



**MissionCriticalPartners**  
Because the Mission Matters

## Next Generation 911 Strategic Plan

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### Final Report

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PREPARED NOVEMBER 2021 FOR  
NEW MEXICO E-911 BUREAU

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## Introduction

The New Mexico E-911 Bureau (NM911) of the Department of Finance and Administration (DFA) Local Government Division (LGD) provides essential programmatic and financial support to 41 public safety answering points (PSAPs) throughout the state. NM911 is updating its 2013 strategic plan to focus on the transition to Next Generation 911 (NG911). This strategic plan—a roadmap—will guide NM911 for the next three to five years as it transitions to NG911. The initiatives and supporting actions in this plan will support NM911’s vision to provide a best-in-class 911 system—utilizing emerging technology to facilitate efficient, reliable public safety response to best serve the communities of New Mexico.

The initiatives and actions are influenced by the following work performed by Mission Critical Partners, LLC (MCP):

1. Collected and reviewed data provided by NM911
2. Conducted a virtual facilitated strategic planning session with NM911 staff members and the 911 stakeholder community to discuss the vision, mission, and priorities regarding NG911
3. Conducted three virtual regional outreach sessions with the 911 community to solicit feedback on the NG911 plan
4. Conducted an in-depth NG911 Readiness Assessment using MCP’s proprietary Model for Advancing Public Safety<sup>SM</sup> (MAPS<sup>®</sup>) tool

MCP used the results of the readiness assessment blended with the outcomes of the facilitated sessions to develop this NG911 strategic plan.

### MAPS Readiness Assessment

The MAPS tool includes customized questions grouped into topic-specific categories based on best practices and industry standards developed by organizations and workgroups such as the Federal Communications Commission’s (FCC) Task Force on Optimal Public Safety Answering Point (PSAP) Architecture (TFOPA), the National Institute of Standards and Technology (NIST), the National Emergency Number Association (NENA), and the Association of Public-Safety Communications Officials (APCO) International. NM911 staff members were asked more than 80 conversational questions regarding seven NG911 readiness categories.

### Facilitated Strategic Planning

MCP facilitated virtual strategic planning meetings with the key stakeholder group on January 7, 2021, and October 20, 2021. Participants included NM911 staff members as well as 11 stakeholders that represent the New Mexico 911 and GIS<sup>1</sup> community.

During the January meeting, MCP helped the group identify language for the vision and mission statements to guide New Mexico in its transition to NG911. MCP also led the group through the strategic

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<sup>1</sup> Geographic information system

planning process using the “gameboard” methodology. This method helps groups define the current state, desired future state, case for change, barriers to success, and strategy. Based on the important activities identified, the group prioritized the initiatives needed to advance to NG911 during the October meeting.

### Stakeholder Outreach Session

MCP, along with NM911 staff members, hosted three virtual regional stakeholder sessions in June 2021 to introduce the updated vision and mission statements and to solicit feedback from the 911 community on the priorities, initiatives, and actions NM911 should take to advance NG911 in New Mexico. In November 2021, another stakeholder session was held to present the strategic initiatives, gain consensus, and gather input on how NG911 should be implemented for the state.

## Program Overview

### New Mexico E-911 Bureau

NM911 is authorized for five full-time equivalent (FTE) positions, which include a bureau chief, three program managers, and a financial coordinator. A GIS program manager was the newest member added to the team in 2021.

### NM911 Vision and Mission

The initiatives and actions in this plan align with and support NM911’s vision and mission.

#### **New Mexico 911 Vision**

The vision of New Mexico 911 is to provide a best-in-class 911 system, utilizing emerging technology to facilitate efficient reliable public safety response to best serve the communities of New Mexico.

#### **New Mexico 911 Mission**

The New Mexico 911 (NM911) Program provides fiscal and technical program support to Public Safety Answering Points (PSAPs) and Local Governments through communication, collaboration and customer service to enable an effective and quality 911 system.

Each initiative and corresponding action within this plan will serve as a roadmap for the organization’s evolution towards end-state NG911. In many cases, the transition to the NG911 end-state is an iterative process where technical and operational needs are intertwined and must be addressed in parallel. It may

take years to make the full transition to NENA i3<sup>2</sup>-compliant NG911 and, in some cases, will require technology or compliance outside NM911's sphere of influence.

The top strategic initiatives identified by NM911 staff and stakeholders are as follows:

- Stabilize the 911 fund
- Local GIS service providers for all PSAPs
- Educate legislators on the importance of NG911
- Deploy statewide text-to-911
- Deploy statewide ESInet<sup>3</sup> and NG911 Core Services (NGCS)
- Equity of services/capabilities statewide – even out the haves/have nots
- Adopt NENA GIS standards

## NM911's Advancement Towards NG911

The graphic on the following page represents NM911's overall readiness for NG911 based on the MAPS assessment. This assessment provided insight into where the organization is today and where it needs to be for a successful transition to NG911. NM911's answers to specific questions were compared to criteria based on industry benchmarks, national standards, and best practices to develop easy-to-understand scores. These scores aided NM911 in building this plan with priorities and actions.

