An
Automated Vehicle Location Solution
for Kitchener, ON
October 16, 2013
Agenda

- Introduction
- AVL at Kitchener
- Esri Canada’s AVL Solution
- AVL Demonstration
- Summary & Questions
Presenters

City of Kitchener, Ontario

Dan Locke, Manager of Sewer, Traffic and Operational Support, Operations Division, Infrastructure Service Dept.

Greg Kay, Business Systems Project Manager (CPGWR AVL implementation)

Esri Canada

Martin Rothman, Senior Product Manager
What is an AVL Solution?

Automated Vehicle Location (AVL) Solution

A vehicle tracking and recording system designed to help improve fleet safety & productivity, and to provide a real-time view of ongoing operations.
Why did Kitchener implement an AVL Solution?

Salt Management

The City of Kitchener has been a leader with implementation of salt management practices in the region for over a decade, being the first area municipality to develop and implement a substantial anti-icing program as part of its routine approach to winter maintenance activities.

As part of our ongoing commitment to the environment, the City of Kitchener continues to implement new technologies, practices and equipment to reduce the use of salt on our roadways.

Anti-icing

As part of the City of Kitchener measures to reduce salt usage on winter roads, we have implemented an "anti-icing" program. Anti-icing is a proactive strategy that refers to the direct liquid application of a salt brine onto the roadway prior to a snow event which prevents snow and ice from bonding to the pavement and makes snow removal more efficient with less salt use required to return roads to bare pavement.

Automated Vehicle Location Equipment

Salt trucks are linked to a Global Positioning System which records the location and amount of road salt applied to the roadway. Supervisors can review the application rates at specific locations to assist salt truck operators in developing plans to minimize the application of road salt while achieving the level of service requirements of the community.
Why did Kitchener implement an AVL Solution?

- Risk and Litigation concerns
- Environmental issues
  - Source Water Protection, Salt
- Minimum Road Maintenance Standards
- Fleet Reporting needs
  - Operational
  - Municipal
  - Provincial
  - Federal
Why did Kitchener implement Esri’s AVL Solution?

- **Legacy System**
  - Poor System Reliability
  - Unable to keep up to our expectations
  - No longer suitable to our needs
  - Little innovation
  - Poor Support
  - Few value added services

- **Esri Canada**
  - Already GIS vendor of record
  - Willing to work with municipality to meet needs
  - Conducted pilot and decided to move forward
What is Esri Canada’s AVL Solution?

An enterprise AVL solution fully hosted by Esri Canada

- Tracks vehicles in real-time
- Playback past activity
- Vehicle Reports
  - Vehicles activity and stops
  - Salt & sand utilization
  - Route status
  - Winter Operations
  - And more…

- Multiple Basemaps
  - ArcGIS Online maps
  - Your own maps

- Secure Online Services
  - Accessible by desktop and mobile web users
  - Updatable vehicle information
  - Non-editable vehicle records
Esri Canada’s AVL Solution

Esri Canada AVL Operations, Installation and Support Services

- Trucks
- Snow Plows
- Spreaders
- Utility Vehicles

Secure Hosted Facility

ArcGIS Server

Data Store

Tracking Server

Web Based Tracking and Reporting

Mobile Web Browsers

Desktop Tracking Analyst

Enterprise Integration
Vehicle Management Console

Giving you control...
- Over Fleet configurations
- Over who accesses the AVL Solution
- Nothing gets deleted → only assigned, updated or retired
AVL Solution - Web User Interface
AVL Solution - Mobile User Interface
Detailed Analysis using Tracking Analyst
In-Vehicle Tracking Hardware

Esri Canada is partnered with TachWest Technologies

TachWest:

- Experts in...
  - GPS/AVL Systems
  - Specialized data collection
  - AVL Device Integration
- Based in Ontario
- Manufacturer of DataTrans DTTracker AVL Units
  - GPS/Cellular telemetry & data recorders that integrate with industry standard in-vehicle equipment controllers
- Provides AVL hardware & services nationally
Tracking Hardware – AVL Units Supported

- **DT550** – Advanced full featured onboard device
  - Interfaces with on-board equipment & devices
  - Ethernet options
  - Wi-Fi “hot-spot” capable
  - Active system - Live tracking and reporting

- **DT300** – Basic on-board device
  - For “location only” (basic telemetry) tracking needs
  - Active system - Live tracking and reporting

- Force America
- Dickey-John
- Epoke
- CompuSpread
- Schmidt
  and more
AVL Solution - Hardware Services

• AVL Unit Vehicle Installation
• Customer Self Install Training
• Remote Support
• Onsite Support
• Hot Swap Units
• Wi-Fi Enablement
• Annual Support
Esri Canada’s AVL Solution

Demonstration
Esri Canada’s AVL Solution

AVL Tracking Hardware
(TachWest)

AVL Solution
(Esri Canada)

AVL Support
(Esri Canada & TachWest)

Communications
(Your choice of wireless provider)
Questions?
Esri Canada’s AVL Solution

Thank You

For more information contact: Sales@esri.ca