November 5, 2018

U.S. Department of Transportation
Office of the Secretary
1200 New Jersey Avenue SE
West Building Ground Floor, Room W12-140
Washington, DC, 20590

Re: **Scope of the Study on the Impact of Automated Vehicle Technologies on Workforce;
        Request for Information (DOT-OST-2018-0150) (83 FR 50747)**

To Whom It May Concern:

On behalf of the Partnership for Transportation Innovation and Opportunity (PTIO), thank you for the opportunity to comment on the Department of Transportation's (DOT) request for information (RFI) regarding the congressionally required study on the impact of automated vehicle (AV) technologies on the workforce. PTIO—whose members include the American Trucking Associations, Daimler, FedEx, Ford, Lyft, Toyota Motor North America, Uber, and Waymo—is comprised of leaders in mobility and logistics that are committed to advancing AV technology in ways that improve quality of life and economic opportunity for all Americans. The organization's collective membership represents a variety of industry sectors within transportation, including automotive, original equipment, trucking, supply chain and logistics, ridesharing and transportation network, and technology. PTIO is thus well-positioned to provide DOT with feedback on its proposed study and is grateful for the opportunity to respond to the RFI around DOT's statement of work (SOW), as well as areas of inquiry (AOIs).

PTIO is committed to improving opportunities for working Americans through common sense adoption of AVs, while also addressing the questions and concerns that naturally come with any transition. In addition to increasing access to mobility, reducing traffic fatalities, and enhancing economic efficiencies, AV technology possesses the potential to improve career prospects, opportunities, and living standards for Americans across the country. Our top priority is to identify and encourage adoption of policies and programs that will help connect workers with AV-related economic benefits and ensure there are opportunities for all workers during the transition to a future with AVs. PTIO commends Congress and DOT for their work on these issues as an evidence-based understanding of the interplay between AVs and the workforce is fundamental to this mission. Below are responses to the questions posed in the RFI.

Responses to Request for Information

1.   Is the SOW in line with public interest?

PTIO firmly believes the SOW is in line with public interest. Like other technological revolutions, the transition from traditional vehicles to AVs will not happen overnight. This measured development and implementation of AVs affords policymakers, industry, and communities that may be impacted the opportunity to proactively prepare the workforce for a transition. We need to develop a data-based

understanding of the changes on the horizon to adequately prepare, so PTIO commends Congress and DOT for pursuing this study and urges lawmakers to continue to support research on this topic.

2.   Should the SOW be expanded or reduced to include or exclude any topic(s)?

The SOW divides AOIs into four categories, two of which are focused on the workforce—labor force transformation and labor force training needs. With respect to labor force transformation, the AOI focuses on pace of change and defining industry segments that will likely be impacted. The labor force training needs AOI focuses on minimum training requirements for new opportunities, the ability of current programs to meet these training needs, and what steps are needed to address the gaps in current programs.

PTIO offers the following recommendations and insight into issues where DOT, in conjunction with the Departments of Labor (DOL), Commerce, and Health and Human Services (HHS), (collectively "the agencies") might consider further exploration.

Labor Force Transformation

- In order to adequately prepare our workforce for AV-related changes to our economy, the government and others should focus on the job opportunities that will arise from AV manufacturing and deployment, including an analysis of which jobs will be created in the different stages of AV adoption. Such information is vital in developing strategies to assist any displaced workers and facilitate progression into sustainable and protracted career pathways.

- PTIO is encouraged to see an AOI regarding the impact AVs will have on different segments of commercial drivers. In its report on AVs and the workforce, Securing America's Future Energy (SAFE) notes that "partial automation of trucks (up to Level 3) does not reduce employment—some studies have even projected increases in trucking employment with Level 3 automation."[1] Additionally, the American Center for Mobility's (ACM) research, "Preparing the Workforce for Automated Vehicles," finds that with respect to trucking, "the transition to automated driving is expected to be relatively gradual in a large segment of this industry and is not expected to culminate in extensive and rapid job cutting" and will "supplement, rather than substitute, vehicle operators."[2] Therefore, we recommend that DOT also explore how progressing levels of automation across the SAE International scale[3] will impact different occupations—including a report on the new job opportunities that may result from each level of AV adoption as well as the likely skills required for these new positions.

- In creating a predictive statistical model to estimate labor force effects, we recommend that DOT seek industry input to develop a comprehensive understanding of possible AV adoption

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[1] SAFE, "America's Workforce and the Self-Driving Future," June 2018.

[2] The American Center for Mobility, "Preparing the Workforce for Automated Vehicles," July 2018.

[3] SAE International is a global association of engineers and related technical experts in the aerospace, automotive, and commercial-vehicle industries that places a focus on life-long learning and voluntary consensus standards development. More information is available at https://www.sae.org/about/.

timelines depending on geographical, technological, and regulatory factors. Examining how different deployment scenarios could impact the labor market will be important in preparing the workforce for possible outcomes, and further exploring how each will impact regulatory and economic timelines is crucial for all stakeholders across federal, state, and local governments—as well as industry, the education community, and workforce development providers. ACM's study, "Preparing the Workforce for Automated Vehicles," sought input from industry leaders in various business segments concerning how AVs may impact the workforce. PTIO believes that DOT will realize benefit in following this approach.