If NG911 readiness is a continuum from one to ten, where one represents "At risk/Not ready for transition," five represents "transitional," and ten represents "NG911-ready," the MAPS assessment assigned NM911 an overall score of **4.09**. This indicates that NM911 is in the foundational level of readiness for NG911 as the agency has taken the beginning steps to plan for the transition to NG911. This level of readiness is very common in the early stages of preparation and reflects strongly on an organization that is forward-focused and keen to identify gaps and areas of improvement to be made before jumping headlong into the technical and operational waters of NG911.

In the graphic, the gray represents where NM911 stands today across several readiness categories, and the yellow arrows represent the progress it will make as it implements the initiatives in this plan. This continuum represents the industry-accepted 911 maturity model and is designed to help agencies measure their progress toward end-state NG911.

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<sup>2</sup> [https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-sta-010.3-2021\\_i3\\_stand.pdf](https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-sta-010.3-2021_i3_stand.pdf)

<sup>3</sup> Emergency Services Internet Protocol (IP) network

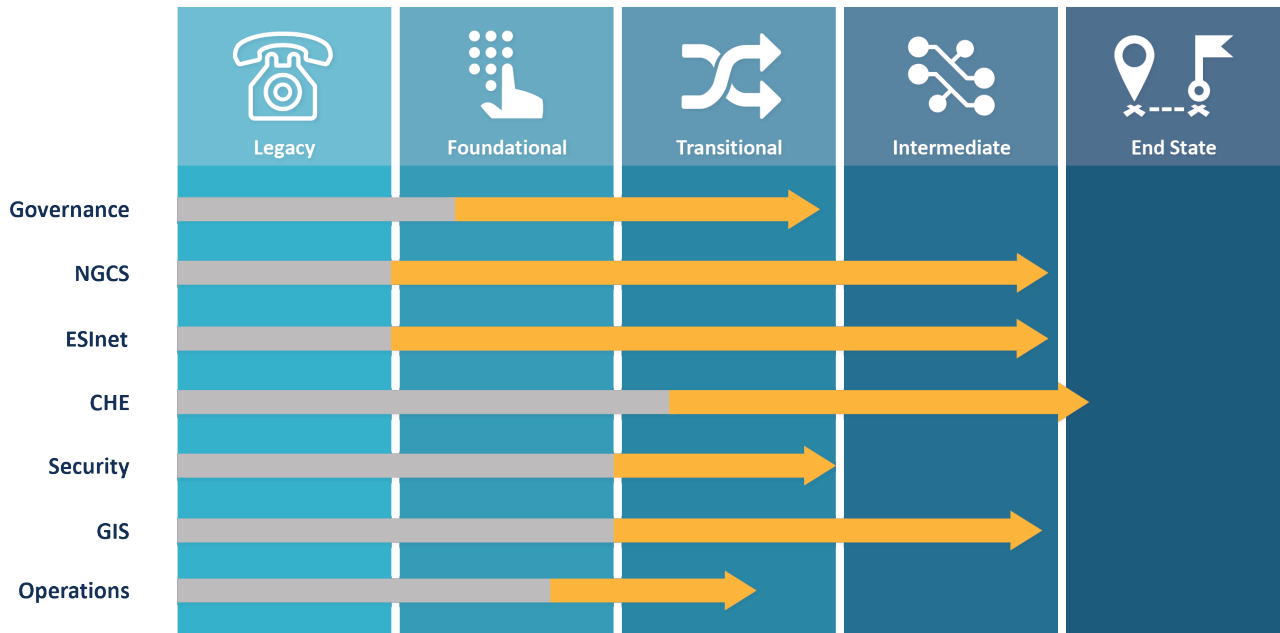


Figure 1: NM911 Progress Toward NG911 Readiness

Table 1: NM911 NG911 Initiatives

Focus Area	Initiatives	Actions
<b>Governance, Planning &amp; Policy</b>	Update legislation	<ul style="list-style-type: none"> <li>Define the role of NM911 in relation to NG911 implementation and coordination</li> <li>Define NM911 as an “essential government service” and its employees as essential personnel</li> </ul>
	Update rules	<ul style="list-style-type: none"> <li>Update New Mexico Administrative Code E911 10.6.2 rules</li> </ul>
	Develop NG911 policies	<ul style="list-style-type: none"> <li>Update the PSAP Manager’s Guide with NG911 program policy statements based upon industry standards and best practices; remove any legacy policies that no longer apply</li> <li>Update PSAP requirements to include NG911 functionality</li> </ul>
	Develop and execute NG911 implementation plan	<ul style="list-style-type: none"> <li>Update the strategic plan to include NG911 (in progress)</li> <li>Use the readiness assessment and this plan as a roadmap for the tasks, owners, and timelines for implementing NG911 in New Mexico</li> <li>Develop benchmarks for progress</li> </ul>

