

**MAKING THE CASE FOR** 

# AN INTEGRATED Fleet Management Solution





# Fleet Management Pressures Demand Unified View of Data

To cope with increased regulatory and business complexity, companies need a better, more complete handle on driver and asset information—or risk paying stiff fines.

**ANAGING A TRUCKING FLEET** HAS NEVER BEEN EASY. There is equipment to maintain, drivers to manage, and regulations to meet—and that is before you get to the challenges of route planning and scheduling.

Today, these challenges are becoming more demanding, with more data to manage about asset maintenance, driver hours and availability, and regulatory compliance. Trying to coordinate these processes with disconnected systems is an all too common experience, explains Adrian Gonzalez, president of Adelante SCM, a supply chain and logistics analyst firm.

"The name of the game is to utilize your assets as efficiently as possible, which requires a holistic view of information," says Gonzalez. "There's a recognition that you need to take into consideration data about your drivers and their availability, about maintenance and the status and position of all of your assets, and to be able to do that concurrently while you're putting together your operational plans."

Historically, adds Gonzalez, data about topics like driver training and certifications, or fleet maintenance, were kept in spreadsheets or solutions for niche purposes like trailer pool tracking separate from the transportation management system (TMS) used to plan operations. This has led to disconnected processes in which a plan might fail to take into account a constraint like whether the driver for a route has the proper training, has time off scheduled, or whether the truck's maintenance is up to date.

"The overarching need is to bring all these informational components into a solution versus being done offline or in a spreadsheet," says Gonzalez.

The trends in the trucking industry are only increasing the need for a unified view of information on operations, fleet assets, and driver resources. With a growing economy, the need to move freight by truck is expanding. According to the American Trucking Associations (ATA), U.S. freight volume will grow by 2.8 percent in 2017, and should expand 3.4 percent annually through 2023.

At the same time, companies are dealing with growth concerns, they're adapting to ever-changing and often cumbersome industry regulations. According to annual research by the American Transportation Research Institute (ATRI) on the "Top 10" issues facing drivers and carriers, "the cumulative economic impact





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of trucking regulations" became a Top 5 issue for both drivers and carriers this past year. For carriers, it ranked third in importance, while for drivers, it ranked fourth.

There are multiple regulations that, together, make it imperative to manage driver profiles and fleet data in a more proactive, online way (see sidebar for a summary of pertinent rules). Failure to comply with regulations has put

some small carriers out of business, while the cumulative pressure of multiple regulations drives the need to be efficient in both record keeping and in the administrative oversight of driver compliance and training.

With these ongoing changes, and the level of complexity in both driver and equipment regulations, companies must ensure compliance or risk being placed out of business or paying stiff fines. The fines for a single incident can be significant. For one "egregious" violation of Hours of Service (HOS) Rules by a driver a carrier employs (egregious is defined as over 3 hours for a HOS time limit), the carrier faces a penalty of up \$11,000 per incident.

To cope with these regulatory and business pressures, companies need a better,

more complete handle on information. For companies that operate fleets or use a mix of their own assets and common carriers, the scope of that information spans driver data, driver hours of service, and data on fleet assets including the location of trailers and the capabilities of trucks and trailers for hauling certain loads.

The Federal Motor Carrier Safety
Administration (FMSCA) oversees HOS
Rules for truck drivers. Motor carriers need
to manage HOS, not only from a compliance
standpoint, says P. Sean Garney, director of
safety policy for ATA, but first and foremost
to ensure safety. Required use of electronic
logging devices (ELD), which passed in
December of 2015, should help make HOS
tracking easier, explains Garney, but being
adept managing driver hours and training
remains a long-term focus within the industry.

"Safety is one tier for analysis, and maintenance is another...Overall effectiveness of driver training, and efficiency of the vehicle assets are the main goals with Big Data. It's about making sure the performance of both your equipment and your people are at the best level they can be."

-Ross Froat, director of engineering and information technology, ATA

"Compliance is always going to be a big issue, so it's important that companies find good, efficient ways to manage the driver pool and keep drivers compliant," Garney says. "Of course, management of driver's hours of service is always important, regardless of what the rules are."

