
Inquiry – Councillor Z. Jeffries (January 25, 2016) GPS in Civic Vehicles and “How’s My Driving?” Decals

Recommendation

That the report of the CFO/General Manager, Asset and Financial Management Department, dated October 30, 2017, be forwarded to City Council for information.

Topic and Purpose

The purpose of this report is to provide City Council with information regarding how the City of Saskatoon (City) currently uses GPS (Global Positioning Systems) and future plans, as well as the options available for implementing “How’s My Driving?” decals.

Report Highlights

1. There are currently three different vehicle GPS systems in operation: Transit, Roadways and Solid Waste.
2. The business case supports the implementation of a corporate-wide GPS system for the entire civic fleet and includes safety, financial and environmental benefits.
3. Capital Project 1948, AF – Fleet Global Positioning Systems, has been submitted for approval in the 2018 Preliminary Capital Budget for this initiative.
4. “How’s my driving?” decals on civic vehicles are being recommended to support safety and civic accountability.

Strategic Goals

This report supports the four-year priority of identifying targeted opportunities to implement specific continuous improvement tools within departments, under the Strategic Goal of Continuous Improvement.

This report also supports the four-year strategy of implementing energy-efficient practices under the Strategic Goal of Environmental Leadership, and the opportunities to reduce spending on fuel supports the Strategic Goal of Asset and Financial Management.

Background

At the January 25, 2016, meeting of City Council, the following inquiry was made by Councillor Z. Jeffries:

“Could Administration please report on the feasibility of installing and/or activating GPS in Civic vehicles and the options available for implementing “How’s my Driving”-style public feedback decals on Civic vehicles.”

Report

Due to changes in management within the Facilities and Fleet Division over the past 18 months as well as the establishment and operation of a pilot project regarding the benefits of a GPS program, reporting back on this inquiry was delayed. The Administration apologizes for this delay.

Current Status of GPS

Over time, the evolution of GPS at the City has resulted in three separate GPS systems for distinct operational needs for groupings of vehicles. The largest is the Transit fleet of about 150 buses using a system that ties into the Transit operational system, Trapeze. The other two are in the areas of Solid Waste and Roadways.

The GPS systems in the garbage trucks for the Solid Waste program are linked to its verification program to optimize routes and to provide enhanced customer service. Roadways also use its GPS system to assist in operational effectiveness and efficiency as well as for customer service reasons.

In addition, the Saskatoon Fire Department and Saskatoon Police Service use GPS systems incorporated within the radio infrastructure to support operations, however, GPS is not linked directly to the vehicle.

The following summarizes the City’s current vehicle GPS systems:

Division	System	Year	Units	Operational Need
Solid Waste	AMCS	2014	24	Route Optimization/Accountability
Roadways	Rexroth	2016	23	Route Optimization/Accountability
Transit	Novus ITS - Trapeze	2010	150	Route Optimization/Accountability

Benefits of GPS Systems to Civic Vehicles

Different GPS systems have been established by civic operations to meet individual requirements of each operational group. Benefits include:

- route optimization and improved level of service (street cleaning, snow removal, waste pick-up, sanding, pot hole response); and
- support litigation confirming provision of service at associated locations.

Additional benefits of GPS systems include:

- location of all civic fleet assets to support emergency response activities;
- location of employees for safety protocols (working alone, emergencies);
- improve operational efficiencies (driver behaviour, reduced idling, maintenance control, asset management);
- recovery of stolen assets and accident analysis; and
- fuel savings and reduced greenhouse gas emissions by reduced idling.

Plans for Future Deployment

Fleet Services has considered the business case for adding GPS in all of the City’s fleet of vehicles and heavy equipment and is convinced that by doing so will be able to achieve the benefits identified above.

Safety of employees and the protection of assets are two major benefits of implementing and corporate-wide GPS program. However, there are also financial and

environmental benefits by monitoring and control of vehicle idling and reducing fuel consumption. Data from a pilot project conducted by Fleet Services, with assistance from Environmental and Corporate Initiatives, concluded that annual CO2 emissions can potentially be reduced by 138 tonnes from idling alone. In addition, an estimate of total fuel savings through reduced idling and optimization of routes on an annual basis for the entire fleet could likely result in savings of about \$500,000.

On the cost side, it is estimated that the installation of GPS on the City’s fleet of 807 units, about \$325,000 in one-time capital costs would be needed. Annual airtime costs per unit are about \$300 (based on data usage), resulting in an average annual operating impact of \$242,000.

