

## Workforce-Optimization Report

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### Final Report

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PREPARED NOVEMBER 2019 FOR  
ASSOCIATION OF CENTRAL OKLAHOMA GOVERNMENTS

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## Executive Summary

The Association of Central Oklahoma Governments (ACOG) formed the 9-1-1 Association of Central Oklahoma Governments (9-1-1 ACOG) in April 1988 to implement and oversee Enhanced 9-1-1 (E9-1-1) service across the region, and to provide legislative advocacy for better 9-1-1 solutions. ACOG's 9-1-1 & Public Safety Division provides staffing and program resources to support 9-1-1 ACOG, which manages one of the largest 9-1-1 systems in Oklahoma. This system supports 23 public safety answering points (PSAPs) and serves citizens living and working in approximately 50 communities across the region.

9-1-1 ACOG is managed by the director of ACOG's 9-1-1 & Public Safety Division, who reports to ACOG's executive director and the 9-1-1 ACOG Board of Directors. The division is organized according to the following functional areas: Administration and Planning; 9-1-1 Technology and Systems Support; 9-1-1 Training Institute; and 9-1-1 Geographic Information System (GIS) and Data Integrity Services.

Mission Critical Partners was hired to assess 9-1-1 ACOG's current operational needs and staff capabilities provided by ACOG. MCP's workforce-optimization team reviewed ACOG's 9-1-1 workforce documents and conducted interviews with employees and stakeholders. The team also applied industry standards to ACOG's current 9-1-1 staffing capabilities to identify impacts a Next Generation 9-1-1 (NG9-1-1) transition might have on the current workforce, depending on whether an owner/operator or managed services provider (MSP) approach is taken for the implementation.

Several internal and external factors could impact ACOG's 9-1-1 staffing and operations going forward. For example, a major external factor concerns the industry's push and the public's expectations for advanced functions and features that will enable PSAPs to improve emergency response significantly.

Workforce optimization embraces four core pillars: recruiting, hiring, training and retention. Workforce optimization is a holistic way of thinking about staffing, one that can help 9-1-1 ACOG's leaders address today's staffing challenges while also preparing for the future represented by NG9-1-1. 9-1-1 ACOG's four functional areas are integral to workforce optimization and the transition to NG9-1-1.

To realize a successful transition, 9-1-1 ACOG could procure NG9-1-1 as a service. This would entail contracting for an Emergency Services Internet Protocol (IP) Network (ESInet) and Next Generation Core Services (NGCS) while maintaining in-house ownership, operation and maintenance of its call-handling equipment (CHE) and related software. Depending on the procurement approach, 9-1-1 ACOG may choose a single vendor to provide the ESInet and NGCS or select a vendor for each. For this option, ACOG will need to hire within the 9-1-1 & Public Safety Division the positions identified throughout Section 2 of this report. Four additional positions will be needed to support Option 1: a geographic information system (GIS) technician, a field technician, a training and education support specialist, and an assistant 9-1-1 director.

Or 9-1-1 ACOG could choose to procure its NG9-1-1 capabilities via an owner/operator model. In this model, rather than contracting with a vendor(s) to provide NG9-1-1 as a service, 9-1-1 ACOG would own its ESInet and some components of the NGCS. The owner/operator model provides flexibility to procure individual NG9-1-1 elements based on desired functionality and may provide 9-1-1 ACOG with greater

flexibility to determine call routing. Option 2 requires the staff additions identified above for Option 1 plus the following: a network operations manager, three to five network engineers, an NGCS manager, and two to three application engineers.

Several internal and external factors could impact ACOG's 9-1-1 staffing and operations going forward. For example, a major external factor concerns the industry's push and the public's expectations for advanced functions and features that will enable PSAPs to improve emergency response significantly.

Other potential factors include political, statutory, or regulatory implications; technology requirements or operational considerations; stakeholder resistance, support or influence; and economic and/or funding considerations, such as grants, loss of funding, and funding diversions.

All of these impacts on the workforce are examined in this report, as is the desired state and how well it aligns with strategic initiatives.

# 1 Introduction

## 1.1 Background

The Association of Central Oklahoma Governments (ACOG) is a regional council and voluntary association of local governments. Established in June of 1966, ACOG is one of 11 COGs in Oklahoma, with each regional council having its own organizational structure, bylaws and/or articles of agreement. ACOG operates as a problem-solving and planning organization for coordination and collaboration of local government activities. It consists of five divisions or departments: Administrative Services, Transportation Planning Services, Water Resources, Community and Economic Development; and 9-1-1 & Public Safety.<sup>1</sup>

ACOG formed the 9-1-1 Association of Central Oklahoma Governments (9-1-1 ACOG) in April 1988 to implement and oversee Enhanced 9-1-1 (E9-1-1) service across the region, and to provide legislative advocacy for better 9-1-1 solutions. ACOG's 9-1-1 & Public Safety Division provides staffing and program resources to support 9-1-1 ACOG, which manages one of the largest 9-1-1 systems in Oklahoma. This system supports 23 public safety answering points (PSAPs) and serves citizens living and working in approximately 50 communities across the region.

9-1-1 ACOG is managed by the director of ACOG's 9-1-1 & Public Safety Division, who reports to ACOG's executive director and the 9-1-1 ACOG Board of Directors . The division is organized according to the following functional areas: Administration and Planning; 9-1-1 Technology and Systems Support; 9-1-1 Training Institute; and 9-1-1 Geographic Information System (GIS) and Data Integrity Services. Nine ACOG employees work across these areas. The figure below provides the organizational chart.

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<sup>1</sup> <http://www.acogok.org/about/>

