

Next Generation 9-1-1 GIS Enhancement Project

In an emergency, when seconds count, citizens rely on 911 to provide access to law enforcement, fire and emergency medical services (EMS). While the current system adequately provides 911 service to the citizens of Kansas, it will soon be obsolete. The current 911 system uses analog technology established decades ago to deliver voice and location data to public safety answering points (PSAPs). National telecommunications infrastructure has undergone much advancement, changing the technology available to the public today – and the way the public communicates. Public expectations are that emergency communications is keeping pace with the technological advancements; however, that is often not the case. Technological advancements directly impact the ability of public safety systems to receive various types of data from the public, including text and video.

While NG911 means different things to different people, it is first and foremost the replacement of the current analog 911 system to digital 911 communications. Major changes will be required to transition to NG911; 911 must be enhanced to support new features such as text and video. New 911 applications and Internet Protocol (IP)-enabled customer premise equipment (CPE) must be installed. NG911 will require a different means to automatically identify a caller's location and successfully route the "call" to the appropriate PSAP. NG911 will rely heavily on Geographic Information Systems (GIS) data, which must be standardized and have near real-time accuracy on a statewide basis.

To obtain and maintain an accurate, standardized GIS database to send and receive 911 calls anywhere in the state, the Kansas 9-1-1 Coordinating Council has initiated a three step project. These steps are 1) GIS Data Gap Analysis; 2) Remediation of identified GIS data gaps and errors; 3) Quality Assurance Audit of remediated GIS data. These projects are explained in further detail below.

Local jurisdictions should also know that the enhanced GIS database can be used for other governmental purposes such as for land records and public safety computer systems.

GIS Data Gap Analysis

In this phase of the project, existing GIS data will be gathered from each of the Public Safety Answering Point (PSAP) jurisdictions and provided to the Data Gap Analysis contractor, Alexander Open Office Systems (AOS). AOS will analyze the GIS data to ensure that it meets adopted standards and identify errors or needed corrections within the data. AOS will also compare the data to neighboring jurisdictions data to ensure that shared geospatial features align to provide a seamless GIS map from jurisdiction to jurisdiction across the state. AOS will provide a list of identified gaps and needed corrections which will be provided to the PSAP jurisdiction. This work will be funded by the 911 Coordinating Council.

Remediation of Identified GIS Data Gaps and Needed Corrections

The list of identified gaps and needed corrections will be provided to the PSAP jurisdiction so that remediation of those gaps and errors can occur. The PSAP jurisdiction is responsible for its GIS data and for having the listed database gaps and errors corrected. The 9-1-1 Coordinating Council has issued contracts with five separate vendors which are qualified to perform this remediation work. PSAP jurisdictions will be able to select one of these five vendors to complete the remediation work or they may choose to do the work themselves or contract a vendor other than one of the five vendors under contract with the Council. The 9-1-1 Coordinating Council will cover the cost of the remediation work if one of the five contracted vendors is utilized. If a PSAP jurisdiction elects to conduct the remediation work in-house or if a vendor not on contract to the Council is utilized, the PSAP jurisdiction will be responsible for the costs of the remediation work.

The five vendors under contract for this project are:

- Allied Technical Consultants, Inc.;
- GIS Data Resources, Inc.;
- GeoComm;
- Kimble Mapping;
- R&S Digital Services, Inc.;

The technical proposals that each of these vendors submitted to be considered for qualified vendor status are available on the Kansas911.org website and can be accessed at <http://www.kansas911.org/108/Geographic-Information-Services>.

Upon completion of the remediation work over the entire GIS dataset, the data will be forwarded back to AOS for the audit phase of the project.

Quality Assurance Audit

To ensure that the remediation work has remediated all of the gaps and errors, the data will be analyzed a second time by AOS. This analysis will basically be a repeat of the initial analysis and upon completion will ensure that an accurate baseline GIS database is obtained for the entire state. This work will be funded by the 911 Coordinating Council.

Process for completion of the GIS Enhancement Project

The process that will be utilized to complete this project is enumerated below and depicted in Figure 1. The steps of the process are:

