SIX TECHNOLOGIES FOR IMPROVED FLEET SAFETY

FLEET SAFETY ISSUES ACCOUNT FOR OVER 40 PERCENT OF WORKPLACE FATALITIES[1]. THIS FACT REVEALS THE IMPORTANCE OF PUTTING SAFETY MEASURES IN PLACE, BUT FLEET SAFETY PRESENTS UNIQUE CHALLENGES BECAUSE OF ITS MOBILE NATURE. HOW DO YOU ACCOUNT FOR WORKER SAFETY WHEN WORKERS ARE MOVING THROUGHOUT YOUR SERVICE AREA? THIS PAPER WILL EXAMINE SIX TECHNOLOGIES THAT, WHEN USED SEPARATELY OR IN CONJUNCTION WITH EACH OTHER DO JUST THAT.

TECHNOLOGY #1: AUTOMATIC VEHICLE LOCATION

Locate Your Vehicles and Drivers in Real-Time

With Automatic Vehicle Location (AVL) managers and dispatchers access real-time location information for every vehicle under their care. GPS enables in-vehicle devices to send location information back to the office, where dispatchers track vehicle movement on their electronic maps. In the event of an emergency, the exact location of each vehicle is known instantly.

AVL can also be used to create boundaries for vehicles based either on timeframes or geographic zones. When vehicles move outside these predefined limits, managers are immediately alerted. This enables companies to track and quickly apprehend stolen fleet vehicles, and address unauthorized vehicle use or vehicle misuse.

American Electric Power (AEP), a user of AVL, has realized the benefits of AVL in a variety of personal injury and public safety situations. When a worker is injured in the field, AEP's dispatchers can see the exact location of the vehicle and quickly send help. Without this technology it would be difficult for AEP to efficiently locate company vehicles as the only information known would be the last and next expected stop on the schedule. AEP also uses AVL in downed power line situations to send the closest available vehicle to the job, which reduces the risk of members of the public coming into contact with the downed lines.

TECHNOLOGY #2: DRIVER BEHAVIOR MONITORING

Information to Correct Unsafe Practices

In the US, more worker fatalities are caused by vehicle crashes than any other incident type[2]. And, fleet vehicle crashes result in the most costly work injury claims at an average of more than $21,000 per incident[3]. Though most managers would agree that managing driver behavior is important to the safety of workers and members of the public, it has been difficult to enforce safety standards from the office—until now.

A driver behavior monitoring system uses vehicle telematic data to track information such as vehicle speed and instances of hard braking. Managers can set speed thresholds and be alerted in real-time when a driver surpasses the threshold. “It was very important to us to be able to connect with in-vehicle components such as the speed gauge to ensure drivers follow the laws of the road and reduce liability,” says Adi Kronfield, President of Patriot Ambulance Service in Chelmsford, MA. Managers can use the this information as a corrective tool to alert drivers to unsafe behaviors and to ensure drivers are meeting your company’s safety standards.

Other in-vehicle technologies, such as collision warning systems and lane departure and headway monitoring systems, can alert drivers to unsafe behaviors while they are on the road. With this technology, when a driver is getting too close to another vehicle or is veering outside of their lane, an audio tone sounds to alert them. This enables drivers to change unsafe driving practices, such as tailgating, and can help prevent accidents caused by tired drivers.

TECHNOLOGY #3: IN-VEHICLE CAMERAS

See Everything in Your Vehicles

A major challenge facing fleet managers is the lack of knowledge about what is happening inside fleet vehicles. Installing in-vehicle cameras gives managers a view inside, either in real-time or through historical playback. With in-vehicle cameras, managers can monitor driving behaviors to improve the safety of their drivers and riders. In the case of a criminal incident, companies can use tape from in-vehicle cameras as evidence. However, in many cases, having cameras installed is enough to deter criminals and keep drivers and passengers safer.

TECHNOLOGY #4: IN-VEHICLE EMERGENCY SWITCH

Call for Help with the Push of a Button

Isolation is another challenge facing the safety of mobile workers. During an emergency, a driver may be alone in the vehicle, incapacitated, and unable to communicate with dispatch through voice or text messages. Installing an emergency switch in your vehicles enables the driver to simply hit a button to alert dispatchers or the police to the issue. Authorities can then use GPS/AVL to instantly locate the vehicle and send help.

Emergency switches can also be of value to mobile workers who transport passengers, such as bus or taxi drivers. Covert switches enable a driver to discretely push a hidden emergency switch if an incident with a passenger arises. Art Taylor, Dispatch Director and Full-time Driver at Blue and White Taxi in Mississauga, Ontario understands the importance of emergency switches: "We've had one or two incidents when it has come in very handy. One being a car jacking incident and the other was when a driver had a problem with some drunken customers. All he had to do was press the emergency button, and we knew where he was. It's sure nice to have it there."

TECHNOLOGY #5: TWO-WAY MESSAGING

Fast and Efficient Communication

In an emergency situation it is imperative that the lines of communication stay open. With in-vehicle mobile computers, drivers and dispatchers can communicate using text messages in real-time. This eliminates reliance on radio communication and keeps vital lines of communication open and the driver's eyes on the road. "With radio systems, airtime is at a premium," says Beverly Sutton, Manager at AAA Southern New England. "Drivers were continually running into the problem of having to wait for an opening in airtime before they could talk to dispatch. With [mobile data computers] drivers and dispatchers communicate instantly, leading to quicker issue resolution."

Not only can drivers alert dispatchers to safety issues in their vehicle, but dispatchers can instantly send an individual driver, or a group of drivers, messages about unsafe situations, such as an impending storm.

TECHNOLOGY #6: ENGINE DIAGNOSTIC MONITORING

Awareness of Maintenance Issues Before They Become a Problem

Vehicle malfunctions can result in dangerous scenarios—from having disabled vehicles strand drivers and passengers in high speed traffic areas to causing costly accidents. Vehicle diagnostics monitoring facilitates the collection of telematic vehicle data. With this data you are then able to optimize each fleet vehicle's performance by scheduling regular vehicle maintenance and anticipating maintenance issues before they turn into a safety issue.

CONCLUSION

Maintaining the safety of your fleet operations is the most important job of any mobile fleet manager. In-vehicle and in-office technology can reduce the time required to locate a vehicle in an emergency, improve driver behavior, lower crime rates, open lines of communication, and enable preventative vehicle maintenance. When these technologies are paired with a conscientious management team, stringent safety standards, and extensive safety training, exceptional fleet safety is within your reach.

SOURCES

1. "Fleet Safety: Protecting Drivers and the Bottom Line." Professional Safety. Oct 2003: 22.
2. "Fleet Safety: Protecting Drivers and the Bottom Line." Professional Safety. Oct 2003: 22.
3. "Worker Death Rates Continue to Fall." Safety + Health. Oct 2001: 12.

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