

The Future of Work: Truckers On the Road to Automation

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2033: The Year of the Autonomous Truck

15 years from now, in the year 2033, truck drivers will still be a beacon of the working-class, but aspects of their job will start to change due to automation. Around this time, automation will begin to transform the occupation into a more dynamic role with better working conditions and quality of life for the driver. The profession will start to become more desirable as technical capabilities are developed and the role will start to become less physically strenuous. Improved conditions and exposure to technology will attract a new demographic—people under the age of 30—to fill the new demand for workers with specialized skills.

No Displacement in the Short-Term

The first generation of highly automated commercial vehicles will take place no sooner than 15 years from now, and the technology will not kill jobs. Automation in long-haul trucking will have an overall positive impact on the industry and the truck driving occupation. The industry will see improvements from increased efficiency through technology performing tasks such as optimizing speed and logistics (fuel, route, etc.) and transporting more freight per trip. This will drive down costs and add to an already increasing demand for truck drivers. In the short-term, this demand will be filled completely by human drivers. As automation becomes widely adopted, the current truck driver skill set will become more broad and a portion of the current workforce will exit the industry naturally due to retirement.

Technology will Drive Job Duties

The technology model that is adopted by the trucking industry will play a critical role in determining how job duties will change. The role of a truck driver will not change in the immediate future but as automation is adopted, truck drivers could become operators that will supervise the vehicle and maintain operations, only taking control of steering when necessary. If platooning becomes the industry adopted model, there could also be a human operator in the first vehicle and a platoon of automated vehicles that follow. After widespread adoption, specialized skills will take over the profession as truckers become supervisors, technicians, and teleoperators. The most disruptive scenario will be in the long-term when automated vehicles are controlled remotely by human operators.

Industry Leads and Policy Follows

Industry will determine the path of technology that is adopted, and policy will follow. In the short-term, regulation will focus on creating updated safety and performance standards. The federal government will move slower than the state and local governments and will require copious amounts of safety data. On the workforce side, there will not be a need for welfare or unemployment policy responses to automation in trucking in the next 15 years.

Data Collection is the Future of Policy

The next steps for policy makers are to systematically manage the future of work for long-haul truckers. Even though the biggest disruptions from automation will be beyond 15 years, government should not be short-sighted and focus exclusively on the safety and performance of automated vehicles. Government can be forward thinking by collecting data on workforce and technology use to model and respond to long-term impacts of automation in the trucking industry. This data can be used to analyze the growth of automation, assess if technology enhances capabilities or replaces them, identify which demographics are most vulnerable, and inform policy responses such as retraining and alleviating potential future displacement.