Fleet operators also have more data available to them. While the ELD rule only mandates a relatively basic ELD capability to track hours, some ELD providers collect a much wider variety of data. ELD providers may gather data regarding fuel tax reporting, or support electronic driver vehicle inspection reports (DVIRs).



Between ELDs, sensors and systems from truck manufacturers, and geographic positioning system (GPS) data, companies have a wealth of data to consolidate and analyze, notes Ross Froat, director of engineering and information technology with ATA. While this scope of data is a challenge, it also is an opportunity to discover efficiencies through analytics.

"Safety is one tier for analysis, and maintenance is another," says Froat. "Data like lane departure warnings, data on hard braking, or over speed data, can be analyzed to study ways to improve training and practices. Overall effectiveness of driver training, and efficiency of the vehicle assets are the main goals with Big Data. It's about making sure the performance of both your equipment and your people are at the best level they can be."

According to Gonzalez, while TMS can optimize routing, scheduling and other aspects of transportation management, the problem for fleet operators is that data relevant to driver and asset assignments must be readily available as operations are being planned. "In the past with disconnected systems, factors like driver time off data was in a spreadsheet somewhere, so it was up to a planner to think, 'OK, but this driver doesn't work on Fridays, so I better manually change the system assignment.' In short, there is inefficiency there, from a lack of information. •



# REGULATIONS DRIVING THE NEED FOR UNIFIED PLATFORM

HERE ARE NUMEROUS TRUCKING INDUSTRY **REGULATIONS** that carry deep impact for drivers, carriers, and ultimately any shipper of freight. One of the most fundamental is the Hours of Service (HOS) rules for drivers, which has been the subject of debate from a wide range of stakeholders for years.

In addition to the HOS rules, there are multiple other regulations that require compliance on a daily basis. From food safety rules to regulations concerning compliance with a drug and alcohol clearinghouse database, companies face a growing set of mandates that increases the need for a cohesive platform to manage information on drivers, equipment, and operations.

## Key compliance issues include:

HOS regulations under the Federal Motor Carrier Safety Administration (FMCSA) set forth the permissible working hours that drivers of commercial motor vehicle (CMV) in the United States may be on duty. A revision of the rules approved in 2011 took effect in mid-2013.

The revision changed some HOS rules around maximum driving hours, and around the 14 consecutive hour driving window. A restart rule that was originally part of the revision was suspended by Congress. The updated HOS rules also established an Egregious Violation penalty (involving exceeding the drive time limit by three hours or more), which, for carriers, involves a penalty of up to \$11,000 per incident.

FMSCA's Electronic Logging Device (ELD) rule, which carries a Dec. 18, 2017 deadline for use of ELDs (or certain Onboard Automatic On Board Recording Devices, which are grandfathered-in as compliant for another two years), is aimed at improving safety by making it easier to accurately track, manage, and share records of duty status (RODS) data.

An ELD synchronizes with a vehicle engine to automatically record driving time for easier, more accurate hours of service (HOS) recording, according to the FMCSA. While many larger carriers already use ELDs, among small operators or carriers, many are scrambling to deploy registered ELDs in time for the mandated use date, and it's thought that the mandate might force some small operators out of the market.

FMSCA's Compliance, Safety, and Accountability (CSA) is a data-driven safety compliance and enforcement program. According to FMSCA, CSA affects motor carriers, including owner/operators, by identifying those with problems and prioritizing them for interventions such as warning letters or investigations.

Under the program, a company's safety data appears online in FMCSA's Safety Measurement System (SMS), which includes data from roadside inspections, violations, crash reports, and investigation results. The SMS's scope spans seven areas of safety, including vehicle maintenance, HOS violations, crash history data, hazardous materials compliance, and data related to alcohol and substance abuse violations.

- The FMSCA also manages a national Drug and Alcohol Clearinghouse for commercial truck and bus drivers. The database serves as a central repository containing records of violations of FMCSA's drug and alcohol testing program by commercial driver's license (CDL) holders. Among its requirements, the Clearinghouse rule mandates that employers will be required to query the database for current and prospective employees' violations before permitting them to operate a commercial motor vehicle on public roads. It also requires employers and medical review officers to report drug and alcohol testing program violations.
- The United States Food and Drug Administration's (FDA) food safety rule, entitled the "Sanitary Transportation of Human and Animal Food," which is part of the Food Safety Modernization Act (FSMA), impacts carriers, shippers, receivers, and others involved in food transport. According to the FDA, the rule's aim is to "protect foods from farm to table by keeping them safe from contamination during transportation" and also "prevent practices during transportation that create food safety risks," such as failure to properly refrigerate food, or inadequate cleaning of vehicles between loads. The rule took effect for large businesses on April 6, 2017, and is scheduled to take effect for smaller businesses on April 6, 2018. •



# Why Fleet Data Must Stay in Synch with Operations

An integrated platform for TMS and fleet management provides common data for comparing costs, weighing customer service factors, and making the right choice on which assets to use.