Based on the business case and results of the pilot, Fleet Services is recommending the implementation of a corporate-wide GPS system that could realize the extensive operational benefits. Capital Project P1948, AF - Fleet Global Positioning Systems, has been included in the 2018 Preliminary Capital Budget for the implementation of this initiative. It is expected that any operational impact due to airtime costs would be more than offset by fuel savings.

In anticipation of the pending approval of the capital project for 2018, a working group of internal stakeholders has been established for possible deployment. The estimated project schedule is:

- Needs Assessment/Stakeholder Reviews 2-3 months
- Tender and Award of GPS Vendor 1-2 months
- Installation of Equipment 2-3 months

It is expected that, pending approval, the tender would be awarded in early 2018 with an expected installation date of mid-year 2018.

“How’s my driving?” Decals

Safe driving programs allow organizations to mitigate accident risk by leveraging comments from concerned motorists to identify risky driving behaviors and have shown to significantly reduce accidents (as per Automotive Fleet’s online article *“Do How’s My Driving Programs Really Work?”*).

Adding decals to vehicles that provide the ability for other users of the road to report on both positive and risky behaviour is a way that many organizations with fleets can increase the safety of their employees as well as other motorists. This is a proactive program focused on forward thinking behavior and encouraging drivers to make more conscious efforts to drive safely and courteously. Proven benefits include:

- accident reduction;
- citizen appreciation and empowerment to report concerns;
- employees make conscious effort to improve driving behaviours; and
- reduced aggressive driving lessens wear on vehicles, maintenance and fuel costs.

This program will complement existing safe driving initiatives, such as motor vehicle record checks, recognition programs, safety classes, and driver training.

The decals could be produced at the City’s Sign Shop, displaying the City’s logo, and telephone number for the public to call. All calls will be coordinated between Service Saskatoon and Fleet Services, and directed to the appropriate civic division for follow-up in accordance with corporate standards for operator expectations.

Public and/or Stakeholder Involvement

Implementing GPS would need to be a corporate initiative to encompass the needs of all user departments. A GPS working committee has been established to discuss an implementation strategy.

Collaborative communication efforts will involve all affected civic operations, unions and the Employee Experience and Performance Division prior to implementation.

Communication Plan

Should the Administration proceed with this initiative, a supporting communication plan will be developed to assist internal and external stakeholders, including the public, in being made aware of the City’s GPS initiative and the “How’s My Driving?” decal program.

A staged communication approach will introduce and provide awareness and maintenance of the program. Future communications could include reporting on performance measurement of the fleet, and regular feedback to citizens regarding the results of the GPS initiative through the annual Service, Savings, and Sustainability Report.

A detailed strategy will be developed in consultation with all civic user departments and associated unions so that all user needs are considered, GPS systems are assessed and all benefits and uses are clearly explained to union partners. Preliminary discussions with civic unions are underway, and future communication will be coordinated by the GPS working committee as part of the stakeholder review and implementation plan.

Financial Implications

The estimated cost to install GPS systems and associated communication plans on all civic vehicles is approximately \$325,000, which will be funded from Capital Project 1948 in 2018. Annual airtime costs per unit are \$300 (based on data usage) resulting in an average annual operating cost of \$242,000.

If the entire civic fleet was equipped with GPS, based on the information from the pilot project, potential annual savings of \$500,000 in fuel could be achieved through route optimization, setting fuel saving goals for vehicle operators and providing monthly idle time reports.

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Decals can be added to the City’s fleet vehicles during regular maintenance cycles. The cost of the decals for the civic fleet is estimated at \$3,200 which will be funded through existing operating budgets.

Environmental Implications

This GPS initiative has the potential to decrease greenhouse gas (GHG) emissions through reduced idle time, overall fuel consumption and vehicle emissions, as well as route optimization.

Data from the pilot project showed that the CO2 produced from extended idling on a group of five vans averaged 380kg per day. Given that there are 292 units in this vehicle category, 138 tonnes of CO2 would be produced annually from excessive idling. If GPS systems were to be installed in this vehicle category, potential annual reduced idle time would be equivalent to removing almost five vehicles off the road.

Due Date for Follow-up and/or Project Completion

Once implementation is complete, the Administration will provide an update through the 2019 Business Plan and Budget process regarding the success of this initiative and any additional net savings.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Report Approval

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