

Virginia Information Technologies Agency



FY17

PSAP GRANT PROGRAM APPLICATION



VIRGINIA INFORMATION
TECHNOLOGIES AGENCY
Integrated Services Division



FY17 PSAP GRANT PROGRAM APPLICATION

HOW TO APPLY/DEADLINE

The grant application is available and accessible from VITA ISP's website (<http://www.vita.virginia.gov/isp/default.aspx?id=8578>). Upon completion of the application, it is to be submitted to your Regional Coordinator. Any supporting documentation must also be submitted along with the application, including mandatory budgets for projects (if applicable).

After the close of the grant application cycle, a Grant ID and email receipt notification will be sent to the e-mail address listed on the application received.

All funding requests must be submitted using the grant application. Technical assistance is available from VITA's Public Safety Communications (PSC) staff throughout the grant process. The FY17 PSAP Grant Application Cycle starts July 1, 2015 and concludes on September 30, 2015 at 5:00 pm.

ALL APPLICABLE SECTIONS MUST BE COMPLETED IN ITS ENTIRETY OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE AND NOT ACCEPTED FOR CONSIDERATION.



FY17 PSAP GRANT APPLICATION

PROJECT TITLE

Roanoke Valley NG-9-1-1 Shared Services Project

GRANT APPLICANT PROFILE/PROJECT CONTACT

PSAP/HOST PSAP NAME: County of Roanoke
 CONTACT TITLE: GIS Manager
 CONTACT FIRST NAME: David
 CONTACT LAST NAME: Wray
 ADDRESS 1: 5925 Cove Rd.
 ADDRESS 2: 2T
 CITY: Roanoke
 ZIP CODE: 24019
 CONTACT EMAIL: dwray@roanokecountyva.gov
 CONTACT PHONE NUMBER: 540-777-8564
 CONTACT MOBILE NUMBER: 540-588-2861
 CONTACT FAX NUMBER: 540-777-9772
 REGIONAL COORDINATOR: Stefanie McGuffin

HOST PSAP AND PARTICIPATING PSAPS/LOCALITIES

County of Roanoke (Host)

City of Roanoke

City of Salem

GRANT TYPE

Individual PSAP

Shared Services



TIER

- | | |
|---|--|
| <input type="checkbox"/> Out of Service | <input type="checkbox"/> Non-Vendor Supported* |
| <input checked="" type="checkbox"/> Technically Outdated* | <input type="checkbox"/> Strengthen |
| <input type="checkbox"/> Not Applicable | |

If technically outdated or non-vendor supported, application MUST include age and/or version of hardware/software.

VERSION: ArcGIS 10.2.2. # YEARS of HARDWARE/SOFTWARE: 1 year

PRIORITY/PROJECT FOCUS NG 9-1-1 GIS EQUIPMENT & SERVICES

FINANCIAL DATA

Amount Requested: \$ 502,442.48

Total Project Cost: \$ 552,686.73

STATEMENT OF NEED

This statement should reference the relationship to the current funding priorities established by the Grant Committee and include evidence of any financial need, along with additional information on the impact on operational services; consequences of not receiving funding; inclusion of project in a long-term or a strategic plan; and local sustainability:

Geographic Information Systems (GIS) is vital to the success of NG 9-1-1. A dynamic and homogenous NG 9-1-1 dataset is necessary for the entire Roanoke Valley area. Currently, there is no local funding available for this shared project and it is not likely to be completed without proper funding. Each partner will use their current IT infrastructure and personnel to support this project. The grant funding request is 90 percent of the total project cost. The other 10 percent of the project cost is the project time personnel from each locality to work on this venture. GIS is vital to the success of NG 9-1-1, therefore we are requesting the Commonwealth of Virginia fund this worthwhile endeavor.

Comment [SS1]: Does this need to be updated? Given the reduced scope/project.



Describe how the grant will be maintained and supported in the future, if applicable.

The grant will be maintained and supported in the future by current staff at each locality. Current infrastructure will be used to support the Roanoke Valley NG-9-1-1 Shared Services Project. The NG-9-1-1 final dataset should be less than 100 GB therefore having a minimal impact on current resources. **In the future, the County of Roanoke, City of Salem and City of Roanoke will need to maintain and replace all required hardware and software.** This project will support PSAP readiness for future technology and enhance the current efficiency of each PSAP.

COMPREHENSIVE PROJECT DESCRIPTION

Identify the longevity or sustainability of the project.

Once this project has been completed. The GIS tools, data and workflows will be in place to make this project sustainable over the long-haul. All partners will be aware of the sustainability plan and what services that we plan to sustain. In the future, it is possible to expand this project to nearby localities to create a regional Real-Time NG-9-1-1 valid seamless dataset. This project will support PSAP readiness for future technology and enhance the current efficiency of each PSAP. The framework established during this project will also sustain continued advancement as funding permits to add increasingly sophisticated data processing and manipulation that helps increase efficiency and reliability.



Describe how this project supports the Virginia Statewide Comprehensive 9-1-1 Plan.