PERATIONS AND TRANSPORTATION **TEAMS** are routinely expected to make fleets more efficient, yet they're often trying to optimize with an incomplete view of necessary information. This situation typically isn't the result of limited functionality within a company's transportation management system (TMS) software, but rather, from the amount of crucial data on fleet assets and drivers that resides outside of TMS.

The implications of failing to integrate data about drivers and equipment with transportation planning are many, including inefficient planning and the need to rework routes; a lack of speed and agility; the potential for non-compliance; and perhaps worst of all, a failure to meet customer expectations.

"There are many problems associated with disconnected systems or spreadsheets to manage data, but the worst scenario is that you end up with a service failure for a customer because you don't have full and current knowledge over every aspect of your fleet or drivers," says Todd Bucher, a VP at MercuryGate, a leading provider of cloud-based TMS.

While MercuryGate's TMS can plan and execute transportation across all modes, including parcel, for asset-based carriers, asset-light carriers, and private shipper fleets, a fleet management solution that interoperates with TMS and shares common data is the ideal foundation. A company with a single platform for TMS and fleet management is in a much better position to decide when to use an outside carrier versus its private fleet.

An integrated platform for TMS and fleet management provides common data for comparing costs, weighing customer service factors, and making the right choice on which assets to use.

A common platform enables better decisions on the type of asset to use—a common carrier or fleet vehicle—all while hitting the desired service level and reducing the number of "empty miles" travelled.

To address this need, MercuryGate now offers MercuryFleet, a fleet management solution that coordinates equipment, driver, and operations data and processes. Companies that don't have a centralized

"When you are trying to optimize efficient routes and schedules, you must also take all the driver issues into consideration, and manage them concurrently. You don't want to be managing issues separately, where you have a planner going from one screen to another to try to find the data needed to get the job done."

----Adrian Gonzalez, president of Adelante SCM

way to manage these three elements typically struggle to keep them in synch. Common trouble spots including keeping track of driver certifications, training, and hours; monitoring hours of service status, managing maintenance, or simply knowing where trailers or other assets are located, explains Bucher.

"Carriers and fleet operators have many trailers in a variety of locations at any given time, and if you don't manage their location well, and have that information readily available, it's easy to lose track of these assets to the point where you can't utilize them well," says Bucher.

Besides truck and trailer assets, drivers are the other key resource that fleet operators should ideally manage in a centralized, online way. The problem, Bucher says, is that within many organizations, records on driver certifications, training, and hours

of service/availability may be in point solutions, spreadsheets, or on paper-based records.

"If you are using a lightweight system or spreadsheets, it can be very difficult to know the availability or suitability of a driver for an assignment," explains Bucher. "Has a driver had some needed training, or is that training about the expire? Does this driver have the hazardous materials training needed for an assignment? Is it OK to assign this a driver to a route that requires a TWIC [Transportation Worker Identification Credential] card? You need the correct answers to these questions readily available."

Carriers and drivers also need to comply with Hours of Service (HOS) Rules overseen by the Federal Motor Carriers Safety Administration (FMCSA). While the controversial 34-hour restart rule—which would have required extensive record keeping—was recently suspended by Congressional action, FMSCA rules on how many hours a driver can be on duty need to be carefully tracked and managed. Electronic logging devices (ELD) can help with this task, but the challenge is to blend timely information from ELDs into fleet management, and from there with TMS tools and operational planning.

Once again, point solutions for tracking driver hours can result in plans that require rework or last-minute scrambling to find alternatives. "You have to have the right data about your drivers and equipment so that you can execute more efficiently," says Bucher.

