught up in rhetoric. It is important to have one standard to comply with ensuring interstate commerce is not affected (i.e. patchwork of regulations) and the supply chain is not hampered, which will increase the prices of goods and create headwind for the industry as a whole.

What advice do you have for the federal government as polices around automation are developed?

This is a very bi-partisan issue and the right people are coming at it with open minds and a willingness to move away from traditional thinking. The federal government should keep doing what they're doing and continue to solicit as many views as possible to force interoperability among modes. Regulators should not get caught up in the "shiny object" the media has created, but rather work to stabilize existing issues. i.e. if a truck is in autopilot mode; does that count against the driver's maximum 11 hours of continuous driving? Ambiguity will breed anxiety and lawmakers and the public should get out in the real world and explore the technologies that are available today (concepts in platooning, level 3 and 4 driver assist, etc.). Finally, there must be parity across industry and all modes. Commercial, rail, passenger, bus, etc. all must be at the table to eliminate ambiguity and ensure interoperability.

Panel II: AV Policy Best Practices from All Levels of Government

Panelists: **The Honorable Steven G. Bradbury (Moderator)**, *General Counsel, U.S. Department of Transportation*

Kevin Biesty, *Deputy Director for Policy, Arizona Department of Transportation*

Melissa Froelich, *Chief Counsel, Subcommittee on Digital Commerce and Consumer Protection, Committee on Energy and Commerce, U.S. House of Representatives*

Kirk Steudle, *Executive Director, Michigan Department of Transportation*

Tina Quigley, *General Manager, Regional Transportation Commission of Nevada*

NV

This is the first time in history that federal, state, and local governments, OEMs, and tech companies have had to work so closely together. In order to have successful adoption at the state and local level, companies must get local businesses, public, local chamber, elected officials, etc. all to “buy in.” Arizona is looking into vehicle miles traveled (VMT) as the driving factor in transportation prediction and planning. The model is still uncertain but will most likely fall into one of two categories; 1. private ownership of AVs without a licensed driver to increase productivity time (ex. working during commute) and 2. a more shared model with mass transit and shared rides. If the former is the model that emerges, then VMT has been encouraged and states and municipalities must be prepared to invest and expand infrastructure and ITS systems to cope, specifically to modernize and maintain technology and maintain roads.

MI

Michigan came out in front of the AV revolution by allowing complete operation from the beginning. This allowed for on-demand automated networks, truck platooning, and led to the creation of the American Center for Mobility and the Council on Future Mobility to address the most pressing issues. The goal of the council is to eliminate silos and foster more collaboration to address insurance and liability, cyber, workforce development, pilots, and keeping maps current (ex. work zones). There are also still many questions that need to be addressed to avoid reactive policies such as electric vehicles not paying into infrastructure, personal ownership of AVs creating less efficient use, and parking policy and rates for autonomous fleets. All levels of government play intricate roles but at the same time must “stay in their lanes.” No one is going to solve all the problems and regulations have to be in place that will create both the problem and the solution.

AZ

Arizona has learned many lessons from a welcoming regulatory environment over the past several years. They have found that by allowing tech and auto companies to openly test, people are overcoming the fear of the unknown as it pertains to AVs. They have also worked very closely with local law enforcement and first responders in pilot programs with companies such as Waymo to address simple, yet pressing questions such as getting pulled over by police. Consequently, Mr. Biesty believes that a world with more autonomous vehicles will not be very different from the one now, as long as collaboration at all levels continue to thrive and a regulatory environment exists to increase public trust.

General Counsel

The General Counsel pushed congress’ dedication to safety and stated that there is a clear need for strong federal and state roles. The committee held over 300 autonomous vehicle meetings with stakeholders in 2017. While the SELF DRIVE Act passed committee 54-0, such an overwhelming bi-partisan support means that it did not address the hardest issues. The passage was a great first step to bring lawmakers together, but there are still several challenging issues and hypotheticals that need to be meticulously examined (cyber, privacy, rural mountainous areas, etc.). The committee also acknowledges the need for providing more testing data to NHTSA to better shape policy structures.

Panel III: U.S. DOT Modal Perspectives

The final panel allowed for a brief introduction from several of the other significant departments within DOT to express their commitment to collaboration and creating a truly intermodal transportation future. Centrally, the

panel expressed the need for more data sharing to increase safety in areas such as work zones for the transit of hazardous materials. Victoria Hildebrand concluded the meeting by announcing a national dialogue on automation that will begin this summer throughout the entire country.