National Safety Council

Case Study

WORKtoZERO
an nsc program

FLEET MANAGEMENT AND LOCATION GEOFENCING

What's the Risk?

AECOM Technical Services, Inc. (AECOM) is contracted with the Georgia Department of Transportation (DOT) to recruit and train operators for the Coordinated Highway Assistance and Maintenance Program (CHAMP). CHAMP Operators play an important role in assisting motorists by clearing the roadway of debris, reporting highway maintenance issues, aiding stranded motorists, and providing support with motor vehicle accidents.

According to the AAA Foundation (2024), more than 120 roadside-assistance workers were fatally struck while working on the road – or at the roadside – between 2015 and 2021. To expedite emergency responses and monitor the safety of operators on the job, AECOM implemented a fleet management system that combines location services, integrated artificial intelligence dashcams, and driver monitoring solutions to enhance the safety and performance of operators.

Impacts

The ability to measure and monitor safety is a great benefit of the technology. For example, operator routes might be tightly geofenced, meaning that any deviation from predetermined paths triggers immediate alerts. Supervisors can check the live status of their operators (e.g., moving, idle, at an incident, etc.). In the event of an emergency or incident, the system's location tracking enables rapid deployment of assistance to the exact location of the operator.

The system also measures driving performance via vehicle telematics and in-cab dashcams. AI-enabled dashcams can also detect indicators of distracted driving, missing or improper seatbelt use, and other potential driving hazards. This information is primarily used as a learning tool for operators, allowing them to better understand and correct their actions before an incident occurs.

Lessons Learned

Key lessons learned during the system's pilot and implementation:

- **Engage with workers early and often.**

  To proactively address potential concerns, it is essential to introduce new technologies at the initial stages of the change process. In these conversations, employers should clearly explain the purpose of the technologies, including the safety or productivity advantages it may offer. Use this time to also address questions or privacy concerns.

- **Start with small-scale pilots.**

  Begin the process with small-scale pilots. Pilots allow users to trial new technologies in the work environment, troubleshoot potential issues, gather employee feedback, and build the business case for the technology. Information from these pilots is invaluable when scaling up solutions into other areas or applications within the organization.

- **Identify key stakeholders.**

  Live demonstrations can be useful for demonstrating the benefits of new systems. Include key players in these discussions, such as IT or Project Managers, early in the procurement process. This ensures that stakeholders involved in ensuring the success of the new technology can ask questions, identify challenges, and allocate appropriate resources to the project.