## Association of Central Oklahoma Governments – 9-1-1 & Public Safety Division

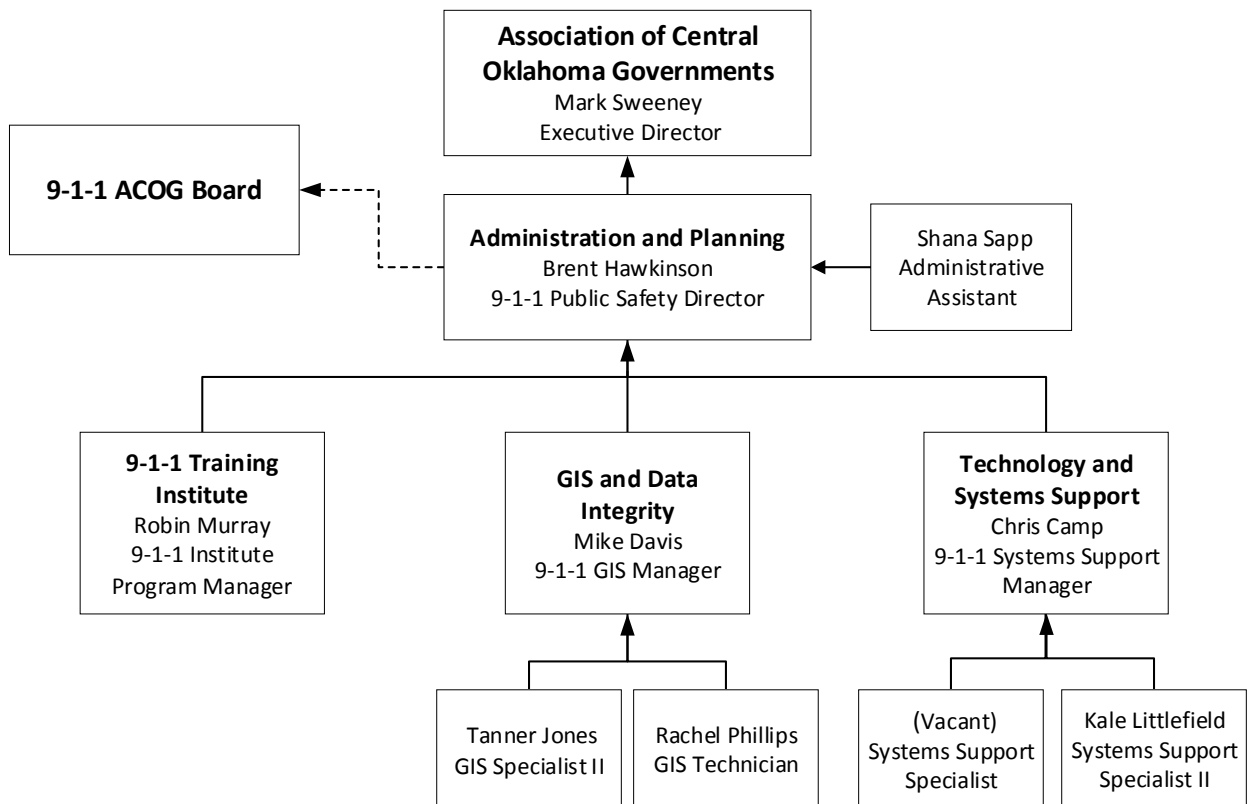


Figure 1: 9-1-1 & Public Safety Division – Current Staffing

### 1.2 Objectives of the Workforce-Optimization Report

9-1-1 ACOG is recognized as a leader in Oklahoma's 9-1-1 community, with its practices serving as models for other 9-1-1 agencies in the state. Continuing its reputation for excellence, ACOG desired an evaluation of its current 9-1-1 workforce practices to identify gaps between them and national standards and best practices of similar organizations pursuing implementation of Next Generation 9-1-1 (NG9-1-1).

In December 2018, ACOG began a search for a public safety consulting firm to assist it in planning, procuring, implementing, and operating an NG9-1-1 solution. In April 2019, ACOG hired Mission Critical Partners, LLC (MCP) to assess the readiness of 9-1-1 ACOG to support NG9-1-1.

This report addresses the workforce-optimization task in MCP's statement of work (SOW). It summarizes the data gathered by MCP's workforce-optimization team to assess current staffing levels and workloads at 9-1-1 ACOG. It describes the desired state to align with ACOG's vision, goals and strategic initiatives for NG9-1-1. The report recommends options for achieving a right-sized and balanced workforce for migration to and maintenance of NG9-1-1 service and includes change-management plans and a projected timetable

for implementation of workforce recommendations over the next two years. The results of this report will become part of 9-1-1 ACOG's NG9-1-1 strategic plan.

This study will help 9-1-1 ACOG better understand the current state and will provide recommendations to improve the practices and processes in place today. MCP took a holistic approach by examining all four functional areas identified above.

### 1.3 Approach

MCP's workforce-optimization team reviewed ACOG's 9-1-1 workforce documents and conducted interviews with employees and stakeholders to assess the organization's current operational needs and staff capabilities. The team compared industry standards to ACOG's 9-1-1 current staffing capabilities to identify impacts the NG9-1-1 transition might have on the current workforce, depending on whether an owner/operator or managed services provider (MSP) approach is taken for the implementation.

The data collection included information related to the following:

- Agreements to create ACOG and 9-1-1 ACOG
- Associated state and local legislation
- Governance policies
- Continuity of operations plans (COOP) and disaster recovery plans
- GIS data, workflows, policy documents, and GIS workgroup activities
- 9-1-1 Training Institute Program
- Operational support
- Employee handbook
- Job descriptions, staff organization charts, and division of roles and responsibilities
- PSAP client information
- ACOG Board of Directors meeting minutes
- Strategic initiatives
- Funding and budget information
- Adopted national standards

To initiate this task, MCP held a WebEx meeting with ACOG's 9-1-1 staff on June 10, 2019. This was followed by a site visit on July 30-31, 2019, during which MCP conducted a series of nine in-depth interviews with members of each of 9-1-1 ACOG's four functional areas, and with two members of 9-1-1 ACOG's board of directors. Representatives of all client agencies were invited to a townhall workshop facilitated by MCP scheduled during the site visit to garner feedback regarding the services they receive from 9-1-1 ACOG. Eighteen members representing 12 of the 23 PSAPs attended. (See the table below.)

Table 1: Onsite Workforce Interviews and Townhall Schedule

Date/Time	Group	Interviewees	Interviewers
Interviews			
7/30/19 – 0900-1030	GIS and Data Integrity	Mike Davis Tanner Jones Rachel Phillips	Bonnie Maney Terry O'Malley
7/31/19 – 0900-1030	Technology and Systems Support	Chris Camp Kale Littlefield Ben Bailey	Sherri Griffith Powell Jackie Mines
7/31/19 – 0900-1030	9-1-1 Training Institute	Robin Murray	Bonnie Maney Terry O'Malley
7/30/19 – 0900-1030	Administrative Assistant	Shana Sapp	Sherri Griffith Powell Jackie Mines
7/30/19 – 1045-1200	ACOG Finance Department	Debbie Cook	Sherri Griffith Powell Jackie Mines
8/28/19 – 1330-1400	9-1-1 ACOG Board Chair	Mark Hamm	Terry O'Malley
7/30/19 – 1045-1200	9-1-1 ACOG Board Vice Chair	Rod Cleveland	Bonnie Maney Terry O'Malley
7/31/19 – 1045-1200	ACOG Executive Director	Mark Sweeney	Sherri Griffith Powell Jackie Mines
7/30/19 – 1045-1200	9-1-1 ACOG Division Director	Brent Hawkinson	Bonnie Maney Terry O'Malley
Townhall Meeting			
7/31/19 – 1330-1630	PSAPs (12 agencies, 18 attendees)	Bethany (1) Del City (2) Edmond (4) El Reno (2) Guthrie (1) Moore (2) Midwest City (1) Norman (1) Oklahoma County (1) OUPD (1) The Village (1) Warr Acres (1)	Chad Brothers Bonnie Maney Terry O'Malley



## 1.4 Change Management

The more complex the ecosystem gets and the faster it expands, the more difficult it is to maintain an understanding of the relationships that will be impacted and the downstream implications of implementing new or cutting-edge technology. Regardless of the solution being contemplated, several common considerations exist. Based on the knowledge acquired during this project, there are actions that ACOG leadership can take to build relationships and trust between the staff as well as the client agencies, as follows:

- Provide further clarity of roles and responsibilities by developing an accountability matrix
- Engage in strength-based leadership<sup>2</sup> to help staff excel by finding the right roles for the right people
- Implement a change-management plan to address the impacts of change (an example process is shown in the figure below)

