

The Effects of Truck Platooning on the Kansas Workforce

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Introduction

The concept of automated freight transit began with platooning, which refers to one leading truck with a driver that controls two or three driverless, wirelessly connected trucks that follow at closely spaced gaps. Modern technology often displaces current jobs and required skills over time, but the potential for the high displacement of professionals in the freight industry remains a significant societal concern. Therefore, increased understanding of how automation in the freight industry can affect various stakeholders, such as drivers, mechanics, managers, owners, and policymakers, is essential.

Project Description

The objective of this project was to evaluate the expected impacts of truck automation and platooning on the Kansas workforce and formulate strategies to mitigate potential negative effects. The study was comprised of two phases: (1) a systematic literature review and (2) the compilation of insights from industry, workforce, and policymakers to create opportunities for platooning and automation. The literature review encompassed prior research, news articles, and reports to identify stakeholder concerns and potential solutions. The review also identified six potential scenarios of platooning based on previous literature.

Based on these findings, a structured survey was developed for each stakeholder group, totaling 217 participants, with 89 professionals from the logistics industry, including managers and owners, and 128 workforce/drivers in long-haul and short-haul operations. The survey data analysis revealed potential impacts of platooning and automation, concerns of industry and workforce participants, and preferences of platooning scenarios. Additionally, the survey

unveiled perceived solutions and anticipated responsibilities of stakeholders. Survey responses were further deliberated with six key officials from the freight advisory and automated vehicles-related committees within the Kansas Department of Transportation during a focus group discussion.

Project Results

Results showed the least workforce resistance for the first platooning scenario (i.e., human-human platooning with drivers in all leading and trailing vehicles), as well as stakeholder readiness to adopt this scenario for infrastructure, technology, and safety applications. The study also indicated a positive attitude towards future scenarios of automation-integrated platooning, while emphasizing the significant role of stakeholder collaborations to address challenges.

Project Information

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