The goal of this project is to create a new Real-Time NG-9-1-1 valid dataset for City of Roanoke, County of Roanoke and City of Salem PSAP. The data will have the following feature datasets Road Centerlines, Address Building Points and/or Polygons, Emergency Service Zones, PSAP Boundaries, Authoritative Boundaries and County / Municipal Boundaries. This project will support PSAP readiness for future technology and enhance the current efficiency of each PSAP.

SHARED SERVICES (if applicable)

The relationship of the project to the participating PSAPs:

The project will use each PSAPs authoritative data to create a Real-Time NG911 valid seamless dataset. Road Centerlines, Address Building Points and/or Polygons, Emergency Service Zones, PSAP Boundaries, Authoritative Boundaries and County / Municipal Boundaries. The seamless dataset will be available for each PSAP in both CAD and GIS production environments.

Intended collaborative efforts:

The project will collaborate with County of Roanoke, City of Roanoke and the City of Salem. The following tasks will need to be completed.

- 1) Each locality will create and maintain a Real-time or near Real-time Rest Endpoint (Feature Service) of the GIS Data listed above.
- 2) Each dataset will be merged together to create one dataset for the Roanoke Valley Area.
- 3) A New Rest Endpoint will be published of the Roanoke Valley GIS Dataset including Road Centerlines, Address Building Points and/or Polygons, Emergency Service Zones, PSAP Boundaries, Authoritative Boundaries and County / Municipal Boundaries.
- 4) The New Rest Endpoint will be consumed by each locality's PSAP emergency Services mapping application. The data will either be Real-Time or Scheduled/On-Demand.



Resource sharing:

Each partner uses the Esri ArcGIS Platform for GIS production. This project will leverage this platform for interface compatibility and allow each partner to share and disseminate their Geographic Information in their compatible CAD format.

How does the project impact the operational or strategic plans of the participating agencies:

This project does not have an impact on the operational or strategic plans for each agency. This project also provides tier of additional disaster recovery capability by leveraging each agencies Esri ArcGIS Platform to share Geographic Information by creating a secondary source of up-to-date data that is externally accessible.



Provide a thorough, concise, and complete description of the project, including an outline of the goals and objectives, implementation strategy, and a work plan.

Description:

Location data has always been central to 9-1-1 to help direct response teams to the appropriate destination. Now, some of the same technological evolutions that inspired NG 9-1-1 can also be adopted to foster increased quality, reliability, and consistency in the underlying location data.

The ever increasing presence of GIS paralleled by advances in location technology offer an opportunity to streamline regional data management and access. Within the Roanoke Valley, three local governments share a vision for collaborative initiative to establish a dynamic regional dataset designed to support the corresponding PSAPs.

Roanoke County, the City of Roanoke and the City of Salem are looking to leverage GIS to compile, manage and host web based map services that represent the most up-to-date versions of the datasets from each locality. The core data would be comprised of road centerlines, address points, building footprints, emergency service zones, PSAP boundaries, and authoritative administrative boundaries.

The challenge, of course, is that much of the data resides within disparate databases with varying data models (schemas) and diverse maintenance processes. As such, this proposal for grant funds would be leveraged to help accomplish the following:

- Facilitate the creation of a data service or feed at each locality containing the core datasets referenced above.
- Establish processes for the local data service/feed to be updated in real or near-real time.
- Develop automated data acquisition methods to consolidate data sources.
- Create a series of advanced scripts to extract, transform and load (ETL) each data source into a standard data schema.
- Construct the new regionalized version of the data as a centrally hosted service that can be generically consumed across communities.
- Facilitate distribution of the data back to each locality to serve as a multi-point failover strategy.

Implementation Strategy:

The implementation strategy underlying the proposed concept is a multi-faceted, highly collaborative process that spans five key phases:

- **Planning & Analysis:** This phase includes both preparatory activities (project authorization, RFP development/release, selection process) and project initiation and controls (kick-off meetings, working sessions, status meetings and progress reporting).
- **Design:** The Design phase is intended to identify and document the detailed approach through a highly collaborative process. The design will span technical coordination and logistics, data reviews and crosswalks, schema development, system infrastructure design and code framing.
- **Development:** Development is where the core work will be undertaken and where design is translated into operational solutions. Within this phase, the team will implement processes and access points, develop the automation procedures (scripts) to acquire and transform the data, establish logging and reporting, publish & distribute the data, and craft system and administrative documentation.
- **Testing & Acceptance:** With any solution, testing is a requisite step, but a multi-agency solution requires additional effort to ensure that all aspects of the solution are reviewed both together and independently. Within this phase, stakeholders from all groups will have the opportunity to participate in a review and feedback process that will, in turn, drive iterative refinements.
- **Implementation:** The final phase of core activities is comprised of deploying all infrastructure, data, scripts, services, and applications to the production environment. During implementation, the team will provide onsite knowledge transfer and deliver final documentation to support ongoing maintenance of the system, while simultaneously coordinating system release for day-to-day access.
- **Post-Implementation:** Post-implementation is intended to support the transitional period immediately following system release, during which both administrators and users may have questions, and to address any issues that arise from formal adoption or increased utilization.

