Case Study 24: In-vehicle Monitoring – by Industry Group

Keywords: In-vehicle Monitoring / Transit / Trucking

In-vehicle camera monitoring is an important element of safety strategies in both transit and trucking. The technology is well developed and the applications are increasing as the technology becomes more sophisticated and more affordable. Both sophistication and affordability (in terms of value per dollar, as well as absolute cost) are enhanced by concomitant developments in related the technologies in connected vehicles and so-called "big data." These allow the efficient collecting and analysis of enormous sets of real time vehicle and driver data. In-vehicle monitoring is on the cutting edge of state-of-the-practice safety strategies and therefore was called out as an explicit area of interest in the employer interviews, as reflected in the individual case studies. Here the essence of current practice for in-vehicle monitoring in traffic safety programs is provided for the two primary industry group users.

Transit Agency In-Vehicle Monitoring: In-vehicle camera monitoring is an important element of transit safety strategies. Typically both driver behavior and external vehicle conditions are monitored. The justification is a mix of liability, driver performance and driver protection (security and exoneration). These systems are seen as a form of "behavior modification through performance triggers" approach, combining monitoring technology with a Smith System type philosophy.

Trucking Company In-Vehicle Monitoring: In-vehicle camera monitoring is an important element of the safety strategies used by the corporate trucking industry. Lytx DriveCam or equivalent monitoring technology is used extensively in the trucking industry to monitor interior and exterior conditions (forward facing or cameras that record what the drivers see and interior/driver facing to record the actions of the driver). Monitoring technology is seen by those using it as "better than aggregated crash statistics" since it is incident specific and the reasons for the crash or other incident are documented. For one company, massive improvements in driver safety were realized with the introduction of this monitoring technology. Liability advantages were also realized when there were crash incidents. Another company installed both forward facing and driver facing event cameras in all the truck fleet vehicles. These monitor incidents (including but not limited to crashes), as well as Smith System trigger behavior. Videos are reviewed randomly in conjunction with vehicle maintenance, as well as in response to a crash incident, error, or complaint. Perhaps most importantly, these cameras are seen by drivers as supportive and not intrusive. They are frequently used to absolve drivers of alleged violations, companies reported that 80% to 90% of alleged violations are unfounded.