



APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 2, 2017.** Please include this application form with electronic entry.

PROGRAM INFORMATION

County: Loudoun

Program Title: LC911 Situational Awareness Tool

Program Category: Information Technology

CONTACT INFORMATION

Name: Wendy Wickens

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SIGNATURE OF COUNTY ADMINISTRATOR OR CHIEF ADMINISTRATIVE OFFICER

Name: Tim Hemstreet

Title: County Administrator

Signature: *[Handwritten Signature]*



VACO Award Submission for the
LC911 Situational Awareness Tool
Program Category: Information Technology
Loudoun County Est 2017 Population:
383,948

Program Overview:

When the County of Loudoun purchased a new set of applications that became the Public Safety Technology Systems, Computer Aided Dispatch (CAD) was one of the key components in our new set of integrated and interfaced applications. One of the products from our old vendor had a real-time web-based situational awareness tool, with data fed directly from CAD, that allowed any public safety employee with security, to view the application and get an understanding of what active incidents were occurring across the County. This tool allowed our first responders access to the application through a laptop, personal computer, or an iPhone, without having to access the dispatch platform. When we procured our new Public Safety suite of products, none of the Situational Awareness Tools on the market met our needs.

Definition of Problem/Challenge:

Loudoun County needed an application that was agency specific with tight security that would provide situational awareness information to our first responders, without the need for a CAD client license. We also needed to have the dispatch data real time, not with a 30 to 45 second delay which would occur if we had to pull our information from our reporting data warehouses. The application needed to be fast, effective, and provide the information in a manner that was easy to follow when being used in the field.



It also needed to be specific to each agency and be able to be enhanced when new ideas and needs were identified.

Description of Project:

We reviewed many products that were available in the Public Safety software marketplace. Our Sheriff's Office, Fire and Rescue, Fire Marshal's, and Information Technology all reviewed the products and each product fell short of our needs. The products were not nearly as comprehensive as Loudoun needed, and didn't have what we considered to be necessary features like:

- Drilling down into the information about an incident
- Driving directions from the responding vehicle to the incident's location
- History of incidents at a location
- A unit screen that would display where and on what calls all of our active vehicles were located
- Alert a group of individuals that a call was coming to their Fire and Rescue station with an email containing the information about the incoming incident
- Not all of the vendors had a product for an iPhone and an Android phone
- Most of the vendors did not use data from a near real time interface and the time delay was not acceptable

We did a pilot for the project to determine feasibility, and with the help of our Public Safety agencies and the IT Public Safety Applications team, we were able to provide the needed information in a tight deadline, as CAD was going live and this product needed to go at the same time. We used the latest web technologies in creating the LCI911 and LCE911 situational awareness tools. It is a SQL database using ASP.net framework and is written in VB Script.



We had quotes for other products not as fully featured as the one Loudoun needed. By designing and creating our own according to our needs, we could save the County approximately \$640,000 over the next 5 years.

Solution:

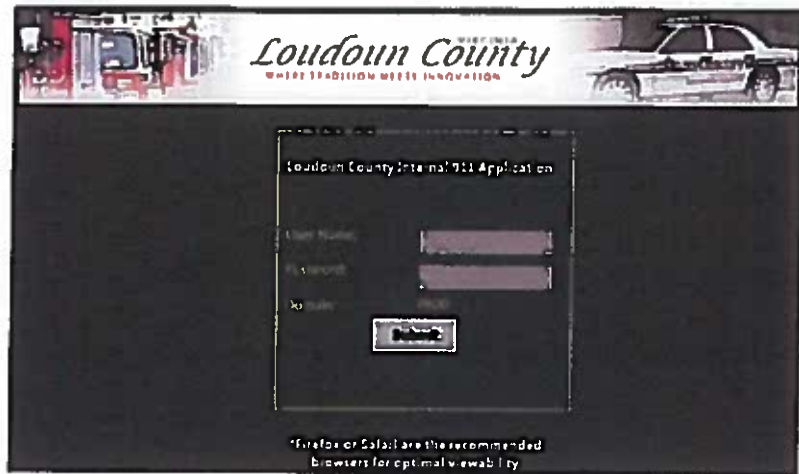
We contracted with our new CAD provider, Motorola Solutions, to provide us with a real-time data feed from our new PremierOne CAD platform, as pulling the data from our reporting data warehouses was too slow at a time lag of 30 to 45 seconds. As a result, our near real time interface provides the main incident data in 5 to 10 seconds from the time the call for service was entered. The Live Incident Status Feed (LISF) provides near real-time information from our CAD platform that creates specific records types when predetermined events trigger a record to be created. When these records are created they are passed to the LC911 application, and based on the location information, the reporting data warehouses are searched for additional call information and the combined data is displayed on the screens. This allows the user to get a full view of the current incident and any historical information we may have on file about that location. Data about the incident, units, status of units, premise hazards, comments, are added to the incident information whenever the information is updated in dispatch, as the call progresses through dispatch to enroute to onscene, to the hospital if required, and finally to closing of the incident.

