



# CELLULAR BENEFITS FOR **MEETING THE ELD MANDATE**



To meet the requirements of the ELD mandate, drivers and fleet managers have a number of different options. This short report explores the mandate itself and discusses the potential benefits of adopting devices that have cellular connectivity rather than using only Wi-Fi connectivity.

### **THE MANDATE REQUIRES ELECTRONICALLY MAINTAINED RECORD OF DUTY STATUS**

In December 2015, the Federal Motor Carrier Safety Administration (FMCSA) published the electronic logging device (ELD) mandate, which requires commercial drivers to electronically log the driver's Record of Duty Status (RODS), replacing paper logs that drivers previously used.

To comply with the mandate, the ELD should automatically record a driver's duty status and any change in status. Vehicle drivers should be able to display the information for the current day, plus the seven previous days, to meet compliance requirements. Additionally, the RODS from an ELD must be stored for six months along with a secure back-up copy.

The initial deadline for complying with the ELD mandate was December 2017. That has changed for vehicles that already were equipped with an automatic onboard recording device (AOBRD) system. They now have until December 2019 to be compliant. Around 40% of the vehicles affected by the ELD mandate already are covered under the AOBRD program, but these vehicles will need a retrofit to remain compliant.

### **THE LEGISLATION WILL AFFECT MORE THAN THREE MILLION DRIVERS AND VEHICLES**

The ELD mandate applies to "most motor carriers and drivers who currently are required to maintain records of duty status" with a small number of exemptions<sup>1</sup>. The mandate covers commercial buses, as well as trucks, along with vehicles that are domiciled in Canada and Mexico but travel into the USA. The mandate is estimated to affect approximately 3.1 million vehicles and 3.4 million drivers, according to the FMCSA.

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### CONNECTIVITY CHOICES: CELLULAR AND/OR WI-FI

The minimum requirement for vehicle compliance is a relatively simple set of information on vehicle and driver status. Neither these services, nor the ELD mandate, require a permanent network connection. Instead of a cellular connection, a vehicle could use a Wi-Fi connection and upload the data intermittently as, for example, when the vehicle is back at base, at a rest stop, or tethered via a smartphone. However, there are a number of benefits in drivers also using a cellular connection.

- Compliance with the ELD mandate can be combined with fleet management and other telematics services. A cellular connection increases the number of additional services that can be used (see Figure 1).
- A real-time connection using a cellular network reduces the burden on the driver. All data from the ELD can be uploaded automatically without driver intervention. Cellular connectivity is available across the road network, making it more convenient than Wi-Fi connectivity. This ensures that the driver remains compliant. It also reduces the administrative burden for a fleet manager, who does not need to remind drivers to make sure that they are compliant. In comparison, the use of a Wi-Fi network, which will require manual intervention, will be more cumbersome.

Services supported by connectivity	Comment
Mapping and traffic information:	Maps can be updated to increase accuracy and to include traffic information.
Driving behavior:	Driving behavior that impacts fuel consumption can be monitored, such as aggressive acceleration, idling, over-revving, and heavy braking. Cost savings typically are reported to be 30%.
Cost information:	Telematics can provide accurate estimates of trip costs, including fuel, vehicle profile, and tolls.
Driver communications:	Units also can be used for voice and messaging with drivers.
Optimise fleet utilization:	Fleet operators get a real-time view of vehicle usage and location, which can provide inputs into dynamic scheduling to improve fleet utilization.
Onboard dashcams:	Footage from onboard cameras can be uploaded after an incident. While this could be done via Wi-Fi after the event, real-time uploads are likely to be more valuable.
Pay as you drive insurance:	Insurance rates can be paid dependent on distance driven, how the vehicle was driven, time, and other variables.
Increase safety and reduce insurance premiums:	Along with improving fuel consumption, telematics also can measure contextual speeding, harsh cornering, and other factors that can help reduce the number of incidents and reduce insurance claims.

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Figure 1: Potential applications for cellular connected ELD [Source: Analysys Mason, 2018]

### **CELLULAR CONNECTED SYSTEMS CAN PAY FOR THEMSELVES**

While the switch to ELD is an unavoidable cost for a fleet manager, the reduction in paperwork should mean that ELD pays for itself over time. Indeed, the FMCSA has estimated that, on average, the savings from a paper-based system to ELD will be around USD\$705 per year and more than 20 hours a year.

The additional cost of adding cellular connectivity may more than cover any additional incremental expense. By adopting the extra services that use connectivity, fleet managers may well be able to benefit from the switch to ELD. Furthermore, the existing AOBRD systems can cost in the region of USD\$45-\$100 per month per vehicle, for what is a relatively old technology. The ELD mandate is an opportunity to replace these systems with something more modern, often for a lower cost.

Some of the services listed in Figure 1 could be delivered via a smartphone rather than through the ELD. However, there are potential benefits of separating the services from the smartphone and having them all on a dedicated device. For example, ELDs typically use a dedicated tablet with an 8-inch (or larger) screen and so are better suited to services like mapping and navigation. Voice services can all be hands free. Also, as the ELD remains in the vehicle, the services offered are consistent regardless of who is driving.

For all drivers and fleet managers affected by the ELD mandate, adherence will require investment and disruption. It may be a good time to explore options beyond simple compliance, such as complementary telematics services.

ELD systems can be deployed anywhere in the world, even in the most remote locations on a simple plug-and-play basis, removing the necessity to configure local network settings. With the right ELD mandate solution, companies can have granular insights, thereby saving enormous amounts of time, better controlling costs, and improving overall productivity.

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