1. Memorandum of Understanding between the 9-1-1 Coordinating Council and the PSAP Jurisdiction executed.
2. Existing GIS data is submitted to AOS. The 9-1-1 Liaison will assist the PSAP jurisdiction with ensuring that AOS receives the GIS data from the PSAP jurisdiction.
3. AOS completes gap analysis of GIS data.
4. Gap analysis results returned to the PSAP jurisdiction for remediation.
5. PSAP jurisdiction selects one of the five qualified vendors or elects to perform the work in-house or through another vendor.
6. If a qualified vendor is chosen, PSAP jurisdiction obtains a quote from the selected vendor for the remediation work. The quote must include the vendor name, the work necessary to remediate all of the identified GIS data gaps, the estimated time necessary to complete work on each data gap, the hourly rate for the work and a total cost of all work.
7. The quote is submitted to the 9-1-1 Liaison for approval. Upon approval of the quote, the 911 Liaison will contact the vendor and authorize the vendor to proceed with the remediation work. If the quote is unacceptable, the 911 Liaison will work with the PSAP and/or the vendor to obtain an approvable quote.
8. Upon receipt of authorization, the vendor will remediate the identified GIS data gaps and needed corrections for the PSAP's entire GIS dataset.
9. Upon completion of the remediation work, the PSAP jurisdiction submits the GIS dataset back to AOS through the 9-1-1 Liaison.
10. AOS conducts the quality assurance audit of the GIS dataset.
11. If the GIS data passes the audit, the PSAP jurisdiction will be notified and will then request an invoice from the vendor. The 9-1-1 Liaison will provide the approved GIS dataset to the PSAP and collect the invoice from the PSAP. If the GIS data fails the audit, a list of the identified gaps or errors will be provided to the PSAP or its vendor for further remediation efforts. Upon completion of the identified remediation the data will again be submitted for audit until such time as the GIS data is approved.
12. The invoice will be forwarded to the Local Collection Point Administrator (LCPA) for payment.
13. LCPA pays vendor.

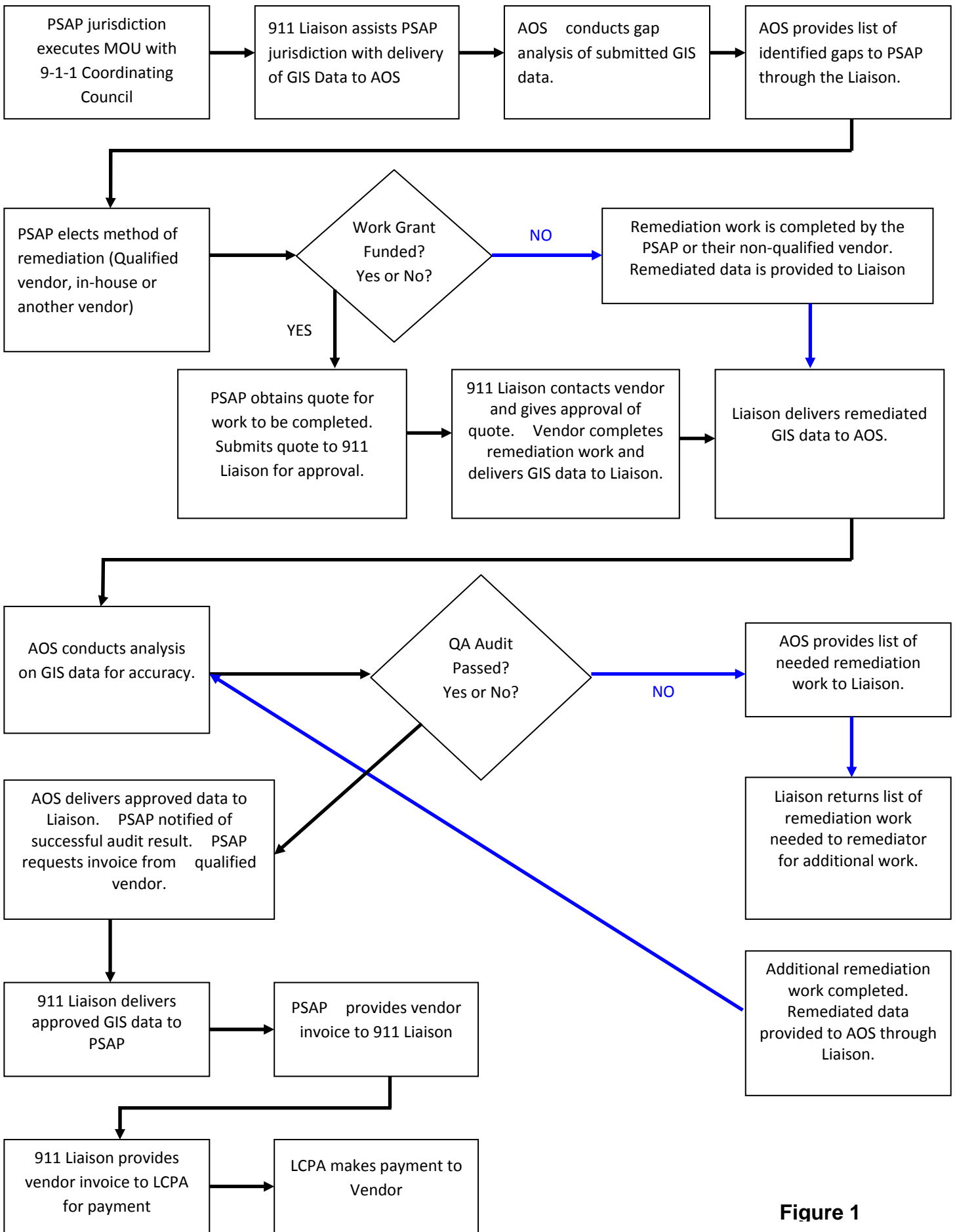


Figure 1