Focus Area	Initiatives	Actions
<b>Communications</b>	Create communications plan that expands outreach/education	<ul style="list-style-type: none"> <li>• Document key messages, target audiences, timing, and methods</li> <li>• Update/maintain NM911 website</li> </ul>
	Conduct public relations campaign	<ul style="list-style-type: none"> <li>• Educate legislature regarding importance of NG911</li> </ul>
<b>Technology</b>	Continue to deploy NG911-capable CHE <sup>4</sup>	<ul style="list-style-type: none"> <li>• Complete CHE replacement cycle</li> <li>• Regularly review and update when necessary NM911's requirements for CHE logging/recording and MIS<sup>5</sup> to comply with the latest industry standards regarding NG911 (and beyond) techniques, technologies, and specifications</li> </ul>
	Procure NG911 ESInet and NGCS	<ul style="list-style-type: none"> <li>• Weigh technical options, seek stakeholder input, and develop system requirements</li> <li>• Investigate procurement requirements and the potential for exceptions related to the ESInet and NGCS</li> <li>• Equity of services/capabilities – even out the haves/have nots</li> </ul>
	Develop cybersecurity plan	<ul style="list-style-type: none"> <li>• Use security standards</li> <li>• Address network monitoring</li> </ul>
	Implement text-to-911	<ul style="list-style-type: none"> <li>• Develop a plan and a set of guidelines, recommendations, or requirements defining NM911's vision for a cohesive statewide deployment of text-to-911</li> <li>• Assure interoperability is a key focus if no single statewide system is to be deployed</li> </ul>
<b>Geographic Information Systems</b>	Continue executing GIS plan	<ul style="list-style-type: none"> <li>• Assure local GIS service providers for all PSAPs</li> <li>• Finalize current NG911-compliant GIS initiatives</li> <li>• Adopt NENA GIS standards</li> <li>• Update GIS database</li> </ul>
	Update addressing guide	<ul style="list-style-type: none"> <li>• Form committee of local, regional, and State stakeholders to develop new guidance based on NG911 standards and current industry best practices</li> <li>• Develop and execute an education and outreach plan to promote the new addressing guide</li> </ul>
	Connect GIS provider and addressing authority	<ul style="list-style-type: none"> <li>• Identify the GIS and addressing authority for each jurisdiction and maintain a contact list</li> <li>• Share new and updated information with the stakeholder community</li> </ul>

<sup>4</sup> Call-handling equipment

<sup>5</sup> Management information system

Focus Area	Initiatives	Actions
		<ul style="list-style-type: none"> <li>Promote cooperative development and maintenance of SSAP<sup>6</sup> between GIS and addressing authority</li> </ul>
Funding	Conduct NG911 funding study	<ul style="list-style-type: none"> <li>Perform a financial analysis to determine current 911 costs and projected costs of the NG911 transition</li> <li>Determine if an increase to the 911 surcharge is necessary</li> </ul>
	Create sustainable funding model	<ul style="list-style-type: none"> <li>Stabilize the 911 fund – do not let it be raided</li> </ul>
Operations & Training	NM911 personnel	<ul style="list-style-type: none"> <li>Hire program manager to assist with policy creation, workgroup facilitation, and stakeholder communications</li> <li>Create subcommittees to assist in policy development</li> </ul>
	Adopt NG911 training standards	<ul style="list-style-type: none"> <li>Update legislation to include representatives from the 911 community and NM911 to serve on the New Mexico Law Enforcement Academy</li> <li>Develop a training workgroup to partner with the training academy to ensure that the curriculum meets PSAPs' needs</li> <li>Update the curriculum as NG911 technology is deployed</li> <li>Include a section on occupational wellness in the PSAP curriculum focused on the stressors of NG911</li> </ul>
	Develop continuity of operations (COOP) plan	<ul style="list-style-type: none"> <li>Engage staff and stakeholders to develop a comprehensive COOP plan template for NM911 and PSAPs that aligns with FEMA<sup>7</sup> recommendations, including an annual review process</li> <li>Expand PSAP requirements to include a COOP plan</li> <li>Develop a succession plan and update regularly</li> <li>Conduct training for staff members to function in a role that is one above their position for emergency backup, succession training, and to increase organizational depth</li> <li>Cross-train staff (to the degree feasible) to augment current staff shortages until additional staff is acquired</li> </ul>

<sup>6</sup> Site structure address points

<sup>7</sup> Federal Emergency Management Agency





Proper governance, planning, and policies are critical components of a successful transition from legacy 911 to NG911. Governance, planning, and policies establish both a path to success and a baseline for how to walk the path. Without them, every aspect of the transition faces increased risk.

As identified in the New Mexico NG911 Readiness Assessment, much of the governance in place today is focused solely on Enhanced 911 (E911) and work is needed in all areas to advance towards the NG911 end state. Focus should be given to creating committees and workgroups to assist with development of the governance structure and the updated policies and documentation required.

## Priority



Focus should be on creating committees and working groups to assist with development of governance structure.

### Update Legislation

The changes made to the New Mexico legislation in 2017 to broaden the definition of “enhanced 911 system” overall are very comprehensive and broad enough to allow for future changes in technology to be interpreted as part of the E911 system. However, the statute<sup>8</sup> does not specifically identify the role of NM911 to facilitate state-level coordination of 911 service networks statewide.

Legislation should be updated to:

- Define the role of NM911 in relation to implementation and coordination of NG911
- Provide NM911 the authority to ensure coordinated intrastate interoperability of 911 communications
- Specifically, state NM911 has the responsibility to coordinate and oversee the state NG911 plan
- Specify NM911 as an “essential government service” and its employees as essential personnel

After NG911 has been fully implemented in New Mexico, the legislation should be updated to remove all legacy terminology and references.