Labor Force Training Needs

- PTIO urges the agencies to focus the study on new, AV-related job pathways, the skills and adjacent training needs for these positions, and how government, industry, and other stakeholders can partner to deliver training and placement services for these new careers.

- With respect to credentialing, occupational licensing, and other possible barriers to employment, PTIO recommends that the study:

  o Include a detailed analysis of how current credentialing mechanisms—like CDL training—can be adapted and streamlined to evolve alongside AV technology in ways that benefit both incumbent and new workers. In doing so, the agencies should study how training for the AV workforce can align and avoid duplication with existing CDL requirements. The study also should identify best practices in existing CDL training and explore how these may be replicated in an AV context.

  o Consider barriers workers may face when shifting to new jobs or occupations as a result of occupational licensing and the implications of job credentialing and skills recognition standards.

  o Examine other barriers to employment and career entry that exist for different demographic and geographic populations within the transportation and driver communities across the country. Identifying and addressing these obstacles now is critical so they do not deter these populations from taking advantage of career opportunities related to AV advancement. Understanding behavior and differences among these groups could help drive the design of future workforce development policies and programs and determine where and to which constituencies they are delivered.

- With respect to job placement, PTIO recommends that the study:

  o Explore how employers and industry may assist in evaluating existing federal and state government-sponsored labor market programs used to match individuals with employment opportunities and the capacity of these programs to meet future needs related to AV adoption. Employers and industry are well-positioned to help identify

where additional or supplemental programs are needed and to uncover and help bridge any possible gaps in delivery.

- With respect to training programs and reskilling efforts, PTIO recommends that the study:

    o Explore how existing DOL retraining programs may be applied to the AV workforce and subsequently ensure they are made available to individuals interested in pursuing career opportunities enabled by AV technology.

    o When considering what gaps exist between current training programs and the needs of commercial and non-commercial drivers (as proposed in the SOW), also consider, from a sociological and psychological perspective, what motivates incumbent workers to either take advantage of employer-provided training and education benefits or seek reskilling opportunities. PTIO believes it imperative to understand how an individual will respond to an evolving workplace and what factors drive human behavior therein.

Quality of Life Effects Due to Automation

- In acknowledging that the highest levels of automation may allow the driving workforce to conduct tasks other than driving, DOT proposes to study how this will impact the health and quality of life of the driving labor force. According to the American Trucking Associations (a PTIO member), America had a shortage of 50,000 truck drivers at the end of 2017—a shortage compounded by the fact that the median age of a long-haul trucker is 49 years (seven years older than the median U.S. worker).[4] AV technology represents an opportunity to enhance truck driving jobs and improve working conditions inherent to the nature of the industry, thereby helping to address the current driver shortage. And by bolstering safety and guarding against human error, AV technology may enable quicker entry into the profession as many prospective drivers must currently meet insurance company-imposed minimum driving experience requirements. As ACM's study notes, AVs will likely "relieve the burden of certain individuals performing a physically demanding job and enhance the safety of vehicle occupants, while also helping to supplement the needs of companies, organizations, and individuals."[5] PTIO would welcome further information on the quality-of-life benefits AV technology may afford truck drivers as such information is important in building and preparing the workforce.

- PTIO is encouraged to see DOT propose to study what AV deployment will mean for transportation-disadvantaged populations, such as people with disabilities and seniors. We would also welcome further study around how AVs may serve as an employment enabler for populations who lack access to public transportation or a personal vehicle due to geographic and economic reasons, and how increasing access to mobility may support new AV-enabled business models.

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[4] The American Trucking Associations, "Truck Driver Shortage Analysis," October 2017.
[5] The American Center for Mobility, "Preparing the Workforce for Automated Vehicles," July 2018.

3.   Are there specific literature or studies that have been conducted on this subject that DOT and DOL should review before initiating this comprehensive analysis?

While PTIO is still evaluating assumptions, conclusions, and recommendations in existing research, we have found the data collected in the following studies insightful:

- The American Center for Mobility (ACM), "Preparing the Workforce for Automated Vehicles."

- Securing America's Future Energy (SAFE), "America's Workforce and the Self-Driving Future."

- UC Berkeley Center for Labor Research and Education & Working Partnerships USA, "Driverless? Autonomous Trucks and the Future of the American Trucker."

<u>**Conclusion**</u>

PTIO and its members stand ready and willing to provide DOT with further assistance as the agency, in conjunction with DOL, Commerce, and HHS, commences the study. We believe that efforts to prepare the workforce for AVs require the input of a diverse range of stakeholders and commend the agencies for soliciting feedback on its SOW. PTIO appreciates the opportunity to respond to this RFI and looks forward to continued collaboration on this critical issue.

Sincerely,

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