The team built a secure, in-house application that is easily modified to meet the needs of each agency. It is a web-based product with Active Directory security and user registration to allow access, with no license fees other than for the use of an Applications Program Interface (API) for Google Maps.



It supplies detailed information on each incident within the County complete with:

- This is the signon screen for the LCI911 application



- This is the call detail screen for the Loudoun County Sheriff's office.



- Main call screen for the Sheriff's Office with each incident plotted on the map.



- Driving directions from the vehicle to the incident



- Google maps with Loudoun County map layers for hydrants, rural water supplies and patrol sectors



- History information at the location critical to first responder safety



- Mapping of all current incidents on a County map
- Unit screens that display where all of our active units are located and to which call they are responding

- Capability to view the application on an iPhone and an Android phone



- Be On The Lookout bulletins (BOLO's)
- Pre Alerts for Fire and Rescue that provide basic information that a call is coming to their station

- Emails are sent to Fire and Rescue career and volunteers of the impending event for their selected stations



Thu 5/25/2017 9:14 AM
 LCR911
 62020 -- CHEST PAIN -- 601 SYCOLIN RD SE

Incident Number: LCFR-2017-00005245

Incident Type: CHEST PAIN
 Location: 601 SYCOLIN RD SE City: LEESBURG
 Building: Apartment

Box Area: 62020

Low Cross Street:
 High Cross Street:

Units Involved: T601, M617C

Radio Channels:

Incident Time: 2017-05-25T09:13:05-727-04:00

FDID: 99050, 10701



Incident Location on Map  Map data ©2017 Google

[Link to Google Maps](#)

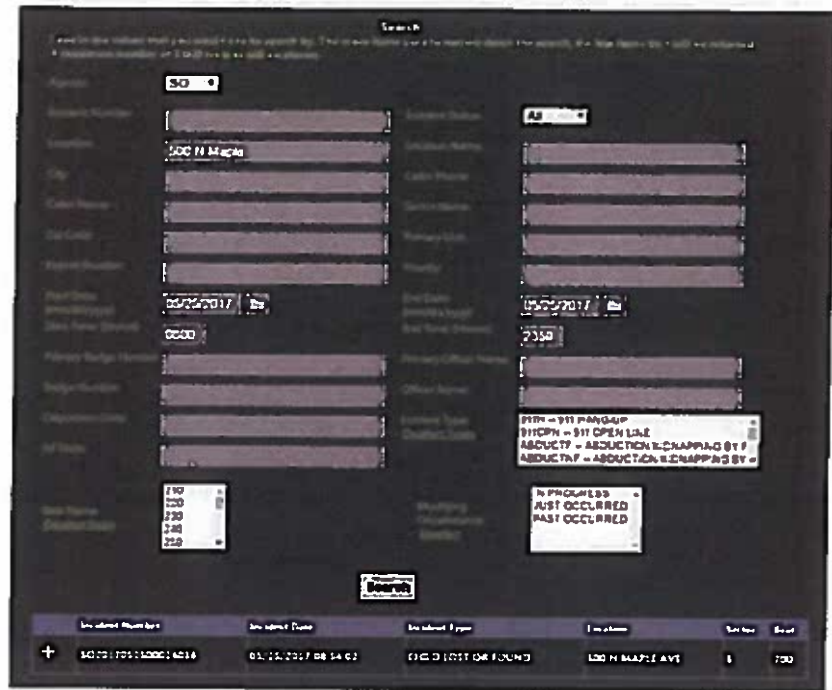
[Link to Directions From Courthouse](#)

[Scanner](#)

- Ability to enter an address and view the x and y coordinates, premise hazards, prior calls for that location, and the location pinpointed on the County map



- An incident search screen that allows multiple selections to narrow down the returned information. Searches can be performed on date, time, date range, location, call type, unit number, and other search criteria.