Stakeholders also have identified the desire to reclassify public safety telecommunicators (PSTs) within New Mexico as first responders. Within the 911 industry, there is a movement to recognize work 911 professionals do every day to protect and save the lives of first responders and the public. The National 911 Program has created a resource packet to assist in this effort.<sup>9</sup>

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<sup>8</sup> [NM Stat § 63-90-8.1 Division of Powers](#)

<sup>9</sup> The first of a four-part toolkit is available now, Telecommunicator Job Reclassification, which can be found at: [https://www.911.gov/project\\_telecommunicatorjobreclassification.html](https://www.911.gov/project_telecommunicatorjobreclassification.html)

## Develop NG911 Policies and Best Practices

NM911 will update the E911 rule<sup>10</sup> to align with the changes made to the statute, removing references to legacy technology to be more vendor neutral and including NG911 and ESInet references. Consideration should be given to including references to basic security and cybersecurity measures that each PSAP should consider when on a shared statewide system.

NM911 has a comprehensive *PSAP Manager's Guide to the New Mexico E-911 Program* that provides information on program policies and the process for requesting funding. However, this document was last updated in 2014 and is focused solely on E911. NM911 should use committees and workgroups to provide feedback and insight from the PSAP community to assist in updating the document to align with the latest statute changes and anticipated rule updates.

At a minimum, the following policies are needed:

- Process for requesting funds
- Connecting to the statewide NG911 network
- Use of additional data based on federal and state statutes
- Consolidation policies
- Incentives for accreditation

## Develop and Execute NG911 Implementation Plan

Using information from the NG911 assessment and this strategic plan, NM911 should create a detailed implementation plan, which should include the major milestones for implementation along with a detailed list of tasks with identified owners and timelines. In addition, the plan should clearly define metrics used to measure progress and benchmarks for success.

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<sup>10</sup> Title 10 Public Safety and Law Enforcement, Chapter 6 Local Government Law Enforcement Agencies, Part 2 Enhanced 911 Requirements - [www.nmdfa.state.nm.us/wp-content/uploads/2021/01/NMAC-10.6.2-E-911-Rule.pdf](http://www.nmdfa.state.nm.us/wp-content/uploads/2021/01/NMAC-10.6.2-E-911-Rule.pdf)



Communication is one of the simplest and least utilized tools for success during times of change. Frequent communication enhances trust, builds relationships, and helps stakeholders lend a voice to a conversation, leading to greater understanding, support, and buy-in on critical initiatives.

### Create a Communications Plan that Expands Outreach and Education

NM911 staff have identified the need to have a formal communications plan and process in place to continue the work being done organically. A communications plan should identify target audiences, communication methods, timing and frequency of communication, and key messages.

NM911 stakeholders identified a desire to:

- Empower the PSTs to provide a voice for change locally
- Educate local 911 authorities about NG911
- Educate local authorities and elected officials that 911 must be partially funded at the local level

As a part of the communications plan, NM911 should aim to publish a quarterly newsletter. This newsletter will provide updates on the transition to NG911, the schedule of upcoming meetings or deadlines, challenges NM911 may be facing, and any industry information that may help educate stakeholders on the benefits of NG911.

As part of the communications process, NM911 has begun updating its website and plans to use it as a simple and effective method for ensuring stakeholders have access to the most recent NM911 news and information.

### Conduct Public Relations Campaign

NM911 and its stakeholders prioritized the need to educate elected officials regarding the importance of NG911 by raising awareness of the benefits of NG911 and stressing the need to fund the transition adequately. As a result, NM911 has begun an initiative with the DFA's public information officer to create educational materials for stakeholders.

A thorough public relations campaign will target outreach and education on NG911, its benefits, and the need to maintain and fund legacy 911 systems during the transition.

**Priority**



Communications is essential to raise awareness of the benefits of NG911 and the need to adequately fund the transition.



While IP networks are a foundation of NG911 and provide greater flexibility, survivability, and access to data, the benefits of connectivity also mean these public safety and mission-critical systems face a greater risk of attack. The initiatives that follow are high-priority tasks to undertake to ensure that NM911 maintains high-quality, reliable, and secure NG911 systems.

### Priority



Ensure the equity of services and capabilities between New Mexico's PSAPs.

#### Continue to Deploy NG911-Capable CHE

CHE is a key component in the NG911 environment and has been a priority of NM911 for the past two years. To meet NM911's goal of reaching an end-state NG911 system, it is vital that CHE equipment be able to receive NG911 data. Leveraging the statewide procurement vehicle for CHE, the State should complete the CHE replacement cycle to ensure all PSAPs are NG911-capable at the time of NG911 implementation.

During the next statewide procurement cycle, CHE contracts should be reviewed against the then-current NENA i3 standards and other industry best practices and updated as necessary. Specifically, requirements for logging/recording and MIS will need to be developed in compliance with the latest industry standards regarding NG911 (and beyond) techniques, technologies, and specifications.