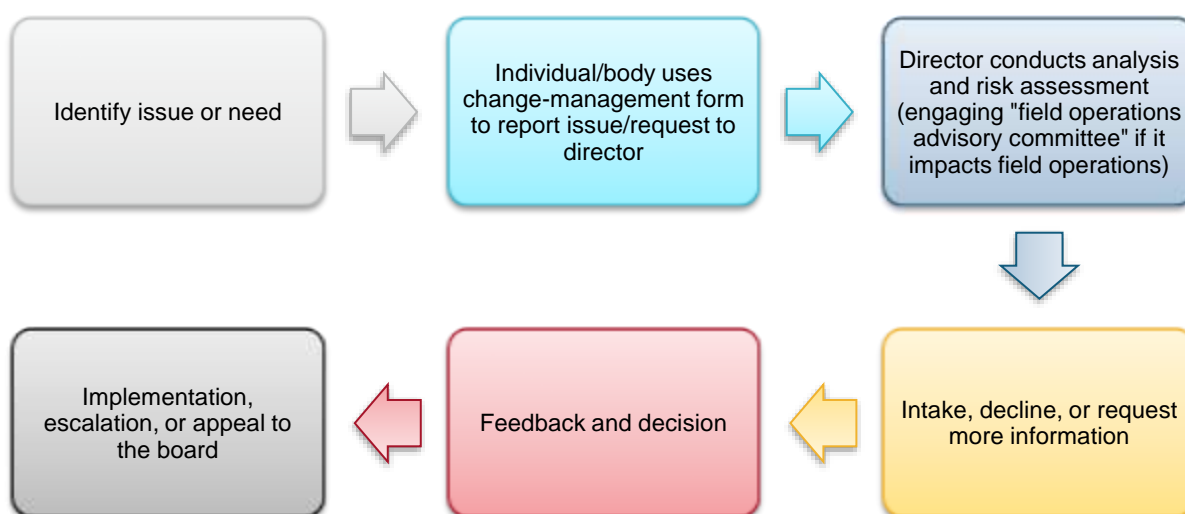


Figure 2: Example of Change-Management Workflow

In the modern public safety communications ecosystem, it is necessary for operations, technology and workforce enhancements, policy development, and training to realize the potential lifesaving value of NG91-1. Future public safety communications systems will be IP-based and, as such, will enable data sharing between agencies that has the potential to enhance emergency response outcomes.

A change-management framework is critical for supporting effective decision-making and determining whether to implement any solution. A change-management framework provides the opportunity to critically explore the pros, cons, and requirements of any solutions or new technology implementations. A change-management framework helps address transformational change and should include analysis of the following considerations each time a solution is presented to an organization:

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<sup>2</sup> "Strengths Based Leadership, Gallup, 2019. <https://www.gallup.com/press/176588/strengths-based-leadership.aspx>.

- Technology policy requirements
- Technology infrastructure constraints
- Workforce implications (both inter- and intra-agency)
- Operational workflows, policies, and procedures
- Training needs
- Governance policies
- Regulatory and legislative constraints
- Funding
- Facility structural constraints
- Metrics for measuring success

The outcomes of the change-management workflow should generate positive responses that align with the priorities of the organization—usually based on a strategic plan—which are focused on improving emergency response outcomes. If those proposing a solution or an implementation—e.g., internal staff, external organizations such as client agencies, the 9-1-1 ACOG board, or a vendor—cannot articulate how the solution aligns, it may be in the best interest of the organization to reject the solution at that time.

Does the proposed solution or implementation:

- Improve situational awareness?
- Improve decision-making capabilities?
- Decrease response times?
- Have the potential to save lives?

A best practice would be to compile the outcomes of this analysis in a document that identifies the following:

- Project scope
- Objectives and risks
- Organization and staffing
- Decision-making structure and approach
- Initial resource requirements

This document essentially would be an executive summary that also can serve as a business case for the suggested solution. Once compiled, the change-management review team would review the document and make an educated go/no-go decision. This is an opportunity—before anything is inked and time and money are committed—for stakeholders to evaluate the solution’s feasibility and value for improving emergency response outcomes.

For those implementations that are embarked upon, it is essential to have predetermined metrics to ensure that the solution provides the anticipated functionality and outcomes. If the metrics are not being realized, the change-management review team will need to determine whether something can be done to improve the solution’s functionality, or whether the solution or service should be removed. Keeping ineffective

policies, technologies and/or services in play is wasteful and can have a negative impact on emergency response outcomes.

Change-management planning should include a policy for capturing several attributes for each solution. These attributes should be gathered, compiled and kept on file—preferably in a database—to manage the solution’s lifecycle and to promote disaster-recovery efforts should they be needed.

Implementing and committing to a change-management policy significantly will improve the transition from solution implementation (NG9-1-1) to managing its lifecycle, including optimizing the workforce that will be responsible for supporting the NG9-1-1 system that supports 9-1-1 ACOG’s client agencies.

## 2 Workforce-Optimization Assessment Findings

Review of the current workforce capabilities requires analysis of four categories of the current model. They are addressed individually in the content that follows, beginning with 9-1-1 ACOG’s four functional areas followed by other important elements that will impact the workforce as 9-1-1 ACOG progresses toward NG9-1-1 implementation.

The recommendations provided after Sections 2.1 – 2.5 are applicable regardless of the NG9-1-1 service option selected, as described in Section 3 of this report.

### 2.1 Administration and Planning

The administration and planning team provides staff support and policy recommendations to the 9-1-1 ACOG Board. The team is responsible for 9-1-1 ACOG’s budget, managing 9-1-1 funding, and contract administration pertaining to client agencies and 9-1-1 technology vendors. This team monitors and educates client agencies regarding legislative and regulatory activities and acts as a liaison between various associations, boards, and committees related to public safety and specifically 9-1-1 service. Finally, the team provides strategic planning, including NG9-1-1 planning and project management.

#### 2.1.1 Leadership

The 9-1-1 ACOG Board of Directors is comprised of civic and county officials from the communities that ACOG serves. It meets once a month to hear reports from the executive leadership of ACOG and 9-1-1 & Public Safety Division and to oversee and approve the 9-1-1 ACOG budget. Staff reports focus on technology provided by 9-1-1 ACOG to client PSAPs.

MCP’s observation is that 9-1-1 ACOG’s board members trust the organization to provide the professionalism and technology expertise needed to keep member PSAPs operational. This is important to a geographical area that has experienced multiple weather disasters over the last several decades. As the NG9-1-1 infrastructure, operations, and technology become more complex and interoperable with neighboring 9-1-1 entities, the governance element will become more challenging, requiring continual 9-1-1 ACOG board education.

The 9-1-1 ACOG board will need facts and analysis to make informed decisions regarding the organization's workforce. These decisions will impact funding decisions; a sustainable and well-conceived funding strategy to support the NG9-1-1 transition is imperative.<sup>3</sup> It is also important to identify and document milestones that demonstrate staff productivity and project success to the 9-1-1 ACOG's Board.

Although this report focuses on ACOG's 9-1-1 & Public Safety Division, ACOG's executive director, who reports to the ACOG Board of Directors, oversees the five core divisions or departments of ACOG:<sup>4</sup>

- Administrative Services
- Transportation Planning Services
- 9-1-1 & Public Safety
- Water Resources
- Community and Economic Development

9-1-1 ACOG falls under the auspices of ACOG's 9-1-1 & Public Safety Division. The 9-1-1 director reports to ACOG executive director and the 9-1-1 ACOG board. The director oversees the organization's four functional areas and staff. The director also manages vendor and PSAP contracts and presents them to the 9-1-1 ACOG board.

