# 2015 NYS Geospatial Applications Awards Competition Entry Form

**Sponsoring Organization:**
Rochester Fire Department

**Stakeholder/Participant List (by Organization):**

- Rochester Fire Department (RFD)
- Rochester Water Bureau
- City of Rochester Department of Neighborhood & Business Development (NBD)
- Rochester & Monroe County Emergency Communications (911)
- City of Rochester Department of Information Technology (ITD)

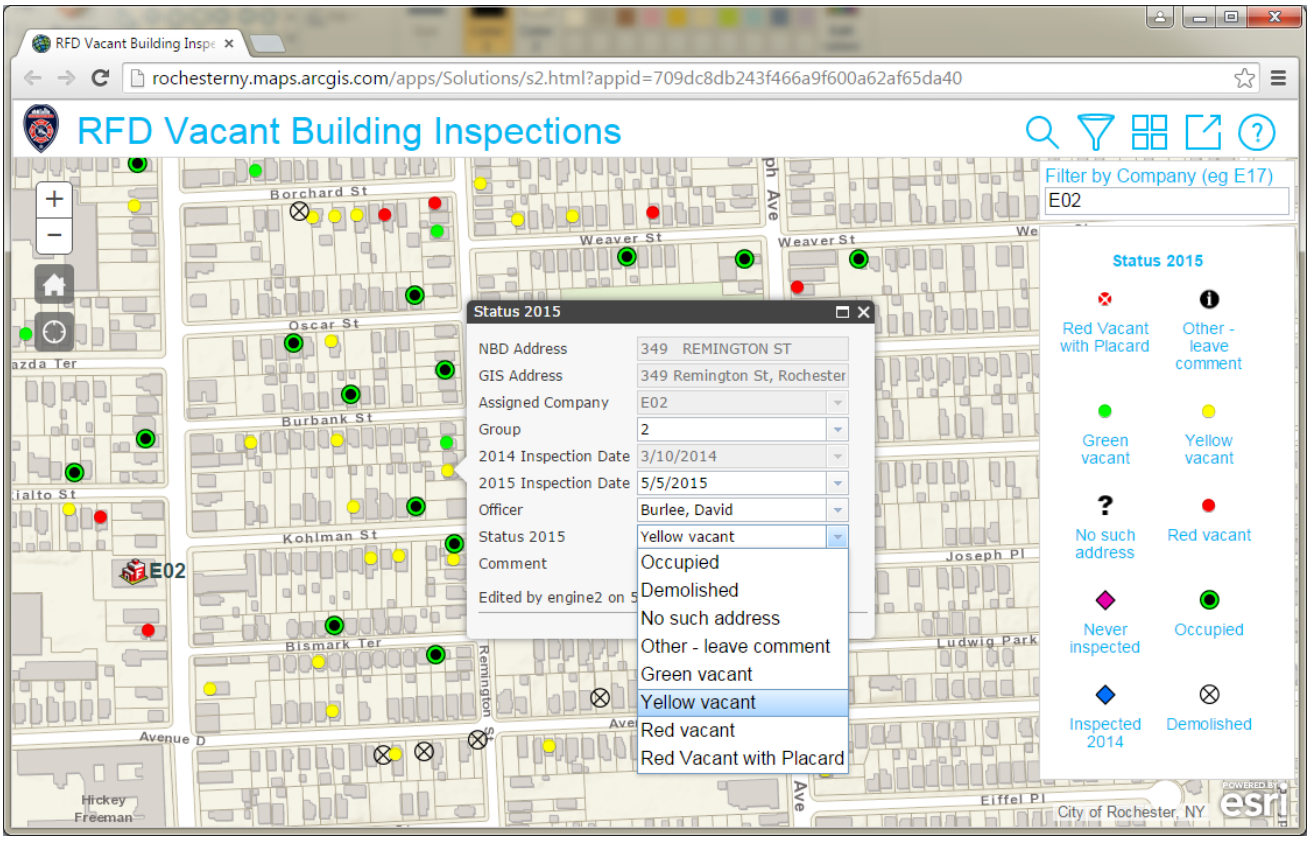
**Title:**
Rochester Fire Department Mobile Inspection Applications

**Abstract:**
The Rochester Fire Department implemented mobile inspection applications for hydrants and vacant structures. The applications were built in-house, employing a rapid development methodology which utilized the ArcGIS Platform and configurable COTS software. The applications eliminated data management problems, saved significant person-hours of effort, and increased safety for firefighters.

**Statement of the Problem:**
The Rochester Fire Department is responsible for inspecting 7,873 hydrants and over 3,000 vacant structures every year. Vacant status needs to be communicated to NBD and 911, and hydrant status needs to be communicated to the Water Bureau. This was a significant organizational challenge. The process was being managed using paper inspection forms, email, and Excel spreadsheets. This was extremely inefficient, resulting in substantial lag times between inspection and notification to other departments. Delays of six months or longer were common, which caused necessary repairs to hydrants to go unaddressed. It was also a health and safety concern for firefighters, as they were occasionally dispatched to a fire with incorrect information about potential safety hazards, including structural integrity problems.

**Response to the Problem:**
City of Rochester Department of Information Technology worked with stakeholders to develop mobile-friendly GIS tools for inspections. The tools run on a web browser on the Mobile Data Terminals in Fire Department vehicles. The tools were developed using the ArcGIS Platform (ArcGIS Desktop, ArcSDE, ArcGIS Server, and ArcGIS Online). We used a hybrid development model - coupling secure services from an on-premises instance of ArcGIS Server with a cloud-hosted (ArcGIS Online) application interface. No coding was needed; the application was built entirely with configuration. Use of off-the-shelf configurable software meant that we were able

to progress from concept to usable application in a matter of months, instead of the several-year cycle typical of project going to RFP.




**Results:**

The fire department no longer delivers 7,873 paper inspection forms to the Water Bureau.

The Water Bureau now has real-time access to hydrant inspection status, and automatically generates work orders. **Hydrant work order turnaround went from 4-8 months to 1 day.**

Vacant inspection turnaround went from 3-6 months to less than a week. NBD and 911 are promptly notified of changes to vacant status.

The project saved the equivalent of 1.5 full-time employees.

**Return on Investment/Cost-Benefit Analysis:**

This project had a 1:20 cost-to-benefit.
**Cost:** 60 person-hours of effort for development, organizational acceptance, and training.
**Benefit:** An estimated yearly savings of 1,200 person-hours (or 1.5 FTE) of record-keeping and management.

There was no additional financial cost, as we utilized existing hardware, software, and licensing for this project.

**Key Participants: (Name, Organization, Title)**

- Joe Luna, Rochester Fire Department, Captain (Planning and Research)
- Mike Woolaver, Rochester Water Bureau, Senior GIS Analyst
- Tony Sutera, City of Rochester Information Technology, Relationship Manager for Public Safety
- Mike Ross, City of Rochester Information Technology, GIS Coordinator
- Mike Herr, City of Rochester Information Technology, GIS Developer
- Gary Kirkmire, City of Rochester Department of Neighborhood and Business Development, Director of Inspection & Compliance Services

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