Such factors make it absolutely critical that companies turn to an integrated technology, not spreadsheets, and that the technology they choose results in an efficient platform for the business. With MercuryFleet, you don't manage one factor in isolation, you manage them all concurrently.

The key to alleviating many of these problems that straddle fleet management and operations is to move away from silo solutions, concludes Adrian Gonzalez, president of Adelante SCM, a supply chain analyst firm.

"Historically, many of the fleet solutions were very focused on the vehicle maintenance itself, and

# ATRI SURVEY REFLECTS CHALLENGE OF **MULTIPLE REGULATORY PRESSURES**

"HE ELECTRONIC LOGGING DEVICE (ELD) mandate emerged as the top industry issue for trucking fleets last year, according to the American Transportation Research Institute's (ATRI's) annual Top 10 list survey for 2016, while the "cumulative economic impact" of multiple regulations also grew in importance.

According to the survey of trucking companies and drivers, the Top 10 issues were the ELD mandate; Hours of Service (HOS) rules; the cumulative economic impact of trucking regulations; truck parking; the economy; Compliance Safety, and Accountability (CSA); the driver shortage; driver retention; transportation infrastructure/ congestion; and driver distraction.

The top issues differed for drivers vs. carriers, with drivers listing the ELD mandate as the number one issue, while driver shortage is the key concern among carriers. For commercial drivers, the top five issues are: the ELD mandate; HOS; truck parking, cumulative impact of truck regulations; and the economy. For carriers, the top five were driver shortage; ELD mandate; cumulative impact of trucking regulations; HOS rules; and driver retention.

According to Rebecca Brewster, ATRI president, the 2016 survey was the first time the "cumulative economic impact" of regulations issue made the top 10. "I think it reflects the industry's collective frustration over the myriad regulations being proposed and/or enacted by the numerous agencies charged with regulating trucking," says Brewster, noting that specific regulatory issues such as HOS, a proposed speed limiter rule, and the ELD mandate, were also of concern for those surveyed. •

sometimes mainly on the power units, with some features on the operations side of things," Gonzalez says. "But in reality, when you are trying to optimize efficient routes and schedules, you must also take all the driver issues into consideration, and manage them concurrently. You don't want to be managing issues separately, where you have a planner going from one screen to another to try to find the data needed to get the job done. If that is your situation, it just screams for better efficiency and integration." •



# The Foundational Elements **of Proactive,** Integrated Fleet Management

# LEET MANAGEMENT—WHICH REQUIRES

a blending of asset, driver, and operational considerations to fully succeed—is tough enough without those "wish we'd known that" moments. These are the instances when an unexpected constraints such as an assigned driver lacking a certification, or poor visibility over trailer assets, derail plans.

The fix for these trouble spot moments is integration, but it goes beyond simply passing data from one system to another, or having applications with a similar look and feel. A truly integrated fleet management solution should include capabilities such as workflow and alerting for proactive management and consistent master data across operational, equipment, and drivers to eliminate redundancies between systems and improve both reporting and execution.

MercuryGate's new MercuryFleet solution delivers on these capabilities, essentially merging fleet management processes with operations management and TMS processes, explains Todd Bucher, VP at MercuryGate. "The challenge for companies is understanding the status of their fleet assets and their driver resources, and applying that knowledge to the business of moving freight," he says. "With our solution, operations people know that they have the proper equipment and drivers available as they make assignments. Fleet and operations management can happen within the same system."

Exception management capabilities are essential to merging the fleet management and operations management domains, says Bucher. For example, if a truck is approaching a preventative maintenance event such as scheduled brake work, or a trailer needs to be inspected, MercuryFleet will send an alert to the appropriate manager regarding the action that needs to be taken.

"You won't want to have to run a report every day to discover what needs maintenance or inspection in your fleet," says Bucher. "The same thing with driver resourcesyou don't want to have to sort through data to find out if a driver needs training. It's best to manage by exception, and

have the system alert you on specific actions to take."

Master data management - having one source of the truth over operational, equipment, and driver concerns is another foundational element to integrated fleet management. Fleet maintenance records, trailer pool data, or driver data such as drug and alcohol testing records, should not have to be sourced from separate systems.

MercuryFleet brings such essential data together in one place, says Bucher. "Because all your people are using the same system and the same data, you have don't have mismatched information or data gaps that somebody has to spend time reconciling," Bucher says.

