From the reactionary usage of yesterday to the proactive capabilities of today, the usage of analytics in fleet safety and accident management has come a long way.

BY LAUREN FLETCHER

While far from the inventor, or even first users of data analytics, the abundance of data points provided by a fleet operation necessitated fleets to be early adopters and avid connoisseurs of analytic technologies.

One area that has especially benefited is safety and accident management.

In its humble beginnings, safety and accident analytics simply focused on motor vehicle reports (MVRs) and analyzed broad-based data per million miles.

"Originally, fleet analytics were used mostly to determine and manage the total cost of vehicle ownership. And, in safety, the most heavily relied upon data was driver MVR data, retrieved once a year or, in some cases, only when a new driver applied for a job," according to Wayne Smolda, president & CEO of The CEI Group.

But, it was rare that any type of analysis was done other than to ensure a driver had a valid license and fewer than one or two DUIs in a given time frame, according to Ted Lewin, senior manager of Risk Management Services for Wheels Inc. "Many times, a fleet manager wouldn't even be involved in the MVR process; it was often left up to Human Resources to determine driver status," Lewin added.

Additionally, early focus on accident management was purely mileage based.

"Focus was placed on the total amount of accidents per 1 million miles driven," said Michelle Lewis, manager, Accident Management for EMKAY.

Typical metrics tracked were accident ratios, accident reasons, and the frequency and severity of accidents, according to Allison Lanzilotta, EVP of Business Development for Fleet Response.

"These results would help identify driver behaviors and target safety programs, looking at the most severe accidents and the most common causes of accidents," Lanzilotta added.

Far from the proactive analytics of today, analytics in safety and accident management were very reactive.

“When a driver was involved in an incident, they went through training or were reprimanded. This resulted in relatively poor improvement in driver performance, as the analytics were not addressing the root cause," according to Tom Sloan, director of Product Management for Donlen.

And, being reactive did not provide fleet managers with a full understanding of their true driver behavior and performance. "Organizations would capture accident data, then later motor vehicle record data. Often, such information was reviewed annually or perhaps quarterly. Since this was all historical data that was captured after the fact, organizations could only react to the data, which was not timely and was often incomplete," according to Rich Radi, director – Driver Excellence for ARI.

Early analytics of safety and accident management revolved around the spend..."
by categories, such as rental, collision, towing, loss ratios, and accidents per million miles, according to Dan Shive, VP of Risk Management Services for LeasePlan USA.

“In the beginning, there was always more focus on maintenance, leasing, and cost savings from manufacturers. So, although there was a desire to have knowledge, there was generally not much effort in how to change behaviors until the last decade or so,” Shive added.

Fleet analytics have evolved from their early focus on simply “managing” the accident transaction.

“Data was minimal and consisted primarily of cost and cycle time reports. There were some fundamental accident types, but they were seldom linked with MVR input and usually left to the fleet manager to interpret. Safety training was either broad brush, based on opinion, or to simply ‘do something’, but lacked direction,” said Doug Peters, advanced analytics product leader for Element Fleet Management.

Safety & Accident Management Analytics Today

Most subject-matter experts agree, many of the basics of safety and accident management analytics remain the same today as they did in their infancy.

“Today, the same analytics are used as in the very beginning, combined with state MVRs and additional data from such advanced technology as in-vehicle telematics, GPS, and 1-800 numbers to report driver behavior. But, with the additional data points available, we now have a broader picture of collisions beyond accident claims and a profile of every driver, combining data from all of these sources,” said Lanzilotta of Fleet Response.

Shive of LeasePlan USA agreed. “The basics remain quite similar today. But, the evolution of analytics further looks at accidents as they relate to drivers by age, risk categories, and repeat offenses, as well as the day and time of week accidents occur. It’s a means of capturing a baseline and using this information to make changes. Whether it’s a public or corporate concern, fleet managers have really learned a lot about what the costs of accidents are,” he said.

The use of safety and accident management analytics has rapidly evolved in a relatively short time period, according to Lewin of Wheels Inc.

“We’ve moved beyond the staples of MVRs and safety training and are looking more granular into data to help determine a driver’s overall risk score. Not responding to recall notices, not completing preventive maintenance, or even having an excess of parking violations are examples of the risk-related information now being aggregated and analyzed. We are also helping determine if certain vehicles in a fleet’s selectors, or specific job functions, are prone to more incidents than others,” Lewin said.

While technology has provided more data points and the ability to dig deeper into data than ever before, fleet managers are still typically using analytics reactively.

“Evaluations of a driver’s risk level or profile, historical MVRs, and accident reports are conventional methods employed. These, of course, require a driver to have incurred an incident, although most at-risk drivers are not always drivers with poor history,” according to Brad Jacobs, director of Strategic Consulting Services for Merchants Fleet Management.

But, the main focus continues to be on the reduction of incidents.

“The analytics manifest into general areas such as what happened, or where has the incident rate trended, with focus on evaluating impacts of field management processes and identifying areas of opportunity. While looking at these traditional measures remain common, driver behavior data from telematics has become more mainstream. Visibility into poor driving behaviors and the ability to augment the behavior in the field has never been more attainable than through the data and technology,” Jacobs said.

But, there has been dramatic growth in the depth of data recorded and a change of focus from reactive to proactive.

“By integrating data from multiple areas of driver performance, fleets can train drivers on behavior improvements prior to being involved in an incident. This has been proven to greatly reduce the number of accidents and violations in a fleet,” said Skan of Donlen.

