

## **Federal Agency Telematics Experiences August 2014**

GSA requested, per GAO recommendation, information from agencies on their experiences with telematics in their fleets. This information shared by agencies is available as follows:

### **Department of Agriculture, Natural Resources Conservation Service (NRCS)**

NRCS did a telematics study on 1178 vehicles, approximately 12% of the fleet. The study was conducted from November 2011 through May 2013. NRCS acquired the telematics equipment directly from Trimble Fleet Solutions. NRCS has used the following telematics technology applications: GPS, Engine diagnostics, Vehicle monitoring and driver identification, and Instant driver feedback.

NRCS has reduced fleet size in conjunction with the Trimble study. The telematics data indicates that NRCS could see a potential ROI within 1 year of implementation of a fleet wide telematics installation with a corresponding decrease of approximately 30-40% of its fleet. However, many factors related to the NRCS mission can't justify that 30-40% decrease in year 1. The results of the telematics study have shown that NRCS has room for improvement in fleet operations. NRCS has begun a comprehensive VAM study of the fleet to further realize any potential savings in reduction of fleet size.

NRCS would absolutely recommend telematics to other fleet managers. We would recommend that the telematics be used as a fleet audit tool, not a permanent fleet requirement. Telematics is very expensive and requires full time, dedicated staff for proper implementation and management. Sampling a portion of the fleet for analysis with Telematics is very telling. We would recommend at a minimum a 9 month to 1 year study of a sampling of an agency's fleet. Also, for telematics to be fully successful, agency leadership would have to fully support the study and recommend changes to fleet operations based on telematics results.

### **Department of Health and Human Services**

After researching various telematics programs, HHS selected to employ the DriveCam Program since video technology is the only way we can see what is really happening in/to our vehicles. The DriveCam program takes a proactive as opposed to reactive approach to mitigating risk. DriveCam's program integrates telematics with video technology. The telematics component has enabled fleet managers to track data points such as: mileage, geofencing, vehicle locations (in real time), vehicle utilization, policy compliance, collision analysis/reconstruction, unraveling mystery damages to vehicles, safety infractions, identifying risky behaviors throughout the agency, identifying riskiest drivers, and identifying best drivers.

In addition to the exception based videos, DriveCam provides HHS with Managed Services. Their Managed Services allows the fleet managers to stay current with the latest technology and continual monitoring of the DriveCam program prior to problems arising. The key components of

DriveCam Managed Services include: program results and reporting, benchmarking analytics, quarterly program reviews, notification of collisions and passenger incidents, centralized visibility to program compliance and best practices, professional program support, hosting, storage, security and system maintenance (DriveCam manages all of the program data), automatic program and software updates, and training programs including eLearning, onsite training and virtual training.

In summary, HHS is very pleased with the all aspects of the DriveCam program. Particularly, how the organization has partnered with HHS to understand our unique and complex challenges with implementing a telematics program (worldwide) and providing us with viable solutions to overcome such obstacles.

HHS's mission, application/measures and deployment is detailed in [HHS's Telematics Actual Application and Deployments chart](#).

### **National Archives and Records Administration**

The National Archives and Records Administration (NARA) has used telematics to monitor its fleet since 2008. Telematics played an instrumental part in reducing the fleet size by 21%. The telematics data was used to identify underutilized vehicles, develop policies to limit the number of vehicles assigned to certain facilities, and to eliminate entire classes of vehicles from the fleet. Usage data is routinely analyzed and criteria established to decide if alternatives to leased vehicles are viable options.

NARA uses telematics data in the preparation of the Annual Fleet Plan and Vehicle Allocation Methodology (VAM). While VAM surveys are useful, generally the responses regarding vehicle usage are not always accurate. Telematics data provides a more accurate picture of when and how often vehicles are needed. The data provided was used to justify the return of 16 vehicles, 8 more than the original VAM required.

NARA Fleet Managers throughout the nation use telematics to help manage their truck delivery service programs. They use telematics to route vehicles, reduce fuel consumption, and increase driver productivity. Many Fleet Managers have used the telematics data to identify operators that routinely waste fuel by allowing vehicles to idle. Constant monitoring has resulted in an annual reduction in the consumption of diesel fuel by 12.5%.

Finally, NARA has used telematics tracking data to monitor everyday use of passenger vehicles. Through constant monitoring NARA has identified personnel that have misused Government vehicles.

### **Department of Homeland Security**

Telematics was installed in approximately 2,300 vehicles in 2009 during upfits at UNICOR. Fleet Management Solutions is the vendor of choice. This was a direct contract through Fleet

Management Solutions. The applications we have used are GPS tracking and engine diagnostics.

Although Telematics has been installed since 2009, was not actively used until the end of 2012 in any management oversight. We have reduced fuel expenditures, identified vehicles for right sizing. Along with other management oversight, we have reduced overall spending in FY13 by \$3.5M and FY14 YTD \$2M

Enforcement and Removal is moving towards outfitting all remaining vehicles, implementing driver pins, and other monitoring services. At the present time, our service is 100% satellite and we will be moving towards a more cellular service which should service all vehicles for approximately the same cost as what we are paying for 1/2 of the fleet now. With this move forward, we should not only have complete oversight, but anticipate a reduction in manpower in the amount of \$900K annually from the elimination of data entry current experienced. When properly used, this is a great management tool that should provide all managers the ability to manage their fleet better.

### **Department of the Navy**

Navy has approximately 300 units. Installation started in Nov. 2012, Fleet Management Solutions. We have used the following telematics technology applications: GPS tracking, engine diagnostics, and utilization, fuel, hard braking and hard take-off.