It allows for awareness by agency of all incidents within the County, and maps all of the incidents on a County map for that agency. Law Enforcement is only able to view Law incidents, Fire and Rescue is only allowed to view Fire and Rescue incidents, and Fire Marshal's are allowed to see all incidents as our Fire Marshal's also have law enforcement capabilities.

The LC911 tool is only available to our first responders within our County network. This product is used by the Emergency Rooms (ER) at our local hospitals to which Loudoun County normally transports our patients to allow the ER to have awareness of the work load that is coming to their hospital. Our Adult Detention Center (ADC) also uses this tool to determine when and who may be delivering an arrestee to the ADC, and if there are a number of arrestees enroute to the ADC, it allows the staff to move resources to handle the incoming work load. Our County Administrator also uses the Fire and Rescue application so that he can be continuously aware of large scale incidents occurring in his County.



The LCe911 tool, is an external version built specifically for Fire and Rescue that would allow the volunteers access to the information via an external source and send the registered volunteer a notification email about the impending incident. From the email, the volunteer can select the link provided in the email, and it will send them to the LCe911 application. This allows the ability to Bring Your Own Device (BYOD).

The Public Safety agencies included in our system are the:

- Loudoun County Sheriff's Office
- Loudoun County Fire and Rescue
- Loudoun County Fire Marshal's
- Loudoun County Animal Care and Control Officers
- Purcellville Police Department

Benefits/Successes:

The application was initially built as a temporary solution to meet the needs of a situational awareness tool for our Public Safety agencies, however it has become a very popular and required tool in the Public Safety set of applications. The custom designed screens for each agency help them to understand what is occurring during an incident and allows the first responders in each agency to view the information in the manner that is most important to them. The supervisors and battalion chiefs can easily see all of the events that are currently active and be able to determine where their staff is located and to which call they are responding. The tool is not only utilized by first responders in the field, but also by support staff, records clerks, investigators, and others in the County who need to monitor critical incidents so that they can respond if needed.



Since the application was custom built by Loudoun County DIT, we have the ability to quickly respond to changes requested by the Public Safety Agencies and they like the response time and no cost of making changes to the application. As our users continue to use the application, they discover more ways to use it, and want additional features added for which our current vendor does not have a solution.

Short Overview of Program:

The LC911 Situational Awareness Tool provides the County's Public Safety agencies with a software product that is not available in the current marketplace. We have built a secure, in-house application that is easily modified to meet the needs of each agency. It is a web-based product with AD security and user registration to allow access, with no license fees other than for the use of an API for Google Maps. It supplies detailed information on each incident within the County complete with location and driving directions, history information at the location, premise hazards, incident search screens, unit information, and BOLO's. It allows for awareness by agency of all incidents within the County, and maps all of the incidents on a County map for that agency.

We had quotes for other products and by designing and creating our own according to our needs, we were able to save the County approximately \$640,000 over the next 5 years. This situational awareness tool is using real-time data supplied by the new Motorola P1 CAD and reporting data warehouses, to provide as much information to the first responders as we have available. The product runs on a desktop, laptop, or mobile phone. It is used as a method of alerting Fire and Rescue Volunteers through a special email solution and external system built for their use. The Fire and EMS main incident screens are being displayed on the big boards in the fire stations throughout the County. This product for Fire and EMS provides a pre-alert feature so that the notification for each call for service being dispatched for that



particular agency is provided sooner, thus allowing them to get out the door faster and saving time in their response to the call.

Brief Summary of Program:

The LC911 Situational Awareness Tool that was written by the Public Safety Applications team in DIT, in collaboration with our Public Safety agencies, to provide the County's Public Safety agencies with a software product that is not available in the current marketplace, as the County moved to its new Motorola PremierOne Computer Aided Dispatch (CAD) system. The development team architected, designed, coded, and tested the new software and put it into production under tight and strict deadlines. This application allows our Sheriff's Office, Fire and Rescue, Fire Marshal's and Animal Care and Control, to view all of the incidents that are occurring in Loudoun County, on one tool, by using a laptop, personal computer, or mobile phone.

It allows for awareness by agency of all incidents within the County, and maps all of the incidents on a County map for that agency. This tool allows the user to get a full view of the current incident and any historical information we may have on file about that location. Data about the incident, units, status of units, premise hazards, and comments, are added to the incident information whenever the information is updated in dispatch, as the call progresses through dispatch to enroute to onscene to the hospital if required, and finally to closing of the incident.