Analytics have evolved as data capture has greatly expanded, remedial training options are numerous, and the data is more actionable, according to Peters of Element.

“Today, remedial driver safety training is more effective as we can target specific training to the historical driver events, such as assigning a distracted driving module to a driver with a rear-end accident event. Deep data dives can be conducted with the availability of countless data points, such as a driver’s job type and tenure, age, past event, history, vehicle type, and geography of job area, etc,” Peters said. “The evolution of targeted training does not ‘treat all drivers equally’ as was the case in the past. Now, we can assign training based on these data points, addressing very specific behaviors.”

And, one of the ways fleet managers have found the ability to be proactive is through the large number of data points captured today, which help determine the root cause of an accident.

“Included within this data is vehicle speed, direction traveled, traffic volume, law enforcement crash investigation information, road sensor information, road design information, telematics, internal company education campaigns, and vehicle manufacturer crashworthiness data. By leveraging today’s available data, fleet managers are provided proactive solutions to help reduce, or better yet, prevent an accident before it occurs,” said Lewis of EMKAY.

And, tracked metrics can be just about anything a fleet manager can think of.

“Today, fleets use data to measure and track every nickel that can be tracked and trended regarding every aspect of fleet operations and performance, with the goal of reducing costs. In accident management, metrics include average downtime, average cost of repair, and appraisal value, which all affect decisions as to whether to repair
or salvage a vehicle,” said Smolda of CEI. “Recently, fleets have been turning to more data sources to assess driver risk including traffic camera violations, public driver complaint services, and telematics.”

Today, organizations have access to comprehensive, real-time data on driving behavior.

“By assimilating large volumes of data from multiple data sources, organizations have greater access to analytical information than ever before,” said Razi of ARI.

The Continued Growth of Analytics

Driver safety continues to be a top priority for organizations today, and the use of analytics can help hone in on poor driver behavior and make significant changes.

“Management is concerned about the well-being of its employees and the community, the costs of risky driving behavior, and the potential liability from crashes. These concerns are greater now than ever before. Analytics can be a very powerful tool for managing and improving driver behavior so drivers make it home safely at the end of the day, costs resulting from collisions and vehicle repairs are minimized, and appropriate action is taken in a timely manner to reduce the risk of liability,” said Razi of ARI.

Lewin of Wheels Inc., also noted that fleets are becoming more aware of the need to protect their drivers.

“Each year, the number of vehicles on the road increases, as does the number of distractions. Due to those facts, motor vehicles are considered the single most dangerous work environment. What was once just a budget concern has now turned into a greater focus and goal of getting every driver home safely each and every day,” Lewin said.

One area of change and growth in safety and accident management revolves around the usage of telematics.

“The fleet industry has seen more broad-based adoption of telematics solutions across vehicle applications in recent years. Risk departments gravitate to these solutions because the data provides insights into actual driver behaviors not otherwise available. With the availability of the data, the analysis naturally follows, with fleets looking for areas of opportunity to drive proactivity in management processes,” said Jacobs of Merchants Fleet Management.

Advances in new technology have also been paired with telematics for improvements in safety and help in accident management.

“Manufacturers have developed a form of ‘black box’ technology that is part of the standard equipment offered on most new vehicles. When paired with telematics, we will have access to definitive data that will allow for root cause analysis on why an accident occurred. This additional data will also allow for more definitive programs and safety programs to be developed, bringing additional awareness and

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educational resources to our fleets,” said Lewis of EMKAY.

According to Peters of Element, analytics are increasing for several reasons including the legal risk factors if safety data is not integrated and remedial training actions taken.

“Millions of dollars are at stake (besides employee injuries and fatalities) in court costs if fleets are not mitigating the negligent entrustment risks. The bent metal repairs and other employee costs average about $16,500, but court costs and tarnishing the company brand can be much more severe,” Peters said.

Additionally, many fleets are looking at the actual cost of an accident.

“Much more goes into the cost equation, such as liability cost, brand exposure, insurance costs, productivity loss, and legal expenses. Taking into account all of these factors puts great emphasis on development and enforcement of a safety based program,” Lewis said.

Two factors are driving the continued growth in fleet analytics, according to Brian Kinniry, senior director of Strategic Services for CEI.

“These factors include the continuing pressure to reduce the costs of operating a fleet and the creativity of manufacturers of devices that can generate data that describes driver behavior in new ways. Once the devices are on the market, fleets are forced to consider adopting them, but until these data streams are integrated into a single safety platform, the extra data can overwhelm fleets that struggle to make good use of it,” Kinniry said.

In the end, analytics technology is really just in its infancy.

“Technological innovation in this area will be accelerating exponentially in the years to come through better analytics engines, faster hardware, and artificial intelligence,” Rady said.

As fleet managers continue to work to find solutions to reduce losses and related expenses, analytics continues to be a key tool.

“However, there’s no real way to completely eradicate accidents on the road. The main factor is that there’s always a human being behind the wheel and even with all the proactive measures we take, we can’t forget that human error is the cause of more than 90 percent of all collisions. The most important thing is that there are documented policies and practices in place to best mitigate the losses,” said Shive of LeasePlan USA.

In the end, according to Peters, “Employees are a company’s most important asset and as such, protection of their safety and continued long-term contributions can be enhanced with safety analytics. Data can identify the high-risk drivers and remedial actions taken to help reduce future accidents and lost productivity and revenue.”

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