

Routing Solutions for Environmental Quality and Public Works

Aldona Valicenti, Chief Information Officer
October 6, 2020



LEXINGTON

Today's Environment

What we're using now – Div. of Waste Management

- 130 heavy duty trucks in DWM with rugged 10" tablets and connected to cameras on trucks
- 44 light duty trucks with hard-wired CalAmp telematics devices for GPS tracking, vehicle diagnostics
- Integration with Salesforce (311), Kronos (employee time-keeping), Zonar (post-trip vehicle inspections)
- Used to track service completion, speed, travel time, other metrics
- Used for route balancing and optimization; accident investigations
- Current routing tools, Routeware, in use for 10 years



Today's Environment

What we're using now – Streets & Roads, Water Quality

- The “light” version compared to DWM
- 90 vehicles in Streets and Roads and 122 in Water Quality with GPS tracking
- Proven useful tool in leaf collection, streetsweeping, winter weather response

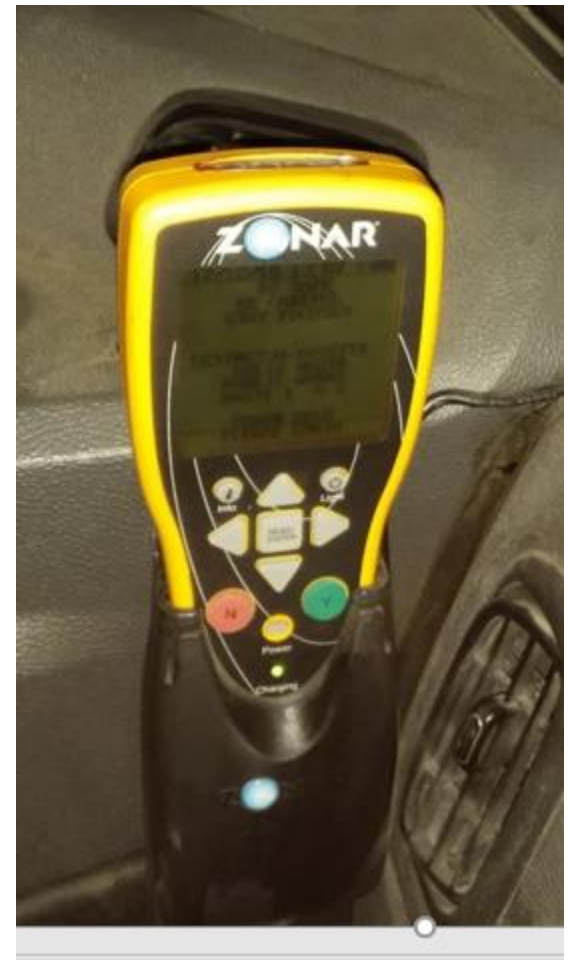
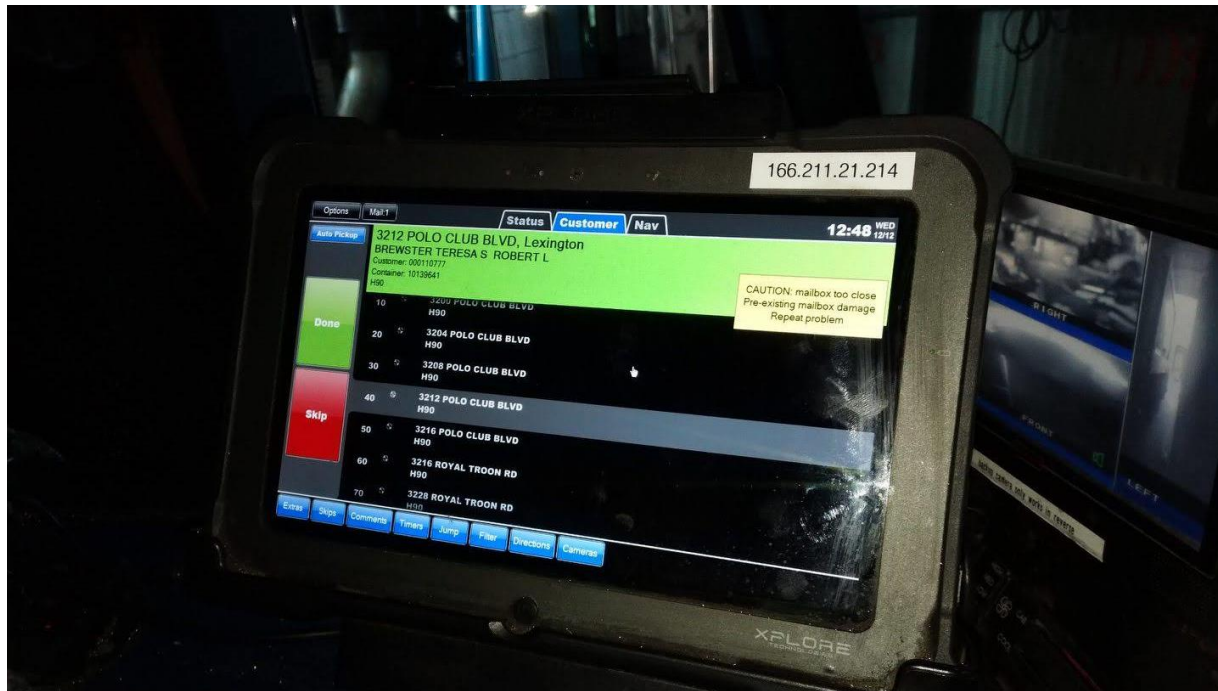
Today's Environment

