Industry practices in metering and monitoring

Summary

This study utilized a case analysis approach to investigate the issues related to implementing fuel metering and monitoring in ground vehicles. Analysis of in-field observations and interviews with industry and a review of industry literature on the use of telematics systems resulted in a lifecycle model (Page 2) that shows key phases of the implementation process and offers a checklist of considerations. This model presents a lifecycle management approach to employing vehicle telematics. This lifecycle includes five phases—planning, acquisition, deployment, management, and retirement of fleet vehicles.

Findings

A key finding of the research is that fuel metering and monitoring is closely tied to overall fleet management. Fuel efficiency is a significant factor in the adoption of telematics systems and can result in 10 to 40% reduction in fuel use. However, fuel efficiency and telematics systems have a larger role to play in business. Fuel performance (and telematics) is tied to other fleet management activities such as route management, asset management, and workforce management. Efficiency improvements in any of these combine to deliver better outcomes. These outcomes include less fuel used, and also longer vehicle life, increased reliability and vehicles optimized for the mission. These combined outcomes have an end result of lowering costs, creating a safer environment, and supporting mission effectiveness.

Recommendations

Our analysis of the industry cases suggests the following be considered when implementing a metering and monitoring system:

Use fuel telematics as part of a broader fleet monitoring system
- Connect fuel metering with maintenance practices
- Combine efficiencies to improve cost, safety, and effectiveness
- Focus data sharing on mid-level managers

Use telematics to support operations
- Emphasize fuel and maintenance metrics as “service” to operations
- Demonstrate the benefits of increased reliability & safety
- Allow for the human interpretation of data to reduce errors
- Align measured outcomes with mission goals

Use telematics to improve situational awareness
- Use telematics data for better resource allocation
- Use telematics data to schedule maintenance on an ‘as needed’ basis
- Assess historical data and identify patterns across time

Be prepared and be prepared for change
- Tie a telematics system to strategic goals and desired outcomes
- Integrate new technologies as “value added” to existing processes
- Be open to emerging needs as technologies and people grow
- Pilot early and make changes based on outcomes, not schedules