

## Big Data: An On-Ramp to Better Fleet Management?

Theo Douglas | September 28, 2017



Vehicle fleets may be poised for another round of innovation in management solutions. As they stand, fleets are costly, hard to follow and often generate multiple streams of data.

Regardless, state and local governments are finding that modernizing and improving virtual fleet management can improve everything from fuel economy and on-the-job safety.

The “real magic,” according to Shaun Bierweiler, vice president of U.S. public sector at California-based Hortonworks, lies in combining real-time data with historic data — something agencies are increasingly coming to realize.

“It’s very important to think not about what I need for today but what am I going to need for tomorrow,” said Bierweiler, whose company provides local governments with “productized,” open-source solutions.

Fully deploying what they purchased is also a best practice for agencies, according to David Rubal, chief technologist for data and analytics at Virginia-based DLT Solutions, a technology reseller of stacks tailored to government specifications.

“I don’t see a whole lot of advanced deployments here,” said Rubal, who describes most agencies as being in the “early stage” of fleet monitoring.

But basics aren’t bad, according to Colin Sutherland, executive vice president of sales and marketing for Canadian vendor Geotab.

“What makes people happy these days is to see the snow plow and where it is in proximity to me,” Sutherland said, noting that generally, the easiest entry point for governments to begin “playing right now in big data” is “to collect data from the vehicles they already have.”

## **EYES ON PLOWS MEAN WINTER'S NO PROBLEM**

Fishers, Ind., a fast-growing, tech-focused Indianapolis suburb, plans to open the state’s first Internet of Things (IoT) lab [this fall](#), and is using fleet management to address a substantial seasonal Midwestern problem — snow.

The city of more than 86,000 has migrated nearly 80 pieces of equipment from a previous provider to a solution from StrataGIS, a division of New York City-based RA Consultants LLC. This includes everything from Bobcats to salt spreaders and work trucks.

The issue, Public Works Director Eric Pethtel said, was being able to document where streets had been salted and plowed — not always an easy thing to see. Additionally, accurately billing customers, like the Hamilton Southeastern Schools Corp., a local school district, for at-cost grounds maintenance poses another challenge.

The solution provider worked with the city to write “several thousand lines of code,” the public works director said, delivering a platform during the 2015-2016 winter that was similar to other off-the-shelf products, only more specialized and adaptive.

“We didn’t buy into that notion that you could not,” Pethtel said, explaining why most of the half-dozen software companies that responded to an RFP weren’t selected.

Extra code from StrataGIS lets fleet-mounted cellular devices communicate with satellites to tell drivers when their salt spreaders are on or off, and show their progress. It works similarly for snow plows so they only clear highways once. This keeps costly road salt on the ground long enough to do its job.

The new system also “talks” to geofencing installed at school properties to provide a minute-by-minute accounting of time spent mowing lawns and trimming shrubs at the more than 20 local schools.

Next up, Pethtel said, may be updates to let staff check out vehicles and do pre-trip inspections virtually, using iPads.

“It took us a while to realize that we can truly expand this any way we want. And we have,” he said.

## **WHEN FLEET SIZE MATTERS**

In central Arizona’s Gila County, home to roughly 53,000 residents in 4,800 square miles, officials are in the final stages of consolidating fleet management from a

combination of paper logs, spreadsheets and legacy computer systems to a system from Virginia-based Agile Fleet.

The agency intends to go live with the solution FleetCommander in October. Its initial cost was nearly \$166,000, with subsequent annual costs of around \$80,000. But Shannon Coons, fiscal services manager for the Gila County Public Works Division, said the return on investment will likely far outweigh the expense.

That's because the county believes it can do a better job of tracking short- and long-term vehicle numbers. The new system will add more than 200 GPS units to document maintenance needs, miles traveled and gasoline used as well as a modern online vehicle "reservation" system aimed at addressing a much larger issue: fleet size.

Currently, some of Gila County's 363 vehicles that will be monitored under the new system are "siloed" by agencies and may be under-utilized as a result. Mileage is tracked only at the county's handful of fueling stations, receipts may be "touched" half a dozen times during a transaction — increasing the error potential — and a lack of daily use records can obscure how long vehicles have been checked out.

Coons said the agency very likely has more vehicles than it needs and could thin the herd if it knew which are driven and needed, and which are not.

"I know that we do have too many vehicles but without data behind me, I can't push it out there," said Coons, who spearheaded more than two years of vetting seven potential solutions.

## **THE SIGNIFICANCE OF SECURITY**

DC Water provides drinking water, and collects and treats wastewater to more than 672,000 residents and nearly 18 million yearly visitors to the nation's capital. Outside Washington, D.C., it also offers wholesale wastewater treatment to about 1.6 million people in four Maryland and Virginia counties.

Not surprisingly, the agency — which operates what's believed to be the largest wastewater treatment plant in the world — already has fleet management through Geotab, which it began implementing in June 2012 on about 500 of its 610 vehicles.

That means sensors on everything from fuel consumption to driving styles in sewer vacuums, crew cabs, backhoes, front-loaders as well as on vehicles like pickups and dump trucks.

Timothy Fitzgerald, director, fleet management, praised the online system's "plug and play" capability, which allows for sensor installation without drilling holes. The solution's integration with WAZE and Google Earth also lets officials watch where and how their assets are being deployed.

But, this being the nation's political center, other pressing needs are always at hand — safety and security.

"We live in Washington, D.C., and there's always a threat level here. You want to be able, from your laptop if you're in Japan and it's Capitol Hill, to push a button and shut

that unit down,” Fitzgerald said, noting the agency is working with Geotab on a potential solution.

But fleet tracking, he said, has other ancillary benefits — making the agency more environmentally friendly by helping it save an average of \$400,000 in fuel costs per year. This environmental awareness has enhanced the agency's profile with the next generation of public servants.

DC Water, its fleet director said, wants to “attract the young minds into this industry in terms of the usage of these types of technologies and how they can benefit the environment and our world as a whole.”

<http://www.govtech.com/data/Big-Data-An-On-Ramp-to-Better-Fleet-Management.html>