*Average annual expense for the system is ~\$381,000;
[but only \$6,900 per year from General Fund]*



most funding comes from Urban Services; DWQ covers their expense with sanitary sewers and WQMF funds





Pictures



2014-07-11T10:51:29

BLUEGRASS COMMONS (Acct: 000071884)
145 VIRGINIA AVE, 101
7/11/2014 10:51:32 AM (38.03576 -84.50946)





Request for Information

Developed by a team from multiple departments

- Aldona Valicenti, CIO
- Todd Slatin, Dir. of Central Purchasing
- Tracey Thurman, Dir. of Waste Management
- Eddie Dean, IT Mgr, Div. of Waste Management
- Jennifer Edwards, IT Mgr, Div. of Water Quality
- Rob Allen, Dir. of Streets and Roads
- Scott Garthee, Dep. Dir. of Streets and Roads
- Jean Brooks, Office of the CIO
- Brad Stone, EQPW Commissioner's Office

Request for Information

Purpose

- Engage potential solution providers
- Develop internal understanding of what market has to offer
- Demonstrate leadership and identify local/regional solutions
- Inform next steps in both short term and long term strategy
- Integrate best solutions into a strategic approach
- Guide immediate near term steps

Request for Information

*RFI 22-2020 Posted July 20, 2020;
Responses were due August 10, 2020*

Seven responses received:

- MarshallGIS, Boise, ID
- Rehrig Pacific, Los Angeles, CA
- **Focus/Telus, Sherbrooke, QC**
- **Rubicon Global, Atlanta, GA**
- **Routeware Global, Portland, OR**
- C2Logix/Univerus, Port Moody, BC
- RouteSmart, Columbia, MD

Team met on Aug. 21, 2020 to discuss the proposals and determine next steps

Follow Up Meetings

Three firms selected for follow-up meetings via Zoom

Meetings with each held on Sept. 14, 2020:

- **Rubicon Global, 10:30 am ET**
 - Michael Allegretti, Hurst Renner, Connor Riffle, Ryan Alexander
- **Focus/Telus, 3:00 pm ET**
 - François Bouchard, Dave Wood, Doug Robinson, Jen Lilienstein
- **Routeware Global, 4:00 pm ET**
 - Tom Malone (CEO), Dan Cunnane, Clay George, Hayden Bradford, Mark Fournier, Kerry Araujo, Jesse Whiteman

Key Findings

Lexington's system compares favorably to other options

- Current state of technology has evolved to two basic tiers:
 - GPS installed on vehicles; simple 'track and trace'
 - Higher level systems do more - route balancing and optimization, post-trip vehicle inspections, integration with GIS and 311.
- Lexington's current system compares well; it is a 'smart city' offering
- Some system's capabilities under-utilized

Key Findings

“Road Patrol”

- Vendors presented opportunities for field employees (waste collectors, streetsweepers, snow plow operators) to do more during their job (Road Patrol).
- “One fleet supports another” - concept
- Examples: Waste collectors would report potholes; streetsweepers report litter; snow plow operators report downed power lines.
- DWM’s system can be configured for drivers to do the same - report on more issues. *However...*

Key Findings

“Road Patrol”

- Concern of drivers doing too much extra work
- Some struggles now to get routes completed.
- 1,000+ service points on a typical route, difficult pickups, blocked bins, bins too close to mailboxes, and other objects; tight turning radius, cul-de-sac issues, etc.
- Interaction with on-board tablets = more distracted driving potentially
- More hands-free automation is desirable.
- Examples: Automatically detect when a roll cart has been emptied, or when streetsweeper brushes are in operation, et al.

Key Findings

Enterprise-wide contracting

- Potential gains exist with current system/contract “enterprise-wide” extension
- Scalability appropriate for divisions
- Flexibility to tailor the system to the needs of each division.
- Minimal or lesser cost potential exists.

Key Findings

In Summary

- Routeware upgraded software over the years
- Added new capabilities through acquisitions
- Provides a route management tool equal or better than others who responded
- Current provider integrates with Salesforce, Kronos, and ESRI
- Devices, hard-wired into the trucks, provide durability and reliability

These factors drive the decision to remain with Routeware, and to pursue some adjustments.

Next Steps

Work to improve performance within the current application

- Work with Routeware to pursue enterprise-wide contract.
- Engage drivers to assist in finding road conditions that need to be fixed.
- Look to gather more data but not add to driver-tablet interaction.
- Ask Routeware to bring solutions used by cities that may apply to Lexington.



Questions?