The amount of in-house work to be done by the director has increased to such a level that important external meetings, such as with the Oklahoma Association of Chiefs of Police, go unattended or are delegated to staff who can bring back information but do not have the authority to make decisions on behalf of the organization.

#### *Key Takeaways*

- 9-1-1 ACOG board members should have a detailed understanding of the internal workings of 9-1-1 service to make informed decisions.
- 9-1-1 ACOG board members understand the importance of emergency communications services and the need for reliability and redundancy.
- There is a high level of trust expressed by 9-1-1 ACOG board members pertaining to the ability of the ACOG's 9-1-1 staff to provide the best technology available.
- The 9-1-1 ACOG board was not involved in the creation or approval of the 9-1-1 ACOG strategic vision. It was presented to them and to the ACOG Board of the Directors, the vision and related mission statements were well-received.
- ACOG executive leadership reports that the Oklahoma 9-1-1 Management Authority historically looks to ACOG for future vision regarding 9-1-1 service.
- ACOG's 9-1-1 director spends much of his time "putting out fires" involving PSAP requests, network and telecommunications carrier issues, and vendor contracts.

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<sup>3</sup> 9-1-1 ACOG has commissioned a separate funding study to analyze the complete cost of transitioning and support for NG9-1-1. Cost projections for the recommendations from this workforce optimization report will be included in that study.

<sup>4</sup> <http://www.acogok.org/about/>

Table 2: Leadership Recommendations

Recommendations	Outcomes
Hire an assistant 9-1-1 director	<ul style="list-style-type: none"> <li>• This newly created position will coordinate with functional areas and support contract management</li> <li>• The position will support and inform both the ACOG executive director and the 9-1-1 director regarding projects within client agencies and the State 9-1-1 Coordinator's Office</li> <li>• The position will allow the executive leadership to focus on leadership activities and not daily management tasks.</li> </ul>
Provide in-depth financial statements to the 9-1-1 ACOG board, itemizing costs for equipment and support; ask several PSAPs of varying size to provide the same	<ul style="list-style-type: none"> <li>• Maintain transparency with the 9-1-1 ACOG board</li> <li>• Provide the 9-1-1 ACOG board with information needed to make informed decisions</li> </ul>
Involve at least one 9-1-1 ACOG board member in strategic vision planning	<ul style="list-style-type: none"> <li>• The board member will be able to report back to 9-1-1 ACOG's board and member communities and to advocate for the strategic vision</li> </ul>

### 2.1.2 Administrative Functions

ACOG's 9-1-1 administrative assistant reports to the organization's director. This position provides administrative support to the 9-1-1 & Public Safety Division and the 9-1-1 ACOG board.

The administrative assistant is responsible for retaining and tracking the signed vendor contracts under the direction of ACOG's 9-1-1 director. The main responsibilities of the administrative assistant are to prepare purchase orders (POs) for training fund requests; prepare and track invoices for processing; process 9-1-1 fund remittance checks; and prepare the agenda and meeting minutes for 9-1-1 ACOG board meetings. The administrative assistant works with ACOG's 9-1-1 director to update and distribute the annual 9-1-1 fund distribution letters and contracts to the client agencies. In addition, she is responsible for tracking each client agency's monthly fund distribution and sending out monthly notifications.

At the time of the interviews, the administrative assistant was new to the organization and in a temporary-to-hire status. This status changed to full-time as of July 2019. The ACOG employee handbook refers to a three-month orientation, which is actually a probationary period rather than a reference to a formal onboarding process. Based on MCP's research, an onboarding process does not exist for any employees, whether temp-to-hire or full-time. While other 9-1-1 employees willingly assisted, it was determined that personal initiative to look through computer files was required to learn the processes for various job functions. Not having formal onboarding procedures can result in a lack of success for a new employee as well as provide an opportunity for important functions to be unintentionally overlooked over time, resulting in inefficiencies and a lapse in accountability.

In addition, the ACOG Executive Director's executive assistant has mentored the administrative assistant and instituted a process to ensure that the ACOG Board of Directors and 9-1-1 ACOG Board agenda and meeting minutes are verified to avoid any last-minute surprises. Last-minute agenda requests are problematic, and clear expectations should be set with members and staff about when agenda items are due to ensure timely delivery of the meeting agenda to members. As the administrative assistant becomes more familiar with the job, she will work more independently and take ownership regarding 9-1-1 ACOG Board meeting administration.

The financial activities associated with tasks such as paying invoices are performed by ACOG's finance department. However, invoices initially are received by the 9-1-1 administrative assistant, who records them and then forwards them to the finance group to be paid. It is unclear a formal verification of the bill against the contract is executed. There was no documentation provided regarding the process between ACOG and 9-1-1 ACOG. The delegation of authority between the two organizations should be documented and designed to ensure against fraud and embezzlement.

#### *Key Takeaways*

- Potential exists for unauthorized staff to access financial documents
- An onboarding policy and associated workflows—so that new staff can enter a role and understand the job functions and purpose for the work—is lacking
- Formal new-employee training procedures that include specifics regarding the way 9-1-1 ACOG and its board desire things to be done and why also is lacking
- 9-1-1 ACOG board agenda items are not provided in enough time to prepare the agenda and communicate it to board members
- Documented 9-1-1 fund receipt and distribution workflows are lacking
- Documented invoice payment workflows are lacking

Table 3: Administrative Functions Recommendations

Recommendations	Outcome
Use the ACOG employee handbook to provide a formal orientation process for new employees. Keep records for each employee regarding their orientation	<ul style="list-style-type: none"> <li>• A clearer understanding of overall organizational goals and objectives, the purpose and importance of the job functions, and a successful transition into a new role</li> </ul>
Document duties and responsibilities for each position	<ul style="list-style-type: none"> <li>• Allows anyone to step into a role and perform the job functions faster and more effectively</li> </ul>
Include more training on what 9-1-1 and NG9-1-1 means to each functional area; provide an overview for new employees of 9-1-1 ACOG's mission and the various work areas	<ul style="list-style-type: none"> <li>• Provides more context around the role and responsibility of the position</li> </ul>

Recommendations	Outcome
Identify in 9-1-1 ACOG bylaws the timeline regarding when agendas and meeting minutes are due to board members	<ul style="list-style-type: none"> <li>Publishing dates and times when agenda items are due and when agenda and meeting minutes should be delivered to board members sets a guideline and expectation for administrative personnel and members to follow</li> </ul>
Review and document the 9-1-1 fund receipt-and-distribution process	<ul style="list-style-type: none"> <li>Formalized process will ensure that the team understands the role and purpose they have in the process, as well as guard against the possibility of theft or embezzlement of 9-1-1 funds</li> </ul>
Review and document the invoice-payment process	<ul style="list-style-type: none"> <li>Ensure that payments are made according to contracted rates and alert the team to any changes in billing from vendors for follow-up and necessary contract changes</li> </ul>
Conduct an outside audit of ACOG's financial processes to identify any potential liability exposure	<ul style="list-style-type: none"> <li>Reduce risk exposure and liability</li> <li>Opportunity to identify mitigation actions – if discovered</li> </ul>

### 2.1.3 Policies and Procedures

ACOG's payroll software has an employee self-service module that provides access to the employee handbook and policy documents related to procurement procedures, PowerPoint presentations, social media and networking, vehicle use, and business travel. These documents are available to all employees with the option to view, download or print.