# Some specific capabilities that can be achieved through integrated fleet management include:

- The ability to plan freight and meet service requirements in synch with full knowledge of asset condition and available human resources.
- A single system, integrated with TMS, to manage quotes, dispatch drivers and equipment, process asset requests and assignments, and manage a trailer pool.
- Comprehensive driver information, including qualifications, certifications, accident records and incidents, collected automatically and reported in real time.
- Proactive management of driver and equipment issues before they become urgent.
- Reporting and metrics that provide accurate views of asset utilization, safety ratings, empty miles, and costs due to accidents, insurance, traffic violations or regulatory issues.
- Mobile apps to speed up two-way communication with drivers.

Ultimately, the benefits of integrated fleet management come down to being able to run operations and utilize assets in the most profitable way, without scrambling to find data or rework plans. As Bucher sums up, "it's all about having the right information about your drivers and equipment so that you can execute more efficiently." •



# **Integrated Fleet Management** in Action

**EWER SYSTEMS TO DEAL WITH,** better decision making, and centralized access to current information on drivers, equipment and operations are some of the primary benefits early users of MercuryGate's new integrated fleet management solution are seeing.

Known as MercuryFleet, the software enables users to achieve results such as streamlined management of asset information, improved asset utilization, proactive asset maintenance, a more agile execution of tenders, and improved customer satisfaction.

MercuryFleet can accomplish these results because it has a central database of driver information and profiles, equipment/asset information and reports, and cost analysis and reporting tools. It also integrates with MercuryGate's TMS on an application level to streamline specific workflows. Exception management and alerts support a proactive approach to managing drivers and equipment resources.

# Here are a few examples of how early users are leveraging MercuryFleet:

- ➡ One major leader in cold chain logistics service with a mix of private fleet and dedicated fleet assets paired MercuryFleet with the company's transportation optimization tool, Mojo, to maximize the use of private fleet assets. The company leveraged decision support features for matching commodity to equipment, while satisfying customer schedules and dedicated carrier requirements. MercuryFleet is also being used by this customer to manage data regarding registration and repair of equipment—both for owned and leased trailers. The results for this company have included improved asset utilization, and improved customer service with respect to schedules.
- A food manufacturer that uses a combination of a private fleet and common carriers for refrigerated distribution tapped MercuryFleet to replace spreadsheets for asset management, while also deploying MercuryGate's TMS. The fleet management solution provides comprehensive management of assets, including service records, incidents, violations, and inspections. With this streamlined fleet management foundation, the company has improved productivity in managing information, and improved asset utilization as part of maintaining its cold chain processes.

Another food manufacturer is using MercuryFleet and MercuryGate's optimization solution, Mojo, to maximize asset utilization and automate the creation of plans for cross docks and pooling. The company's challenges included a relatively complex network of multi-tier cross docks and pool centers to manage, a combination of private fleet and common carriers, and refrigerated distribution of perishable goods.

The optimization tool made it possible to replace static routes with cost-based optimization, while MercuryFleet's equipment management features ensure accurate maintenance processes and asset availability. The solution has improved asset utilization and labor efficiency for the company, while supporting its cold chain requirements.

A logistics provider with both its own assets and non-asset service needed a solution to manage private equipment and drivers in combination with independent contractors. The provider, an existing TMS customer, is using MercuryFleet for driver and equipment management, including compliance and asset maintenance. The combined solution provides a one-stop shop for execution and asset management. Additionally, the fleet solution and the TMS are able to support intercompany tendering to a brokerage division, which has improved the productivity of the agents involved.

The types of companies that can gain value from MercuryFleet are many, says Todd Bucher, a VP with MercuryGate, because if integrates with MercuryGate's multimode cloud-based TMS and has comprehensive information around drivers and assets. This allows MercuryFleet to meet the needs of many types of companies, whether it's a shipper with a private fleet, a common carrier with a large fleet serving multiple customers, or a logistics provider using a combination of both.

"Historically, most other approaches for the market would offer one system for freight management and another for fleet management, but they would be separate solutions," says Bucher. "Additionally, with some of these fleet management systems for carriers, you can't broker freight from them. By contrast, we can support any mode, any model, within a single application."