#### Procure NG911 ESInet and NGCS

NM911 and its stakeholders identified the need to develop robust technical requirements that meet the operational and technical needs of the state. The NG911 solution should support transition and end-state i3 requirements. As a first step in the creation of NG911 requirements, NM911 should seek stakeholder input and create a technical workgroup. The workgroup will utilize stakeholder input and assist in evaluating technical options for deployment. For example, will NM911 deploy a single statewide solution, or should it be deployed regionally and consist of multiple regional systems?

Once the direction of NG911 deployment has been determined, the workgroup will assist with developing standards-compliant system requirements for procurement. Part of the workgroup's focus, in addition to developing request for proposal (RFP) requirements, will need to be creating a transition plan that supports both legacy and next-generation systems. As with most ESInet and NGCS deployments, NM911 will have to maintain its current legacy environment as well as deploy next generation-compliant systems.

#### Develop Cybersecurity Plan

Cybersecurity is of great importance for all broadband-enabled devices and networks. Cybersecurity attacks are prevalent in the emergency communications industry—each year, the number of attacks continues to grow. Using the TFOPA security recommendations, NM911 should create a cybersecurity plan to address cybersecurity threats and vulnerabilities. The plan should address network monitoring so that there is increased visibility and transparency to NM911. As part of the planning process, third-party

audits of systems, networks, and facilities should be required as well as regular reviews of security policies and procedures.

### Implement Text-to-911

NM911 staff identified the need for a statewide text-to-911 plan. Text-to-911 is the ability to send a text message to reach 911. The deaf, hard of hearing, and communities with speech impairment rely on the ability to text 911 to receive help in an emergency. Leveraging stakeholder input, NM911 will need to develop a plan that defines NM911's vision for a cohesive statewide deployment of text-to-911. This plan should address the technical requirements needed to deploy text-to-911, a timeline for deployment, best practices or guidelines for processing text-to-911 calls, and training required and assure interoperability is a key focus if no single statewide system is to be deployed. The plan should align with industry best practices and standards.



NM911 has done much to prepare for the GIS data required in a successful NG911 transition. The further implementation of a large-scale, enterprise-wide capability such as geospatial data collection, aggregation, validation, and dissemination will require a tremendous effort through a phased approach, significant stakeholder coordination and collaboration, and adequate and sustained funding streams.

### Update Addressing Guide

Standardized processes, such as the [NEW MEXICO ENHANCED 9-1-1 Addressing Guide for Local Governments](#), will require formal documentation to reinforce the need for compliance by all jurisdictions. The identification of these opportunities and the authoring of a document are key functions of the State. Given the importance of site structure address points (SSAP) and address accuracy to road centerline address ranges to the operation of NG911, it is vital that the State update this guide.

Many local jurisdictions in New Mexico do not have addressing ordinances or follow industry best practices for addressing. Others that have adopted standards either do not have the resources to ensure the standards are being followed or addressing authority has been transferred to an agency unaware of the standards and their importance to 911 operations. In addition to updating the addressing guide, the State must promote adoption of it at the local and regional levels across the state through a coordinated outreach and education effort.

The first step in updating the addressing guide is to assemble a variety of stakeholders from rural and urban jurisdictions across the state. The updated guide should include methods for assigning addresses, data maintenance procedures, and developing SSAP and properly attributing road centerlines to NENA and State standards, and a communications workflow to ensure all entities in emergency services are aware of new addresses.

GIS errors often need to be corrected by the addressing authority, but in many jurisdictions, GIS and addressing are performed by different people in different departments. Ongoing cooperation and collaboration are key to successfully implementing the updated addressing guidelines and maintaining accurate GIS data. The guide should promote the necessity for addressing and GIS staff to coordinate new address creation and the correction of address errors found by 911 centers through their daily operations.

Success for this effort can be tracked through the collection and aggregation of SSAP and road centerline data at the state level. A successful partnership will create a system that produces accurate GIS data, with processes in place to correct errors with near-real-time updates to achieve compliance with state

### Priority



Provide a collaborative environment for GIS providers and addressing authorities to support the further development and maintenance of GIS data to advance the NG911 migration at every level of government.

guidelines. These data then can be shared back to the 911 community for use in computer-aided dispatch (CAD) and call-handling systems.

Finally, State GIS funds can be used to improve addressing in local jurisdictions. The guide should provide details on outlining projects and requesting funds. Where possible, templates and other draft documentation should be provided to lessen the burden on local resources as they work to update and maintain these important GIS datasets to NG911 standards.

### Continue Executing GIS Plan

To advance the NG911 migration, NM911 must remain focused on continuing to execute the GIS plan.

There are six core principles which the state, local, and tribal stakeholders may improve to successfully prepare GIS programs in all levels of government to support geospatial functions in the NG911 system.



**Governance:** GIS programs in New Mexico must work in a collaborative environment, both across jurisdictional boundaries and vertically through all levels of government, to ensure the integrity of NG911 GIS data across the state and with neighboring states. It is recommended that NM911 organize and actively participate in the collaboration.

**Staffing and Training:** It may be necessary for NM911 to support understaffed jurisdictions with contracting assistance or with direct GIS data development and maintenance.

**GIS Data Uniformity:** NM911 will encourage GIS data symmetry across the state and data interoperability between PSAPs and NGCS providers in New Mexico and with neighboring states.