However, MCP noted a lack of documented job descriptions, policies or procedures regarding 9-1-1 ACOG's functional responsibilities. Each of the functional areas have documented some of their processes; however, there is no easily accessible universal repository for policies and procedures related to workflows.

Employees indicated an understanding of the work assigned to their team but in many instances were unable to refer to documented roles and responsibilities. The consensus was that a lack of clarity exists surrounding an employee's assigned job functions. Section 2.1.2, Administrative Functions, of ACOG's employee handbook refers to a three-month orientation for new employees, which is actually a probationary period rather than a reference to a formal onboarding process. As noted in Section 2.1.2, a documented onboarding process is recommended. Inconsistencies exist between the functional areas as to whether employees receive information documenting their job functions. There also is no clearly defined career paths explained for each position.

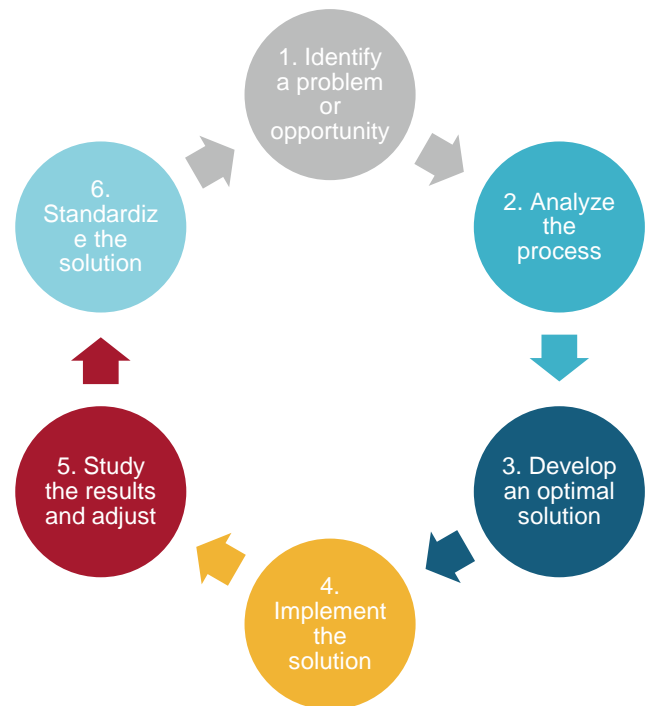
When expectations are tied to detailed job descriptions and defined job functions, employees can expect consistent performance reviews, adequate pay and a path for future development. Without those defined expectations, morale, productivity, and employee retention suffers.



Another important element that impacts a workforce is disaster recovery and COOP. Any emergency services provider should have published policies, procedures, and roles and responsibilities assigned within its workforce to handle communications and troubleshooting during a disaster.

9-1-1 ACOG has a disaster-recovery, service-information document used by the technical staff when service disruptions occur on the telephone network. The plan has been in effect since 9-1-1 ACOG transitioned to its help-desk solution in January 2014. The plan has worked well in its application since its development; however, it will need to be revised when 9-1-1 ACOG transitions to NG9-1-1 and updated for new processes, methods and technology to reflect new requirements.

9-1-1 ACOG does not have a documented COOP for its internal operations, nor does it have a crisis communications plan for the region. The responsibility for this plan should be assigned to a position within ACOG's 9-1-1 workforce, which could be a fit for a 9-1-1 operations manager or assistant director.



### *Key Takeaways*

- Employees cannot identify specific policies or procedures associated with their roles and responsibilities.
- There is risk in not having defined policies and procedures in terms of productivity, morale, and employee retention.
- An easy-to-access shared repository is needed for all policies and procedures, and accountability should be assigned for each policy and procedure.
- It will be important to enforce, review regularly, communicate changes, and ensure that the wider group of stakeholders understands and agrees with ACOG's responsibilities and policies.
- 9-1-1 ACOG has a well-planned disaster-recovery, service-information document to be followed by the technical staff when service disruptions occur on the telephone network; it describes how to mitigate the outage impacts while the technical staff repairs the problem.
- 9-1-1 ACOG does not have a documented COOP for its internal operations.
- 9-1-1 ACOG does not have a crisis communications plan for the region.



Table 4: Policy and Procedure Recommendations

Recommendations	Outcomes
Form a team to create 9-1-1 ACOG policies and procedures for use by both ACOG 9-1-1 staff and client agencies	<ul style="list-style-type: none"> <li>All stakeholders will have access to policies and procedures and clearly understand workflows and decision-making processes</li> </ul>
Create detailed job descriptions and well-defined job functions for all ACOG's 9-1-1 staff members	<ul style="list-style-type: none"> <li>Employee performance, morale, and job satisfaction will be improved by clearly defined roles and responsibilities and consistent application of the performance metrics</li> </ul>
Add detailed job descriptions and responsibilities, as well as functional procedures to the PayCom employee self-serve repository, which contains the ACOG employee handbook	<ul style="list-style-type: none"> <li>One-stop shop for all employee-related policy and procedure documents.</li> </ul>
Create a documented process for making changes or updates to the plan including who is to conduct the review, who has the authority to make changes, and how those changes will be adopted, as well as a schedule for—at a minimum— annual review of the plan regarding any modifications or updates	<ul style="list-style-type: none"> <li>Clearly defined policies and processes ensure that those responsible are informed and changes to the plan are documented</li> <li>Regularly scheduled reviews help to keep the plan current so that when it is needed, the information and procedures are accurate and effective</li> </ul>
Enhance the disaster-recovery plan to identify roles and responsibilities and to define communication, data, operation and technology policies during an outage	<ul style="list-style-type: none"> <li>Clearly defined roles</li> <li>More seamless and efficient operations during disaster situations</li> </ul>
Review and update the 9-1-1 ACOG disaster-recovery Plan regularly; involve board members, directors, staff members, client agencies, stakeholders, local media, and ACOG partners in the review	<ul style="list-style-type: none"> <li>Processes to update disaster-recovery plans regularly will ensure that the plans always are current and reflect the operations in place</li> <li>Helps to train and educate all those involved so that when a disaster needs to be mitigated, all are informed and useful</li> </ul>
Communicate and train internal staff and PSAP personnel on the crisis communications plan processes and procedures	<ul style="list-style-type: none"> <li>Mutually agreed-upon processes that are developed, understood and trained will help to ensure efficient management of communications during an event. Just like training exercises pertaining to a possible event, exercising the communications plan will help to ensure efficiency</li> </ul>
Assign maintenance of the plan to appropriate staff	<ul style="list-style-type: none"> <li>Assigning maintenance of the plan to the appropriate staff member(s) ensures responsibility for keeping the plan current and accurate</li> </ul>

## 2.2 Geographic Information System (GIS) and Data Integrity

The GIS and Data Integrity functional area is staffed by a 9-1-1 GIS manager, a GIS specialist II, and a GIS technician. The GIS manager reports to the 9-1-1 director. Job responsibilities include maintaining the regional GIS data comprised of 9-1-1 address databases, the Master Street and Address Guide (MSAG) database, emergency services network (ESN) boundaries database, and shared mapping data used by client agencies. The team coordinates with wireless carriers regarding location accuracy, produces maps upon request, and has begun to upgrade its data to comply with the NG9-1-1 data standards recently adopted by the Oklahoma Geographic Information (GI) Council. This work involves extensive coordination with community and county planners and personnel, seven wireless carriers, the State, the University of Oklahoma, and 9-1-1 ACOG's regional GIS contractor.

