

Using Fleet Technology to Reduce Accidents and Liabilities in Construction

Sep 2016 | by James Boileau, P.Eng. and Andy Peterson, Zurich Services Corporation



With the construction industry growing at a healthy pace in recent years, many contractors face the challenge of managing heavily congested job sites crowded with company-owned fleets and subcontractor and supplier vehicles.

As a result, truck and vehicle accidents both on and off job sites are on the rise and inexperienced workers and drivers are further exacerbating the problem.

Additionally, many of today's projects are in dense urban areas, where the volume of private vehicle and pedestrian traffic adjacent to job sites is higher than in a suburban or rural area. This puts the public at further risk of accident and injury.

The frequency of fleet accidents is on the rise, as are the medical bills, vehicle repairs and liability payouts resulting from injuries to people and property. With these rising costs, fleet managers are looking for ways to improve fleet safety and reduce expenses resulting from fleet accidents. With many vehicles on the road or on job sites each day, many contractors have a large fleet accident exposure that could be more effectively managed using technology.

Adopting New Technologies to Reduce Accidents

Technology is improving efficiency and safety for contractors in many areas, including fleet safety. In fact, the fleet management market is expected to grow from \$10.91 billion in 2013 to \$30.45 billion

by 2018.¹ Fleet intelligence tools can help improve productivity and cost savings as well as enhance customer service.

For example, to better manage traffic flow on construction sites, Cemstone Products Company, a Minnesota-based supplier of premium concrete solutions, works closely with the general contractors during the pre-job planning stage. “To reduce congestion on the job site, we plan proper load delivery spacing,” says Mike Brekken, safety director. “This load spacing creates less congestion on the job site and less stress for the drivers trying to maneuver the vehicle and concrete pour.”

Cemstone recently installed a single monitor inside the 450 vehicles in its fleet, reducing the difficulty of reading multiple screens for drivers. Previously, Cemstone’s drivers had to view critical information such as GPS, tire pressure, delivery messaging and more on separate screens. “Having one monitor in the vehicle for all functions made a major difference for the drivers in their ability to safely track their movements both to and from the job site while driving,” Brekken explains.

Brekken also sees technologies such as rollover sensors in new trucks playing a critical role in helping Cemstone’s drivers who face unique challenges when driving cement mixers (e.g., a high center of gravity or the different viscosities that come with each load). He adds, “Cemstone considers technology tools as a way to help reduce stress for our drivers and create less scrambling while at the job site. When our drivers have an overall clearer mindset, they are able to pay better attention, which leads to better safety.”

The Power of Telematics in Improving Fleet Safety

Advancements in telematics technology are helping construction companies reduce fleet accidents on job sites. Many companies have adopted this technology to monitor vehicle location, performance and driver behavior. Telematics combines GPS technology and integrated telecommunications to provide a real-time snapshot by sending, receiving and storing information about each vehicle in a fleet, providing vehicle tracking and diagnostics.

“Telematics offers a powerful tool to see what is happening with a vehicle while on the road,” says Steve McGill, corporate safety manager at Volkert, Inc., a full-service, multidiscipline engineering firm based in Alabama. More than 50% of the company’s services are performing field operations,

requiring its 560-plus vehicles to be on the road constantly. The company's fleet logged more than 17 million miles in 2015 serving customers nationwide.

"Since almost 80% of our company's claims are auto-related, we knew that a more aggressive approach had to be taken to manage driver behavior," explains McGill. The company is now starting a one-year telematics test to collect the data necessary to best determine how to minimize accidents. Volkert will be analyzing many driving habits, including hard braking and quick accelerations, which the company believes could be contributing factors in accidents.

"Telematics is truly a surgical approach to helping us identify the precise problems in fleet safety," McGill explains. "As we receive the individual driver's telematics reports, Volkert will retrain our drivers in order to correct any unsafe driving behaviors which were identified."

Potential benefits of telematics in a fleet safety program:

- Optimize vehicle route planning and deployment
- Improve driver behavior and safety on the road to help reduce the occurrence of vehicle crashes and reduce auto liability claims
- Enhance employee driving skills and knowledge
- Alleviate driver stress and fatigue through coaching and development

Key Considerations When Implementing a Telematics Program

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A key first step in implementing a telematics program is for a company to develop a clear objective of what it wants to accomplish. Is it to...

- Provide more efficient movement of materials, equipment or workers from job site to job site?
- Improve driver behavior?
- Track vehicle maintenance records?
- Manage Department of Transportation (DOT) driver logs?
- All of the above?

Once your objectives are determined, other considerations in implementing a telematics program include:

1. **Select a system with the right fit**

When choosing a system, in addition to evaluating the telematics capabilities, companies should consider how their employees will use the systems. There can be significant differences in the amount of time it takes to train staff and implement different types of technologies. Having the “best” system may be less important than having the system that fits your organizational needs.

2. **Plan the pilot phase carefully**

Companies should structure a pilot program to fully understand how the system works and then address any issues before implementing a telematics system for the entire vehicle fleet. Selecting which vehicles, employees and supervisors are involved and defining the communication process can make or break the success of the effort. It’s often helpful to set clear and measurable goals and activities for both managers and employees involved in order to get their buy-in and feedback.

3. **Carefully design supervisor and employee messaging**

It’s important to communicate that employees are not bad drivers, but that you want to help them to be better than average. A coaching approach from the supervisor (rather than a series of disciplinary actions) may help produce greater improvements across the organization. Be sure your managers are ready for those coaching roles.

4. **Stage the full telematics rollout**

After successful pilots, organizations will sometimes rush to incorporate telematics into the rest of the fleet. While enthusiasm is great, it’s critical to take the same painstaking steps to communicate and support the implementation for the wider fleet. It is often helpful to take a staged implementation approach to ensure that each group of supervisors and drivers is comfortable with how the system works and understands its respective role in the initiative.

5. **Put the data in focus**

Telematics data can be overwhelming. Focusing on a few key areas can help drive behind-the-wheel improvements. For example, consider comparing hard or panic braking to the amount of time driven. Establish company averages and identify the outliers. Work with the drivers who are performing much worse than the average, but also factor in the overall group. Companies with an active coaching process can often significantly decrease the average rate of hard braking and the rate of overall vehicle crashes.

Heavy vehicle usage will always play an important role in the construction business—a hard fact that makes contractor auto exposures an ongoing, chronic risk that needs to be managed effectively. Using cutting-edge technologies such as in-vehicle telematics can help create an effective and efficient fleet safety program designed to protect your employees, drivers, the public and, ultimately, your bottom line.

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[1] MarketsandMarkets, <http://www.marketsandmarkets.com/Market-Reports/fleet-management-systems-market-1020.html>

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