**GIS Data Maintenance:** Local and state GIS programs will require immediate data development and sustained data maintenance assistance to ensure the availability of robust, accurate, and fully attributed GIS data.

**Best Practices:** Using national standards as a baseline, NM911 will promote the development and maintenance of GIS data to standards best suited for statewide interoperability.

**Funding:** Central to the migration effort is the need to fully fund the efforts of local GIS programs via local and state budgets. The level of effort necessary for the preparation and maintenance of GIS data to support NG911 will vary by jurisdiction. It is vital that the State work with each jurisdiction to determine the best path forward and identify the funding necessary to achieve success.

Further details on these topic areas can be found in Appendix A.



Proper funding is imperative not only for the transition to NG911 but to ensure standards of service in operating current 911 systems. Without a thoughtful and measured funding model that ensures nobody is left behind in the transition to enhanced technology, there will inevitably be disparity in the level of 911 service delivered statewide.

NM911 recognizes that funding is not adequate to pay for the current legacy 911 costs, let alone pay for both legacy and NG911 systems concurrently during the transition. This will exceed the 911 revenue collected today, and it must take steps to ensure understanding of the operational and sustainment costs of 911 and NG911.

NM911 staff and stakeholders have prioritized the need to establish a sustainable funding model to ensure a successful transition to NG911 and meet the strategic vision of a best-in-class 911 system.

### Priority



Create a sustainable funding model to ensure statewide parity of 911 service.

#### Conduct an NG911 Funding Study

To meet the priority identified by NM911 and stakeholders to create a sustainable funding model for 911, it is necessary to first understand the true costs of operating the current 911 system and have an estimate of the costs of NG911. NM911 should conduct a funding study to help determine:

- How to increase efficiencies and eliminate redundant costs
- The potential costs of NG911 deployment
- Which NG911 procurement option is best for the state
- How to fund ongoing NG911 costs
- Alignment with the recommendations from the FCC's advisory committee, the Ending 9-1-1 Fee Diversion Now Strike Force<sup>11</sup>
- Whether to adjust 911 fees and, if so, by how much

#### Create Sustainable Funding Model

Once the NG911 funding study is complete, NM911 will have the data needed to begin to establish a sustainable funding model. NM911 should establish a stakeholder workgroup to study potential funding models, including neighboring states and other states of similar size. If it is determined that legislative changes are required to increase the amount of the 911 fee, it will be vital to have the support of:

- Stakeholders
- Elected local officials
- Industry partners
- Legislative sponsors

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<sup>11</sup> [The Ending 9-1-1 Fee Diversion Now Strike Force | Federal Communications Commission \(fcc.gov\)](https://www.fcc.gov)





NG911 is often discussed as a technology issue, and it is, but it is equally challenging to operationalize the technology. NM911's support of the operational challenges during migration to NG911 is essential to the success of the transition. NM911 should be prepared to provide PSAPs guidance through training, procedural development support, and financial incentives as they adopt successful NG911 protocols.

### NM911 Personnel

Stakeholder engagement is a vital part of the information sharing in NG911 implementation. NM911 should consider hiring a program manager to assist with policy creation, workgroup facilitation, and stakeholder communications.

The program manager will help:

- Create subcommittees as needed to assist in the development of policies
- Ensure an adequate cross-section of various technical, line, and management personnel are part of these subcommittees
- Assist with the creation and implementation of the communications plan

### Adopt NG911 Training Standards

Professional development and consistent training for PSAPs are critical to remaining current with standards and changes in technology, as each day, new tools are developed and made available for use. New Mexico recognizes the importance of training and has state-level training requirements for all telecommunicators and dispatchers. However, stakeholders have identified the need to have a voice in the training curriculum.

Legislation<sup>12</sup> should be updated to include representatives from the 911 community and NM911 to serve on the New Mexico Law Enforcement Academy Board. While legislative training requirements align with minimum guidelines, input from the 911 community to curriculum development is limited, and training topics do not address NG911. The input of multiple parties will provide the opportunity to speak to 911 training curriculum needs.

NM911 should develop a 911 training workgroup to partner with the training academy to ensure that the curriculum meets PSAP needs. This should be an ongoing process that factors in need for training updates that align with technology changes. Potential workgroup members include:

- CAD administrators
- Radio system support personnel
- Line and management-level employees

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<sup>12</sup> Section 29-7-3 NMSA 1978

Training standards should include a section on occupational wellness in the PSAP that focuses on the stress and stressors of NG911. In the early years of the 911 profession, little consideration was given to the emotional, psychological, and physical impact of receiving and processing emergency calls for service. Only recently has the 911 industry become better aware of the auditory impact of being a 911 professional. With the emergence of NG911 technology and the various media that will be presented to PSTs, it is critical that training be tailored for viewing and processing that impactful media in much the same manner as fire department, emergency medical, and law enforcement first responders are trained to manage the impact of what they see. Effective proactive training and ongoing support processes will mitigate the potential negative behaviors that can result from ongoing exposure to vicarious trauma. This will assure employees have the tools necessary to manage stress throughout their careers. As with all training, it is important to ensure PSAP training requirements align with industry standards (e.g., APCO, NENA, and National Fire Protection Association [NFPA]) and remain so aligned as standards are updated.