The following table outlines the work plan in a structure consistent with the phases described above:

Planning & Analysis

Roanoke Valley NG-9-1-1 Prep Activities
Detailed Project Planning
Kick-Off, Status and Working/Review Meetings
Progress Reporting

Design

Collaborative Discovery Workshop
Data Acquisition, Review & Crosswalks
Schema Design, Review Meetings & Process Documentation
System Infrastructure Requirements & Design
Automation Methodology Development
Process Monitoring & Logging Approach

Development

Establish Data Access Controls, Structure & Technical Logistics
Software Installation, Configuration
System Deployment & Configuration
Schema Implementation & Database Administration
Develop Data Automation (Acquisition, ETL, Publication)
Support the Design of a Regional Map Service Design (Configuration, Cartography)
Draft Design Documentation Updates (per implementation)
Draft Administration Documentation

Testing & QA

Configure & Manage Feedback Tracking Solution (JIRA)
Onsite Coordination, Review, Training
System/Process Review & Validation
Acceptance Testing Support
Script Revisions/Refinement
Testing Coordination & Reporting Meetings

Implementation

Finalize Documentation
Knowledge Transfer
Production Environment Setup
Production Script/Service Deployment
Production App Deployments
Release Coordination
Post Implementation Support



**PROJECT TIMELINE FOR
SHARED SERVICES & INDIVIDUAL PSAP APPLICATIONS:**

For each applicable phase of the project, indicate the estimated completion date. Sample activities for each phase are included.

PROJECT PHASE	ESTIMATED COMPLETION DATE
<input checked="" type="checkbox"/> INITIATION (Project approved by appropriate stakeholders) Sample activities: project concept is documented, local board or governing authority approval or endorsement is received, PSAP grant application is filed, local budgets are obtained, appropriated grant funds are approved, and budgetary estimates are obtained	10 / 1 / 16
<input checked="" type="checkbox"/> DESIGN/PLANNING (Project, system, or solution requirements are developed) Sample activities: requirements are documented, components to be purchased are identified, and general design is documented	12 / 31 / 16
<input checked="" type="checkbox"/> ACQUISITION (Selected system or solution is procured) Sample activities: RFP (or other bid related processes) are drafted, proposals are evaluated, contract is signed, purchase orders are issued, and quotes are obtained	10 / 31 / 16
<input checked="" type="checkbox"/> IMPLEMENTATION (Selected system or solution is configured and installed) Sample activities: purchased components are delivered and installed and training is performed	6 / 30 / 17
<input checked="" type="checkbox"/> TESTING/COMPLETION (Selected system or solution is tested and put in production) Sample activities: performance of system/solution is validated and system/solution goes "live"	9 / 30 / 17



BUDGET AND BUDGET NARRATIVE

List the planned expenditures to be made with grant funds. (**NOTE: In lieu of a line item breakdown, an itemized cost schedule or detailed vendor prepared quote may be submitted as an attachment. However, budgetary quotes received from a particular vendor(s) during the application process do not commit the PSAP to use that vendor(s) once the grant is awarded.**) Briefly explain the reason for each requested budget item and provide the basis for its cost. In addition, if contingency cost has been added, please identify the amount.

Please see attached quote from GIS Inc. vendor for professional services. Also, below is each requested budget item and the basis for its cost.

Item	Cost	Basis
Planning and Analysis (Prof. Services)	\$18,000.00	Detailed project planning
Design	\$23,000.00	Data acquisition, schema design, system infrastructure design, develop automation methodology and process monitoring and logging approach.
Development	\$27,000.00	Perform technical logistics, install software, configure software, system deployment and configuration, database administration,
Personnel	\$52,130.00	Data validation and coordination
Technology Equipment	\$6,029.49	Precision Workstation and monitor
Small Equipment & Supplies	\$2,500.00	Phone and office equipment
Travel	\$1,000.00	Travel cost
Reimbursable Expenses	\$600.00	Misc. Expenses
Testing & QA	\$21,000.00	Test, track feedback, train, data validation, system validation, refine scripts, Refine application and coordinate testing.
Implementation	\$15,000.00	Finalize documentation, knowledge transfer, setup production environment, deploy production service, deploy production application, release coordination and post implementation support.
Contingency(5 percent)	\$0.00	Request if there any available funds remaining to fund this line item.
Total	\$166,259.49	

EVALUATION

How will the project be evaluated and measured for achievement and success:

This project will use the following measurements:

- PSAPs have adopted the mutually agreed upon processes for data sharing.
- Establish a hosting environment that meets the service level needs of the participating PSAPs.
- An automated, end-to-end data process with periodic administrative oversight has been successfully established.
- Achieve a viable and consistent regional dataset that can support PSAP operations.
- Satisfy the collaboratively derived definition of "near real time" regional data.
- Demonstrate a fully operational, regionalized dataset to support that participating PSAPs.
- Transfer knowledge from the execution team to the administration team and user base.



CONSOLIDATION (Primary or Secondary) - (complete only if applicable)

How would a consolidation take place and provide improved service:

2T

How should it be organized and staffed:

2T

What services should it perform:

2T



How should policies be made and changed:

2T

How should it be funded:

2T

What communication changes or improvements should be made in order to better support operations:

2T