ACOG's 9-1-1 GIS team supports approximately 50 communities in central Oklahoma with three tiers of support. The six "A" client agencies have in-house GIS personnel and maintain their own GIS datasets and MSAG tables. The three "C" client agencies do not have those resources, so ACOG's 9-1-1 staff performs data maintenance for them, particularly addressing and MSAG maintenance. The 40 "B" client agencies fall somewhere in between, with the GIS team doing the client's addressing and managing data as requested. At the town hall meeting, the response regarding the GIS team's work was overwhelmingly positive. It was noted that the team provides a professional addressing/mapping service that the client agencies could not afford on their own.

In 2018, the team added 102 plat additions and 8,308 total addresses to the addressing database. The GIS technician is responsible for addresses and plat updates. The GIS specialist II fields geodatabase and GIS system problems and does the data transfers to the PSAP computer-aided dispatch (CAD) systems. The GIS manager covers carrier requests for cell-tower-sector validation and programming issues. All three employees handle 9-1-1 database changes.

The current ticket system for GIS requests has been cumbersome and confusing to use, so it is used optionally. When used, ticket resolution is usually two days for automatic location identification (ALI) or voice over IP (VoIP) addressing issues. Cell-tower-routing issues take seven days on average to resolve. ACOG's 9-1-1 GIS employees have formal job descriptions and a progression path tied to education. Their current workload has them tethered to their workstations and prevents them from interacting with other 9-1-1 staff.

MCP's GIS-readiness assessment report<sup>5</sup> states that the volume of work necessary to support 9-1-1 ACOG's client agencies is beyond normal expectations for three GIS professionals. It recommends utilizing external GIS resources to handle high data-maintenance demands and to add one additional employee to meet demands for CAD coordination and 72-hour turnaround times for address changes. The findings of the workforce-optimization study support these recommendations.

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<sup>5</sup> 9-1-1 ACOG has commissioned a separate GIS study to analyze the implications of transitioning and support for transitioning to NG9-1-1. Detail aligning the recommendations in this reported are included in the GIS readiness assessment report.

### Key Takeaways

- The GIS team has three experienced and knowledgeable employees for its mapping and data-integrity functions. They operate very well in their jobs; however, the volume of work necessary to support the client agencies exceeds industry expectations for three GIS professionals.
- Given the path ahead, the three will not be adequate to support the core data services necessary to support the NG9-1-1 migration. The GIS team will require help from 9-1-1 ACOG's regional GIS contractor to transform the GIS data tables to the statewide NG9-1-1 schema.
- The GIS team believes that 9-1-1 ACOG's data is ready for NG9-1-1-related upgrades.
- The GIS team requires more staff to maintain the requirements for integrated public-safety-grade GIS addressing data that also agrees with MSAG and ALI data generated by the call-handling system.
- The team will struggle to meet the National Emergency Number Associations' (NENA's) 72-hour turnaround time for provisioning and maintenance of GIS data in a NG9-1-1 environment.

Table 5: GIS Support Recommendations

Recommendations	Outcomes
Hire one additional GIS technician	<ul style="list-style-type: none"><li>• Sharing the addressing workload with the current technician</li><li>• Freeing the GIS specialist and manager for other work</li></ul>
Utilize experienced and credentialed external GIS resources to conform GIS datasets to statewide NG9-1-1 standards	<ul style="list-style-type: none"><li>• Transition to NG9-1-1 mapping datasets will be a temporary endeavor</li><li>• Mitigates high data-maintenance needs</li></ul>
Consider sharing overload work with the ACOG Transportation Planning Services Division's GIS professionals	<ul style="list-style-type: none"><li>• A holistic GIS dataset for transportation and emergency services would be efficient</li></ul>

## 2.3 Technology and Systems Support

The Technology and Systems Support functional area is responsible for: call-handling equipment (CHE) configuration; 9-1-1 server and computer monitoring and maintenance; all hardware, including routers, switches, gateways, servers, backroom equipment and workstations; and providing 24 hours a day, 7 days a week (24 x 7) help desk support for 22 PSAPs, including GIS issues. This team assists with PSAP equipment relocations, coordinates upgrades with CAD system vendors, and assists CAD system and GIS vendors when they provide support at the PSAP. The team consists of two 9-1-1 system specialists who are led by a 9-1-1 systems support manager who reports to 9-1-1 director.

Based on the service needs of the client agencies, a member of this team is required to respond to requests 24 x 7. Even though the on-call assignments rotate and many of the responses can be managed remotely, because of the small size of the team, the impact on the workforce is that individuals routinely do not get uninterrupted time off. If the on-call person is at a PSAP providing support and another PSAP

enters a priority request requiring immediate assistance, the second system specialist may have to be called in. This has created a stressful work environment that can impact work productivity, as well as staff wellness and retention.

The team has an open system specialist position, leaving the remaining staff member to support all 22 PSAPs. It is important to note that the position opened because the previous specialist took a lateral move to another division within ACOG for a base salary increase and due to the stress of constantly being on call. This is not a sustainable environment and the workload indicates a clear need for a third system specialist, not only to provide backup and relief concerning the 24 x 7 duties, but also to distribute day-to-day tasks.

MCP determined that the system specialists provide services to the PSAPs that are above and beyond maintenance of the CHE and that the client agencies are very happy with the level of service provided by the team. Due to the staff shortage and the already heavy workload, MCP recommends that 9-1-1 ACOG track the amount of staff time required to provide this concierge level of service to determine whether additional staff and compensation are required. Providing details regarding this level of service to the client agencies during quarterly meetings will help to explain the need for increased 9-1-1 ACOG staffing and funding.

The technical and systems support team uses an automated ticketing system, SysAid, to track requests for assistance. However, it was noted that the PSAPs typically call in to report an issue rather than use the automated system. The system specialists try to create a ticket after the fact, but that does not always occur. Consequently, PSAPs should be trained and encouraged to open a ticket in SysAid. When that is infeasible, such as when a critical service interruption occurs, the team still should open a ticket for tracking purposes. Improved tracking will demonstrate the number of requests, the type of calls, the severity of calls and the length of time required for a resolution to present an overall picture that leadership can use to understand and justify the need for additional personnel.

During the last year, the team has tracked 1,787 trouble tickets and logged 462 calls for assistance. The team was not able to provide an automated report that identifies the nature of the ticket or the length of resolution time. The team also does not use the system to track whether site visits are required for resolution. The ticketing system categories are identified in the table below:

Table 6: Ticketing System Categories

9-1-1	Network Equipment
9-1-1 Database	Other
9-1-1 Down	Other Equipment
Application	Routine Maintenance
Basic Software	Servers
Data Center	Software

9-1-1	Network Equipment
ERP <sup>6</sup>	Telephony/Voice
Map	User Workstation

MCP recommends that the team uses or upgrades, if necessary, the ticketing system to better track service requests, site visits and resolution time, and to produce management reports. MCP further recommends that the team uses the ticketing system to track how many requests are resolved with user training. Tracking how many requests are not actually technical issues, but rather, a result of user error or lack of user training will enable the 9-1-1 Training Institute functional area to identify where and how PSAP training may be able to help lower the number of trouble tickets.