## Develop COOP Plan

NM911 should engage staff and stakeholders to develop a comprehensive COOP plan for the state office and a template for PSAPs that aligns with FEMA recommendations, including an annual review process and staff training.

A COOP plan outlines the steps necessary to maintain operational capacity during a localized or region-wide disruption of normal operations. The key objectives for any COOP plan should include actions to:

- Minimize disruption to normal operations and service levels
- Mitigate, to the extent possible, the effects of disruptive events
- Minimize the fiscal impacts of disruptive events
- Prepare staff to implement emergency procedures
- Establish or define alternate methods to continue service delivery
- Provide for the efficient and timely restoration of department operations

An effective COOP plan is one that is responsive to known, emerging and immediate threats. The plan should cover all operational levels, including a succession plan, and be capable of level setting for varying durations and degrees of impact.

## Conclusion

This *New Mexico NG911 Strategic Plan* was designed to guide NM911 toward its desired future for NG911. The initiatives laid out will serve as a roadmap to help NM911 progress in the areas of governance, planning and policy; communications; technology; GIS; funding; and operations and training.

During the virtual meeting on October 20, 2021, the key stakeholder group prioritized the strategic initiatives to establish a focused five-year plan. On November 1, 2021, a town hall session for all PSAP stakeholders was held to present the strategic initiatives, gain consensus, and gather input on how NG911 should be implemented for the state. The group agreed on the need for a single statewide NGCS

implementation to benefit from economies of scale in pricing, overarching coordination, and long-term results. Stakeholders also identified a desire to explore the potential for multiple network providers. The resulting five-year plan is shown below.

Table 2: Five-year Plan

New Mexico NG911 Five-Year Strategic Initiatives
Year One Priorities
<ul style="list-style-type: none"> <li>• Update legislation—revise legacy terminology and references, clarify NM911 procurement authority, and permit increased funding if determined it is needed</li> </ul>
<ul style="list-style-type: none"> <li>• Update rules</li> </ul>
<ul style="list-style-type: none"> <li>• Conduct an NG911 funding study</li> </ul>
<ul style="list-style-type: none"> <li>• Develop NG911 policies</li> </ul>
Year Two Priorities
<ul style="list-style-type: none"> <li>• Create a communications plan that expands outreach and education</li> </ul>
<ul style="list-style-type: none"> <li>• Create a sustainable funding model</li> </ul>
<ul style="list-style-type: none"> <li>• Develop an NG911 implementation plan</li> </ul>
<ul style="list-style-type: none"> <li>• Develop a cybersecurity plan</li> </ul>
<ul style="list-style-type: none"> <li>• Continue to deploy NG911-capable CHE</li> </ul>
Years Three through Five Priorities
<ul style="list-style-type: none"> <li>• Procure NG911 ESInet and NGCS</li> </ul>
<ul style="list-style-type: none"> <li>• Update the addressing guide</li> </ul>
<ul style="list-style-type: none"> <li>• Adopt NG911 training standards</li> </ul>
<ul style="list-style-type: none"> <li>• Hire NM911 personnel</li> </ul>
<ul style="list-style-type: none"> <li>• Implement text-to-911</li> </ul>

It is important to note that the five-year plan is a living document and will need to be reviewed and updated each year. As NM911 moves forward with planning and implementing NG911, priorities may shift based on accomplished milestones and technology advancements in the industry.

In conclusion, NM911 is committed to helping deliver NG911 service to the state and is poised to continue working with stakeholders to implement the initiatives and priorities in this plan.

## Appendix A – Additional GIS Details

### Governance

GIS and 911 programs across New Mexico mostly function within their borders. NG911 mandates collaboration across jurisdictional boundaries. As local data is developed, these data also must be validated and corrected between neighboring jurisdictions. By creating a forum for cross-jurisdictional data validation and promoting collaboration through working sessions, the State can drive the regionalization of GIS data to the benefit of all jurisdictions in the state. These working sessions should bring together multiple neighboring jurisdictions that share common boundaries with each other. GIS and 911 representatives will work together to develop a call routing boundary for each jurisdiction that minimizes call transfers and set snap-to points between every jurisdiction to ensure line and polygon edits do not change the border data. Each jurisdiction should leave the working session with a complete PSAP and provisioning boundary as well as snap-to points defining polygon vertices and line endpoints.

Rural New Mexico jurisdictions will benefit most from cooperative GIS data development. Without the large budgets of their urban counterparts, smaller jurisdictions must be creative in finding ways to attract and retain GIS staff, fund data development projects too large for internal staff and maintain GIS data to NG911 standards. The State does provide guidance to jurisdictions seeking to pool financial or professional resources on its website. NM911 should further promote this offering through committee forums highlighting the State contracts that most likely offer more competitive pricing than the jurisdictions could secure on their own. The State also inserts itself into the quality control process of the local project to ensure that the data deliveries meet State and national standards when NM911 funding is used. This is beneficial to the State and the jurisdictions since those without robust GIS capabilities are less likely to have the knowledge or time to properly verify the quality of GIS deliverables.