Lack of personnel over the past year due to sequestration did not allow us to spend the needed time to understand the results. We are just starting to analyze and determine where cuts can be made and also attempting to change driving culture to reduce idle, and bad driving behaviors.

### **Department of Energy**

One of our three fleets in Idaho Falls, ID installed Verizon telematics in various LD & MD vehicles in Sep. 2009 then equipped 52 HD buses with the same system in 2012. All 352 vehicles are still currently leveraging telematics technology. We have used the following telematics technology applications: GPS tracking, engine diagnostics, and vehicle monitoring and driver identification.

Our Idaho Falls Fleet that employs telematics improved utilization resulting in fuel savings fleet reduction by 65 vehicles. Total cost savings for FY13 was \$392K.

The Department of Energy has used telematics in some of its vehicles for approximately five years, which has led to savings due to optimized fleet utilization and reduction in fuel, maintenance, and vehicle misuse. For example, a fleet manager at Idaho National Laboratory reported that they have used telematics data to help make decisions to eliminate 65 vehicles since FY 2011, with an estimated annual cost savings of approximately \$390,000.

**Breakdown:**

Vehicle Lease Costs:	\$299,520
(+) Mileage Costs:	\$182,000
<u>(+) Telematics Costs (65 vehicles):</u>	<u>\$19,500</u>
Savings from Fleet Reduction:	\$501,020
<u>(-) Telematics Costs (Remaining vehicles):</u>	<u>\$108,300</u>
<b>Total Annual Savings:</b>	<b>\$392,720</b>

**Department of Veterans Affairs**

VA's telematics devices have been acquired gradually over a period of at least 6 years. Most of these have been acquired directly from the vendors, although some may have been acquired through GSA fleet. Vendors that we use include Network Fleet, Route Match, Trimble, Navman, Smart Drive, Drive Cam, Agile Fleet Commander, Fleet Tracker, Geotab, and SPOT Tracker. VA currently has 5,542 systems installed and expects to install another 6,250 more systems during FY 2014. We have used the following telematics technology applications: GPS tracking, engine diagnostics, vehicle monitoring and driver identification, in vehicle recording, and instant driver feedback. The benefits have not been quantified.

**Tennessee Valley Authority**

The first phase of telematics is on heavy equipment and commercial trucks, approximately 200. This has been over the 18 months. The contract has been with Sitech LLC (through Caterpillar Vision Link). We have used the following telematics technology applications: GPS, engine diagnostics, and tracks fuel burn on the OEM installed units.

Idle time reductions have been identified, which in reducing idle time you reduce fuel consumption, extend scheduled maintenance and PM intervals. Since TVA is spread over parts of seven states, gps tracking has been beneficial in locating equipment, reducing man hours physically searching for the equipment.

# HHS Telematics Actual Application and Deployments

Beginning during Q3 of FY11 and continuing through Q4 of FY14, HHS made use of Drive Cam strategies to measure performance and compliance in different settings. Future deployments and studies are being considered as well. Data is now in preliminary stages and will receive scientifically based analysis and conclusions going forward.

Item	HHS Mission	Application/Measures	Deployment
1	HHS Assistant Secretary for Preparedness and Response – National/International Catastrophic Events. This mission is carried out by the HHS/ASPR/National Disaster Management System (NDMS) [Examples: Hurricane Relief; Floods; Massive fires related population displacements]	<b>Application:</b> Drive-Cam installed on MD/Heavy Duty Trucks	<b>CONUS:</b> cross country and/or regional delivery of very large caches of materials; Logistics and support to states' disaster management request.
		<b>Telematics/Measures:</b> Vehicle routing/efficiency compliance; Utilization; speed/safety compliance; seat belt compliance; texting while driving compliance; Physiological behavior	
2	HHS Center for Disease Control and Prevention (CDC) – International health Services and medication programs and distribution for HIV/AIDS eradication programs in Africa and Hattie.	<b>Application:</b> Drive-Cam installed in sedans/station wagons; Medium Duty/Heavy Duty Trucks; mini buses	<b>International:</b> Metropolitan and rural settings in 35 different countries; Logistics and support to varying locales/regions
		<b>Telematics/Measures:</b> Vehicle routing/efficiency compliance; Utilization; speed/safety compliance; seat belt compliance; texting while driving compliance; Physiological behavior	
<b>Future</b>			
3	HHS Food and Drug Administration (FDA) – International health Services and medication programs and distribution for HIV/AIDS eradication programs in Africa and Hattie.	<b>Application:</b> Drive-Cam anticipated to be installed in sedans/station wagons.	<b>CONUS:</b> Regions/District field investigative work.
		<b>Telematics/Measures:</b> Vehicle routing/efficiency compliance; Utilization; speed/safety compliance; seat belt compliance; texting while driving compliance; Physiological behavior;	
4	HHS Planned Research Telematics initiative using a blind study approach along with a control group data capture and scientifically sound data analysis.	<b>Application:</b> Drive-Cam anticipated to be installed in sedans/station wagons in some cases at random. Up to 300 units in the study.	<b>CONUS:</b> HHS National regions (10) crossing over 9 Operating and staff Divisions. Study will involve vehicles across the fleet spectrum.
5	HHS Planned Research Telematics initiative using a a control group data capture and scientifically sound data analysis.	<b>Application:</b> Fleetmatics (Sage-Quest)/Keyfob study; anticipated to be installed in select sedans/station wagons HHS HQ functional areas.	<b>CONUS:</b> HHS /OS HQ areas only.
		<b>Telematics/Measures:</b> Vehicle routing/efficiency compliance; Utilization; speed/safety compliance; seat belt compliance; texting while driving compliance; Physiological behavior; may study the efficacy of determining who the motor vehicle operator is over time.	