# Making the Case for an Integrated Fleet Management Solution

The path to productive, profitable fleet management

# NTEGRATED FLEET MANAGEMENT BENEFITS

many in the supply chain. Whether you are a senior executive, a fleet manager, a transportation planner, or a maintenance or safety director, integrated fleet management can drive positive supply chain and business results.

That's because rather than "swivel chair" integration between point solutions or looking through spreadsheets for answers, information about assets, drivers, and operations can be easily accessed in one system on one platform.

MercuryGate's MercuryFleet solution delivers on these integrated benefits. Its database contains an array of information about drivers and assets, and it

"There are many positive outcomes from integrated fleet management, but the core benefit is that everyone is on one system. It makes processes more efficient, because everyone has current, consistent data, and there is no time wasted checking on the status of asset conditions or driver qualifications."

-Todd Bucher, VP at MercuryGate

connects to MercuryGate transportation management system (TMS) processes as part of executing on freight movements.

The system can gather and organize data from electronic logging devices (ELD) and satellite positioning systems to stay current on driver issues including HOS or inspections. It can be used for trailer pool management and other aspects of managing equipment, including when maintenance is needed for a particular unit.

The system's reports and metrics provide useful business intelligence, while alerting functionality supports management by exception. Mobile apps are part of the solution, enabling rapid two-way

communication with drivers.

The alternative to this integrated approach to fleet management is to have point solutions for functions like trailer pool data, drug and alcohol testing, or vehicle inspections, and spend time trying to piece together a current picture of asset and driver readiness so that operations can plan and execute on freight.

"This silo approach wastes time and effort, and is prone to details being overlooked that can cause plans to go awry," says Todd Bucher, a VP with MercuryGate.

"With the integrated approach to fleet management, regardless of your role in the company, everything is in one system and everything is at your fingertips," says Bucher. "You don't have the safety department using one system, operations and planning on another platform, and the people managing the fleet and the trailer pool using other solutions."

Here is how MercuryFleet can positively impact various functions within a company:

For senior managers, MercuryFleet provides metrics on asset utilization or empty miles that can point to areas for improvement. MercuryGate's TMS also provides a range of reports and metrics on transportation costs and utilization. Over time, the proactive management of drivers and equipment under MercuryFleet should help to improve utilization, driver readiness and performance, and adherence to customer requirements.

For fleet managers, MercuryFleet provides the ability to dispatch drivers and equipment, manage trailer pools, and view metrics on driver performance in one solution. There is no time wasted consolidating data before making assignments, or double checking that drivers have the proper qualifications, or that trailers or other equipment are in place and suitable for an assignment.

The system's reports on equipment can help make



longer-term decisions about whether to repair or replace equipment, while also tracking issues like utilization and empty miles. Of equal importance, MercuryFleet provides fleet managers with options that help them determine which shipments should move by private fleet and the ones that can be more economical to move by an outside carrier.

For safety directors, there is one source of truth for driver and compliance data. Rather than point solutions for reviewing drug and alcohol testing, or driver training for hazardous materials transport, MercuryFleet centralizes these functions, providing workflows and alerts to elevate issues that need attention. This proactively helps safety directors ensure that drivers are current with regard to training.

MercuryFleet can also access data from ELDs to identify trends on driver performance and safety. Overall, the solution saves time spent consolidating data from multiple systems, while proactive alerting and follow up over needed training should help boost a company's Compliance, Safety & Accountability (CSA) score. In fact, MercuryFleet's

logic mirrors the logic of the FMCSA's Driver Safety Management System (DSMS) to calculate driver measures and percentiles.

For managers and planners in operations, MercuryFleet ensures that driver and equipment assignments will adhere to current requirements thanks to the solution's driver profile and asset management features. Managing quotes, dispatching drivers, assigning equipment, and managing trailer pools are fully supported in MercuryFleet, while MercuryGate's TMS can be used to plan routes and tender freight. While MercuryFleet can be used as a standalone solution, when combined with the TMS, it offers a cohesive platform for operations, driver, and equipment processes.

As Bucher sums up the benefits: "There are many positive outcomes from integrated fleet management, but the core benefit is that everyone is on one system. It makes processes more efficient, because everyone has current, consistent data, and there is no time wasted checking on the status of asset conditions or driver qualifications." •