

# Wireless Fleet Management

## Reducing the Cost of Ownership

Brian Turner

With the nonstop march of technology in vehicles today, even the simplest car has more electronic processing power than the entire Apollo series of rockets launched by NASA. As a result of this technology, municipal fleets now have the ability to drastically improve asset management and reduce one of the municipality's largest expense lines. Vehicle telematics is a term that fleet managers are hearing more and more these days. The term is best defined as "remote information exchange with vehicles over a wireless medium."

### Determining Needs

Extracting vehicle operations data and transmitting it wirelessly to an office computer system isn't a new idea (the heavy truck industry has been doing it for years), but today, a handful of companies are offering systems tailored to light- and medium-duty vehicles, as well as heavy-duty. The potential buyer needs to consider what type of information they really need and how flexible the systems are for future development.

One of the best sources of this data is the vehicle's own control computer. Since 1996, all passenger cars and light and medium trucks sold in North America

have a standard connector/port under the dash for diagnostic access by techni-

---

The business case should clearly demonstrate and validate both real and strategic savings of both operating and capital expenses.

---

cians. The telematics solutions that use this port avoid damage to the vehicle's wiring harness caused by hard splicing. This provides a doorway to all the information a fleet supervisor will ever need.

The business case for considering such a system in a municipal fleet should clearly demonstrate and validate both real and strategic savings of both operating and capital expenses. From automated odometer capture through tracking (and planning) of preventative maintenance events, to pinpointing vehicle faults that can increase fuel use or even cause breakdowns, any system should earn its keep in fleets as varied as police service vehicles to public works trucks. An easy-to-use vehicle activity date/time re-

port feature should help streamline payroll and client billing. This is achieved by recording vehicle engine hours and kilometres traveled per date, and is useful when dealing with service teams that don't always report to a time clock. One of the "gee whiz" features of some of today's systems is the ability to track vehicle movement in "live time" through Global Positioning Systems (GPS). Keep in mind that this adds a lot to the purchase price and monthly monitoring fees, and the only municipal departments that may need live GPS are police, fire and ambulance. The majority of fleet vehicle location reporting requirements can be met with a less expensive "passive" GPS where the stored information is downloaded and viewed when needed, in an historic perspective.

### Return on Investment

In the case of public funds invested in municipally-owned fleets, a good system should be able to offer paybacks in as little as six to nine months. One of the keys to true affordability lies in the use of a WiFi (wireless fidelity) based data transmission format, which avoids the expense (and unreliability) of monthly satellite or cellular air time. In addition, the vehicle hardware portion of an acceptable solution must be priced right (historically, the early telematics systems had prices in the \$1000 to \$1500 per vehicle range). But, with progress in electronics comes smaller and less expensive packages.

Savings in hardware shouldn't be wasted on difficult installation charges,



Brian Turner is an account executive with Netistix Technologies Corp. with over 28 years of automotive management experience and a former municipal councillor.

either. The best systems use a “plug and play” philosophy and lend themselves to easy, in-house installation, permitting municipal fleet staff to swap units out when a vehicle is retired. Key to staff productivity is integration with existing fuel management and fleet management systems. As well, offering a municipality the option of owning the software application versus relying on a web-hosted solution gives more flexibility to IT departments.

### Emission Reductions

Since the Kyoto protocol came into force in Canada, the greenhouse gas (GHG) reduction capabilities that vehicle telematics systems can offer has sparked even more interest. The ability to track and compare engine idle time and other energy wasting activities gives municipal department heads an important tool to enforce green operating policies.

With Transport Canada and vehicle manufacturers pegging the average V8 gas engine fuel consumption at 2.2 litres per hour when idling, and with fuel prices ranging from \$0.70 to \$1.00 per litre, it isn't hard to envision the dollars saved with true measurements of idling times alone. But, those savings are matched in GHG reduction and, with the current federal focus on air quality, external funding for GHG improvement projects are starting to appear on the horizon. A preferred solution will require the ability to confirm

if a vehicle is operating in an “emission compliant” state.

Municipal governments must be the leaders in their communities for this battle against dirty air.

### Usage and Safety issues

The most overlooked benefit of a vehicle monitoring system is the ability to easily point out vehicle over- and under-usage. Being presented with an easy to understand fleet usage report quickly gives decision makers the knowledge to reduce capital assets. After all, no municipality is in business to own and operate vehicles, but simply to use their rolling assets to deliver core services. How many fleet managers or department heads have the time to perform a vehicle usage and deployment study? Having such a study delivered to your desktop computer daily, and being able to view it in a daily, weekly, or monthly format with a simple click of the mouse puts a mountain of information in the hands of the right staff. Being able to remove as little as one or two snowploughs or street sweepers or transit buses from even a large fleet can mean substantial savings to be redirected to improving services or holding the line on property tax increases.

In the area of employee health and safety, these silent and remote electronic supervisors have made inroads as well.

With the federal government's new employer responsibilities as spelled out in Bill C45, managers, supervisors, and even elected officials have a much heavier burden when it comes to ensuring that workers are operating in as safe an environment as possible. Because the largest risk of injury to an employee occurs when operating a motor vehicle, a reliable monitoring system can have substantial and positive impact on safety. The ability to predict breakdowns and highlight overdue preventative maintenance services is a key feature to look for to improve vehicle safety. As many responsible fleet managers can confirm, the proper maintenance of equipment is key in protecting against injuries. For those municipalities that use commercial liability insurance, the list of insurers that offer premium discounts for vehicle monitoring is growing quickly.

In Winnipeg, where the city recently launched the first deployment phase of an electronic vehicle management system using state-of-the-art telematics, Yvan Lupien, Chief Operating Officer of the city's fleet management agency is convinced of the system's value. “The future of accountable public asset management,” he says, “lies in the use of affordable and reliable technology to keep the decision makers close to the street, checking the pulse of their fleet. MW

*as published in*

# Municipal World

*The magazine trusted by municipal decision-makers since 1891*

1-888-368-6125

[www.municipalworld.com](http://www.municipalworld.com)