



Partnership for
Transportation Innovation
& Opportunity

Understanding Autonomous Vehicles and the Future of Work

Assessing Workforce Needs In The Transition To Our AV Future

PTIO is a coalition of leaders in mobility and logistics committed to advancing autonomous vehicle (AV) technology in ways that improve the quality of life and economic opportunity for all Americans. Ensuring that our workforce realizes the economic gains and other benefits of this new technology requires sound and proactive public policies derived from an evidence-based understanding of the interplay between AVs and the future of work. To this end, PTIO encourages lawmakers to promote research initiatives in the areas outlined below.

Examining the Workforce Transition

While various existing bodies of research project that AVs will have a gradual - rather than immediate - impact on the labor force, questions persist as to how precisely AV-related job impacts will evolve over time, what existing occupations are likely to be affected, and what new occupations are likely to emerge.

- **What new job opportunities will arise from AV manufacturing and deployment?** Policymakers, educators, job trainers, and employers need this information in order to adequately prepare the workforce for these new opportunities and to target education and workforce training and upskilling efforts that can transition existing workers into future career pathways.
- **How will impacts to existing occupations vary depending on levels of automation?** Assessing changes to job tasks alongside the potential for incremental evolution of AV deployment will be critical to determining what skills will be in demand and when.
- **Are the impacts on the workforce likely to vary by region?** Determining how different deployment scenarios could impact different regional labor markets is vital to effectively preparing the regional workforce for possible outcomes and targeting workforce development efforts accordingly.
- **What is the likely timeline and trajectory for widespread AV adoption and how might they be impacted by technological, regulatory, and other factors?** Having a full understanding of the timeline and trajectory for widespread adoption of AV technology, including the potential for incremental evolution of AV deployment based on level of automation, can help drive the timing of education and workforce training opportunities and allow us to identify what skills will be in demand and when.

Understanding Training Needs and Delivery

As a country, we need to know how to best prepare incumbent and new workers for AV-related career paths and identify how government, industry, educators, and other stakeholders can partner to deliver effective training and placement services for these emerging careers.

- **What occupational licensing barriers must workers overcome to transition successfully to new jobs or occupations and how can these be mitigated?** Understanding how existing job credentialing processes and skills recognition standards impact transitions into new occupations, and identifying opportunities for improvement, will be important in a quickly-changing economy.
- **What barriers do different demographic and geographic populations currently encounter when pursuing entry to a transportation or driving profession?** Understanding variations in behavior and other differences among demographic and geographic groups could help drive the design and effectiveness of future workforce development policies and programs and determine where and to which constituencies they are delivered. Identifying and addressing these obstacles now is critical so they do not deter populations from taking advantage of career opportunities related to AV advancement.
- **Which existing federal and state government-sponsored labor market programs that match individuals with work opportunities are most effective and why?** Understanding the effectiveness of existing labor market programs can help identify and bridge any gaps in delivery.
- **From a sociological and psychological perspective, what motivates or deters incumbent workers to decide whether to avail themselves of training and education resources or seek reskilling opportunities?** Understanding how individuals will respond to an evolving workplace, and what factors drive human behavior therein, is critical to facilitate a smooth transition.
- **How can current credentialing mechanisms, such as CDL training, be adapted and streamlined to evolve along with AV technology?** Learning how training for the AV workforce can align and avoid duplication with existing CDL requirements could support smoother transitions for incumbent workers.

Studying Quality of Life Improvements

AV technology represents an opportunity to improve working conditions inherent in some driving occupations and may also help empower groups whose career opportunities have been limited by lack of transportation. While some preliminary research has been conducted in this area, further study is needed to fully assess what these improvements are and what they will mean for the labor market.

- **What are the quality-of-life benefits AVs may afford commercial drivers, both in everyday tasks and with the qualifications for entering the profession?** Such information is important to augment the current commercial driving workforce and recruit people into future AV-related opportunities.
- **How might AVs serve as an employment and economic enabler for populations who cannot drive and/or lack access to transit?** Understanding how AVs may increase mobility will help shape a broader understanding of how the technology may improve the economy as a whole.