Based on the information provided, MCP recommends adding a third system specialist; however, there may be a need for a fourth specialist to provide coverage for the 24 x 7 operations. MCP has identified a potential area of risk and recommends that ACOG seek guidance from a human resource expert experienced with the 24 x 7 nature of the system support staffing requirements and the Oklahoma Fair Labor Standards Act.

#### *Key Takeaways*

- The team is down one system specialist; under the current operational configuration, one more system specialist needs to be added beyond filling the open position.
- Salary for team members may not be adequate for the type and amount of work performed.
- The career path for this team is compressed, resulting in members taking lateral moves to be afforded additional opportunities.
- Team members need to learn to use SysAid's reporting capability to better measure performance and support benchmarking when additional positions are needed.

Table 7: Technology and Systems Support Recommendations

Recommendations	Outcomes
Use or upgrade the ticket system to enable tracking of service requests and producing management reports	<ul style="list-style-type: none"> <li>• Actionable data for improving response times, identifying strengths and weaknesses of systems receiving least and most requests, determining which agencies need the most support and, perhaps, a technology audit</li> <li>• Educates leadership regarding the costs of providing the service and the need for personnel</li> </ul>
Backfill the vacant system specialist position and create and fill an additional system specialist position	<ul style="list-style-type: none"> <li>• Provide coverage to support PSAPs and enables system specialists to rotate on-call support</li> </ul>

<sup>6</sup> Emergency Responder Products (ERP)

## 2.4 9-1-1 Training Institute

This functional area has one position, the program manager, who reports to 9-1-1 director. The responsibilities for this functional area include providing pre-employment testing and 9-1-1 basic telecommunicator training, recognizing telecommunicators on National Telecommunicator Day, and providing operational consulting as needed. For a six-month period, due to the loss of the previous public-relations (PR) employee, the responsibilities of public-education and PR communications were outsourced to a PR firm. A full-time public-information director (PID) is now on board, thus ending the outsourcing approach.

Over the last 12 months, 25 training classes were held, equaling 456 hours, with 417 students attending. Each month averages 38 hours of training. Training class offerings are found on ACOG's website and sign-up is easy. The 9-1-1 Training Institute keeps records of training for all who attend, along with certification records.

The institute was established in 1994 to offer emergency telecommunicators in central Oklahoma a top-quality, affordable and nationally accredited alternative to expensive out-of-state training, so class fees are waived or kept low to encourage participation. More than 90 agencies now participate in institute-offered courses, a significant increase from four years ago when there were 30. Over the last four years, demand for training also has increased significantly; as a result, four Association of Public-Safety Communications Officials (APCO) public safety telecommunicator I certification courses now are offered per year instead of one. Also offered are three APCO communications training officer (CTO) certification classes, as well as classes focused on topics such as fire service communications, APCO communications center supervisor, domestic violence, active shooter, suicide intervention, and many others.

Feedback concerning educational and operational support was overwhelmingly positive, as evidenced by the following comments:

- ACOG training is working well for the PSAPs, specifically for new telecommunicator training
- The unit provides good customer service
- Pre-employment testing works well
- Due to budget constraints, several agencies would not have access to training if not for the 9-1-1 ACOG education support

Training enhancement suggestions include the following:

- Update training topics so that there are options for the veteran telecommunicators.
- Provide refresher courses for the 9-1-1 call-handling screens
- Consider incorporating different training topics, different training vendors, and more variety of training into the 9-1-1 Training Institute offerings
- Begin planning to provide pretraining for NG9-1-1 so that agencies will know what to expect before implementations begin
- Consider establishing a newsletter, enhancing public education
- Training for ACOG's 9-1-1 staff

To maintain the level of service for the existing offerings, while also considering future enhancements required by NG9-1-1, this functional area needs a deputy-level position to support the program manager with ongoing institute activities and to provide backup when the manager is out of the office. As demonstrated by the hiring of a full-time PID, 9-1-1 ACOG recognizes the importance of the public-relations and public-education functions being in-house for direct control over the message and increased productivity. This position could be used to lead public education initiatives, such as text-to-9-1-1, and to produce training presentations and documents.

### *Key Takeaways*

- The institute has only one employee for its education and operations support function. This is not enough to satisfy current agencies' expectations regarding training, public education, employment testing, and public relations communications. It will not be enough to support a transition to NG9-1-1.
- The institute is necessary for smaller agencies to receive training certification for APCO public safety telecommunicator 1. This benefits the public and the PSAP by providing professional and knowledgeable emergency service and limits PSAP liability.
- 9-1-1 ACOG provides great customer service to its client agencies.
- The institute's program manager cares about the client agencies and strives to offer them the best possible service at an affordable cost.
- 9-1-1 ACOG keeps training and certification records in a centralized database, which is necessary for documentation.
- The training courses provide an opportunity for interaction between the client-agency employees, which promotes cooperation and knowledge sharing.

Table 8: 9-1-1 Training Institute Support Recommendations

Recommendations	Outcomes
Create a position to support training and education	<ul style="list-style-type: none"> <li>• Succession planning and career path to the institute's program manager position</li> <li>• Provides support to, and backup for, the program manager and additional functionality for training and other educational programs</li> <li>• Supports ACOG's public information director (PID)</li> </ul>
Create an educational program for the institute's staff	<ul style="list-style-type: none"> <li>• Site visits and exposure to APCO training out of state</li> <li>• National APCO conference attendance</li> <li>• Maintain training certifications and learn about new training opportunities</li> <li>• Train-the-trainer is an investment in staff that improves the training program and outcomes</li> </ul>
Provide teaching tools necessary for the institute's programs	<ul style="list-style-type: none"> <li>• Upgraded classroom</li> <li>• Photoshop and PowerPoint for presentations</li> </ul>



Recommendations	Outcomes
Provide opportunities for the institute's program manager to contribute to 9-1-1 ACOG board member education by giving training presentations and attending Oklahoma 9-1-1 Management Authority meetings	<ul style="list-style-type: none"> <li>Education about 9-1-1 ACOG's training programs will inform upper levels of management, enable information sharing, and encourage engagement and communication by training staff at all levels of the organization</li> </ul>

## 2.5 Recruiting, Hiring, Training and Retention

Staffing struggles in the 9-1-1 community are not new and even though 9-1-1 technology is advancing, they seem to be worsening instead of improving. The lack of available, qualified staff makes it difficult for both PSAPs and the organizations that support them, such as 9-1-1 ACOG, to keep up. When these support organizations are not staffed sufficiently, the 9-1-1 infrastructure and related services are put at risk. The results can be devastating and, as new technology and media make their way into the PSAP environment, it becomes even more imperative to ensure that organizations such as 9-1-1 ACOG are not only staffed adequately by ACOG but that the staff is well-trained and well-supported by leadership.

ACOG has knowledgeable, skilled 9-1-1 staff but NG9-1-1 will increase the level of expertise required. To find candidates with the skills required by each functional area, now and into the future, it is imperative that 9-1-1 ACOG widens the net and changes where it looks for candidates. As 9-1-1 ACOG transitions to an NG9-1-1 platform, leaders will need to seek candidates with more advanced skills. This will require them to stay up to date on where they look for those candidates and continually expand their recruiting strategy to include social media, online job boards and other digital means.

A review of salaries suggests that ACOG should regularly evaluate its pay scale to stay competitive within the market. It will be in ACOG's best interest to ensure the highest level of pay and benefits possible, to not only attract but also to retain qualified 9-1-1 staff.

