

## Designing the Future of Transit Work

**Purpose:** To examine how transit work will transform as autonomous vehicle (AV) technology is applied to the complex operating environment of public transit. This project will help answer questions such as how will AV technologies work alongside trained transit operators who handle tasks autonomous systems cannot perform and how transit workers might influence the design and decisions on whether to deploy emergent AV technologies.

**Approach:** With AFL-CIO as a project partner, the team began by conducting interviews and diary studies with transit workers to document current functions they perform beyond driving. Then the team facilitated a series of participatory workshops to explore the future of transit work and develop a strategic roadmap on transit operations with AVs, with both design proposals and policy recommendations.

### Key Findings:

- ✓ Drivers noted the benefits of new assistance technologies targeted at passengers with disabilities, which could mean alleviating aspects of the physical work bus drivers were required to perform and increased efficiency
- ✓ Drivers also noted that new technologies reduced the interaction between passengers and drivers, which drivers often reported as being one of the most rewarding aspects of their job
- ✓ Drivers also stated that the implementation of new technologies was not regularly accompanied by sufficient training, which operators noted as creating more uncertainty
- ✓ Bus drivers across the focus groups reiterated that regular operations are only a small part of the job; instead, dealing with emergencies and uncertainties is the real challenge, and often the norm

**Conclusion:** There is a critical need for continued analysis of the core human operator functions (e.g., hazard response and on-board incident reaction) that are necessary regardless of the type or level of AV technology deployed, and consider the realities of the complex operating environment of public transit.



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### Project Record:

<https://ppms.cit.cmu.edu/projects/detail/376>

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