### Staffing and Training

The State is leading the NG911 migration and is responsible for relaying not only how to migrate but also why. GIS data development is expensive and time consuming. The most frequent use of GIS at the local jurisdictions in New Mexico is for printed maps, which does not require the accuracy necessary for NG911. To ensure that jurisdictions develop GIS data to NG911 standards, it is incumbent upon the State to educate the GIS professionals on how to meet the standards and the leadership on why GIS data must meet these standards, why meeting the standards takes longer than making printed maps, and how their jurisdiction and the State benefit from proper GIS data development and maintenance practices.

Of the 93 municipal, county, and Tribal authoritative GIS data providers in New Mexico, only 58% of them are sharing GIS data with the State. Outreach, education, and support services are vital to the availability of current, accurate, and fully attributed GIS data to support the migration to and continuous operation of NG911. While the State is to be commended on its participation in and support of GIS and 911 workgroups and committees, direct outreach to the jurisdictions responsible for the creation and maintenance of GIS data is necessary to increase participation in the State's data aggregation efforts.

The GIS industry is realizing a deficit in qualified job seekers, as is evident by the multiple open GIS positions across the state. If New Mexico is not able to attract and retain GIS professionals, the State may

need to assist local jurisdictions in securing contracted assistance with developing and maintaining GIS data. Statewide contracts offer several benefits over each jurisdiction maintaining separate contracts:

- Deliverables are measured to the same quality metrics.
- There are substantial cost savings in large-scale data maintenance projects over individual jurisdiction-based contracts.
- The State can require the cooperative development of GIS data between:
  - Jurisdiction and jurisdiction
  - Jurisdiction and contractor
  - Contractor and contractor
- The deliverables can be approved by the State before payment is rendered.

To ensure the success of these efforts, the State must create a separate budget for GIS under NM911 and fully fund the program. Further, NM911 should enter into a service level agreement (SLA) with all jurisdictions maintaining their GIS data in-house. At a minimum, an intergovernmental agreement (IGA) is required. These agreements will specify:

- The standards to which GIS data shall be maintained.
- The frequency of maintenance and update to the statewide dataset.
- If the jurisdiction is unable to meet the terms of the agreement, NM911 reserves the authority to assume responsibility for GIS data maintenance.
- Any 911 or other State-provided funding affects if NM911 assumes GIS data development and maintenance responsibilities.

## GIS Data Uniformity

NG911 requires that GIS data be seamless between PSAPs within the state and in neighboring states. NM911 continues to support such efforts as the Earth Data Analysis Center (EDAC) to build and maintain extract, transform, load (ETL) tools for use by local jurisdictions by developing a statewide NG911 GIS data model that conforms to state and national NG911 standards, and participating in several state and national GIS collaborative groups.

The State must next strive to build and maintain an aggregated, statewide GIS dataset of the foundational layers necessary for NG911. The NG911 Readiness Assessment identified that roughly 90% of the PSAPs require some technical assistance with GIS data improvement. Maintaining a statewide dataset will allow the State to monitor each jurisdiction's ability to maintain the GIS data to NG911 standards and assist where necessary. Further, given the disparate GIS capabilities at PSAPs across the state, relying on the NGCS provider to coordinate with each jurisdiction in a manner conducive to respective local capabilities creates a heightened risk of a PSAP disengaging from the project simply because it does not understand the requests being asked of it.

Uniformity in GIS data deliverables also allows NM911 to frame requirements of all contracted data development efforts not coordinated through the State. National NG911 GIS standards are interpreted differently by different vendors. NM911 should bring clarity to the NG911 GIS standards for the state by further refining national standards and incorporating best practices created from other states' implementations.

## GIS Data Maintenance

Data maintenance must continue the collaboration established in the data uniformity process. NM911 should establish a data maintenance agreement to be signed by every GIS data steward. This agreement will outline the expected data maintenance schedule, identify geospatial interdependencies between GIS programs, and establish roles and responsibilities for data updating. Governance will regulate the interactions of jurisdictional GIS data maintenance as required when updating GIS data along jurisdictional boundaries.

The migration to NG911 will take many months to complete and may run in parallel with legacy tabular call routing for even longer until the wireless industry can capture a Phase II location from every caller at the time 911 is dialed. Without a routable location, the pseudo automatic number identification (pANI) and legacy selective router are necessary to route wireless calls based on the cell tower antenna sector. This also means the GIS and legacy tabular data must be maintained in sync throughout the migration. The State should coordinate the availability of legacy automatic location identification (ALI) data to all PSAPs and provide tools for the continued validation between the ALI and GIS data.

## Best Practices

NENA has released and continues to author new standards for geospatial data supporting NG911. NM911 used these standards as a baseline for statewide standards<sup>13</sup>. In some cases, NM911 recommends adopting a NENA standard(s) outright. However, it may be necessary to further develop NENA standards into functional specifications for New Mexico. In these cases, NM911 must be careful to continue to at least meet the NENA standard(s).

NM911 should help promote cross-jurisdictional data development through the development of a workflow for resolving PSAP boundary issues across the state. It will be necessary to develop similar documentation for many operational processes pertaining to GIS. Such needs will become apparent as the jurisdictions begin implementing NGCS and addressing interoperability. NM911 should identify these opportunities and seek to standardize the process across the state.

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<sup>13</sup> [GIS Resources \(nm911.org\)](http://nm911.org)