

## COUNCIL REPORT

M&C No.	2018-322
Report Date	November 14, 2018
Meeting Date	November 19, 2018
Service Area	Transportation and Environment Services

His Worship Mayor Don Darling and Members of Common Council

***SUBJECT: T4G Snow Control Management Analytics***

***OPEN OR CLOSED SESSION***

This matter is to be discussed in open session of Common Council.

***AUTHORIZATION***

Primary Author	Commissioner/Dept. Head	City Manager
<b><i>Tom McGrath</i></b>	<b><i>Michael Hugenholtz</i></b>	<b><i>Neil Jacobson</i></b>

***RECOMMENDATION***

It is recommended that Common Council agree to this partnership with Enterprise Saint John and T4G and further that the Mayor and Common Clerk be authorized to execute the necessary contract documents.

***EXECUTIVE SUMMARY***

The Transportation and Environment Services Department (TES) is requesting Council's approval to partner with T4G Limited in an effort to produce a predictive modelling tool for our winter plowing operation. This tool is intended to aid TES Management with optimizing equipment work time, predicting equipment downtime and Snow Plow route optimization.

***PREVIOUS RESOLUTION***

N/A

***REPORT***

The City of Saint John entered into the Smart & Connected Cities Challenge and was awarded a grant of \$25,000 from Enterprise Saint John (ESJ). T4G Limited has partnered with ESJ and approached the City of Saint John to assist in maximizing winter equipment utilization through data analytics. Their goal is to utilize information related to vehicle salt levels, snow plow cutting edge condition, expected vehicle performance, potential obstructions to route completion and existing route priorities. This information is expected to aid in optimizing productive vehicle time.

T4G intends to utilize both past and future data collected via the existing automated vehicle location (AVL) system that is currently installed in the City's snow plows and salter units. T4G proposes to address equipment productivity issues related to salt levels, cutting edge states, predicted breakdowns and route coverage. They will also analyze route planning data and historical management records related to past storm events. Through consultation with City Staff, T4G aims to determine appropriate influence points and choose one to be the basis for exploratory modeling. This information can then be utilized in real-time and used to redirect equipment to optimize service for City roads and Citizens. This project will focus on downtime causation and build a modelling tool around one such factor, based on a collaborated decision on priority. T4G will then present their findings and demonstrate a modeling tool that will assist City Staff in dealing with real time issues currently affecting snow control functions, as it pertains to those issues previously presented. This modelling tool may then be chosen for full implementation.

***STRATEGIC ALIGNMENT***

This report aligns with Council's priority for Valued Service Delivery.

***SERVICE AND FINANCIAL OUTCOMES***

This endeavor is funded via a partnership agreement between T4G, Microsoft, and Enterprise Saint John (ESJ). The multiple joint-partner funding investment model is as follows:

T4G Limited	\$15,000
Microsoft	\$10,000
Enterprise Saint John	\$25,000

This agreement will require the City of Saint John to pay T4G \$33,350 as the project progresses. Subsequently, ESJ will reimburse the City of Saint John 75%. The remaining 25% will be reimbursed to the City by T4G once appropriate project sign offs have been met. This will result in a net \$0 investment by the City of Saint John.

***INPUT FROM OTHER SERVICE AREAS AND STAKEHOLDERS***

This report was reviewed and consulted with IT and Procurement.

The City Solicitor's Office has reviewed the proposed agreement and provided advice thereon and which advice has been incorporated into this report

***ATTACHMENTS***

T4G Proposal: "Snow Vehicles Proof of Value"