Further, the recruiting and hiring of staff with the aptitude and skillsets required for NG9-1-1 is challenging across the nation and has become increasingly vexing in the current economy. Ergo, ACOG should consider a career path that will allow employees to be brought in at a lower level and receive on-the-job training with compensation increased as skillsets increase.

Nationally, on average, it can take anywhere from two to five months to complete the hiring process for one candidate. Not only do organizations need to change where they are looking for potential candidates, but when they find them it is imperative that they shorten the hiring process.

Some recommendations include:

- Make the process more consistent and user-friendly by posting jobs online
- Establish new screening workflows, policies and procedures that help to accelerate the hiring process
- Modify outdated eligibility requirements



As noted previously, it not only is important that the client agencies receive training but also that the current and future 9-1-1 staff members have access to training programs that allow them to perform their job duties and stay current on industry trends. One of the most common reasons for failing to retain new staff members is an inability to meet position expectations.

Some recommendations include:

- Develop a well-designed internal staff training program, including advanced training for technical staff, that promotes consistent training application
- Implement expanded training curricula for current staff to encourage professional development and to help grow skillsets
- Develop quality assurance programs and implement data-driven metrics for staff evaluation

During the interviews, MCP observed the need for an employee-retention program. Retention is arguably the most important pillar of workforce optimization. However, most agencies are not placing enough focus on employee-retention programs. Each of the teams requires defined career paths and associated merit increases. ACOG's 9-1-1 staff members should not have to leave the organization to find opportunities for advancement and compensation increases. The simplest, most straightforward place to begin, especially for organizations with a flat structure, is to develop career paths for staff members. By outlining these paths from the outset, new hires have a clear vision regarding their roles within the organization and how they can grow professionally. For those who may not be interested in climbing the ladder, instituting special assignments and roles within a project can keep employees engaged.

Even if ACOG is not able to raise 9-1-1 staff salaries, offering incentives and perks, like gym memberships, mental health resources, retirement packages and improved benefits, such as remote work opportunities for staff whose roles and responsibilities do not necessarily need to be accomplished in a traditional office setting. All of these tactics can make it worthwhile for employees to come on board and, more importantly, stay on board.

### 3 Workforce-Optimization Plan

The four functional areas of 9-1-1 ACOG—Administration and Planning, 9-1-1 GIS and Data Integrity Services, 9-1-1 Technology and Systems Support, and 9-1-1 Training Institute—are integral to workforce optimization and the transition to NG9-1-1. There are internal and external factors that may impact workforce requirements and subsequently progress toward these initiatives. These may include political, statutory, or regulatory implications; technology requirements or operational considerations; stakeholder resistance, support or influence; and economic and/or funding considerations, such as grants, loss of funding, and funding diversions. These impacts on the workforce are described in this report, as are the desired states and how well they will align with strategic initiatives.

This section of the report assumes the implementation of the recommendations made throughout Section 2 of this report.

9-1-1 ACOG has commissioned other studies that complement this report, including a GIS study, referenced in Section 2.2, a funding study, and an NG9-1-1 readiness assessment. The funding study, referenced in Section 2.1.1, analyzes the complete cost of transitioning to, and support for, NG9-1-1. Cost projections for the staffing recommendations from this workforce-optimization report will be included in that study.

Initiatives associated with the recruiting, hiring, training and retention of staff operating in the four functional areas will be developed and included as strategic initiatives to support the organization’s priorities.

### 3.1 Option 1 – Managed Service Model

One option for ACOG to realize a successful transition to NG9-1-1 is to procure NG9-1-1 as a service. This would mean contracting for an Emergency Services IP Network (ESInet) and Next Generation Core Services (NGCS) while continuing to keep in-house ownership and maintenance of CHE and related software. Depending on the procurement approach, 9-1-1 ACOG may choose a single vendor to provide the ESInet and NGCS or select a vendor for each.

In this model, the vendor is responsible for managing all hardware and software. This solution may involve services that reside in the cloud with very little physical equipment at 9-1-1 ACOG sites. A managed service model is easier and faster to deploy for both the vendor and the 9-1-1 entity.

For Option 1, 9-1-1 ACOG will need to hire the positions identified throughout Section 2 of this report. This option requires the following four positions in addition to those that already exist:

- GIS technician
- Field technician
- Training and education support specialist
- Assistant 9-1-1 director

The challenge with this model, regarding workforce optimization, is the need for strong management of the vendor. Ergo, 9-1-1 ACOG will need ACOG support staff with the ability to not only manage the vendor contract but to also ensure that the vendor is meeting the service levels agreed to in the contract.

Table 9: Option 1 Roles and Responsibilities

Position	Roles and Responsibilities
Hire an additional GIS technician	<ul style="list-style-type: none"> <li>• Sharing the addressing workload with the current technician</li> <li>• Freeing the GIS specialist and manager for other work</li> </ul>
Hire an additional system specialist	<ul style="list-style-type: none"> <li>• Current systems support employees are on call 24 x 7</li> <li>• Having three at a minimum—and potentially a fourth—in the group to share on-call support will mitigate the heavy workload</li> </ul>

Position	Roles and Responsibilities
Hire a specialist to support training and education	<ul style="list-style-type: none"> <li>Provides succession, backup, and support to the training program and to ACOG's PID.</li> </ul>
Hire an assistant 9-1-1 director	<ul style="list-style-type: none"> <li>Coordinates functional areas and supports contract management, including vendor contracts and service level agreements (SLAs)</li> <li>Supports and informs ACOG's executive director and 9-1-1 director regarding client-agency projects and those of the State 9-1-1 Coordinator's Office</li> <li>Allows executive leadership to focus on leadership activities and not on daily management tasks.</li> <li>Has responsibility for continuity of operations and crisis communications</li> </ul>

Table 10: Option 1 Opportunities and Challenges

Opportunities	Challenges
<ul style="list-style-type: none"> <li>Vendor is responsible for maintenance of all hardware and software</li> </ul>	<ul style="list-style-type: none"> <li>Limited local control of the system</li> </ul>
<ul style="list-style-type: none"> <li>Quicker and easier to install</li> </ul>	<ul style="list-style-type: none"> <li>Less flexibility to integrate outside applications</li> </ul>
<ul style="list-style-type: none"> <li>If a single vendor is chosen, easier to manage SLAs, i.e., "one throat to choke"</li> </ul>	<ul style="list-style-type: none"> <li>Putting all eggs into one basket</li> </ul>
<ul style="list-style-type: none"> <li>Does not require hiring additional staff to support, therefore lowering the cost of permanent ACOG 9-1-1 staff</li> </ul>	<ul style="list-style-type: none"> <li>Less control of vendor staff</li> </ul>
<ul style="list-style-type: none"> <li>Lower cost of ownership as 9-1-1 ACOG is subscribing to a service</li> </ul>	<ul style="list-style-type: none"> <li>Subscriber costs possibly will continue past what would have been the purchase price to own</li> </ul>
<ul style="list-style-type: none"> <li>Does not require a capital funding investment, so fewer worries about end-of-life equipment because the managed services contract should include an upgrade at end of life</li> </ul>	<ul style="list-style-type: none"> <li>This might be a clause that includes a percentage increase for newer equipment</li> </ul>

## Association of Central Oklahoma Governments – 9-1-1 & Public Safety Division Option 1 – Managed Service Model

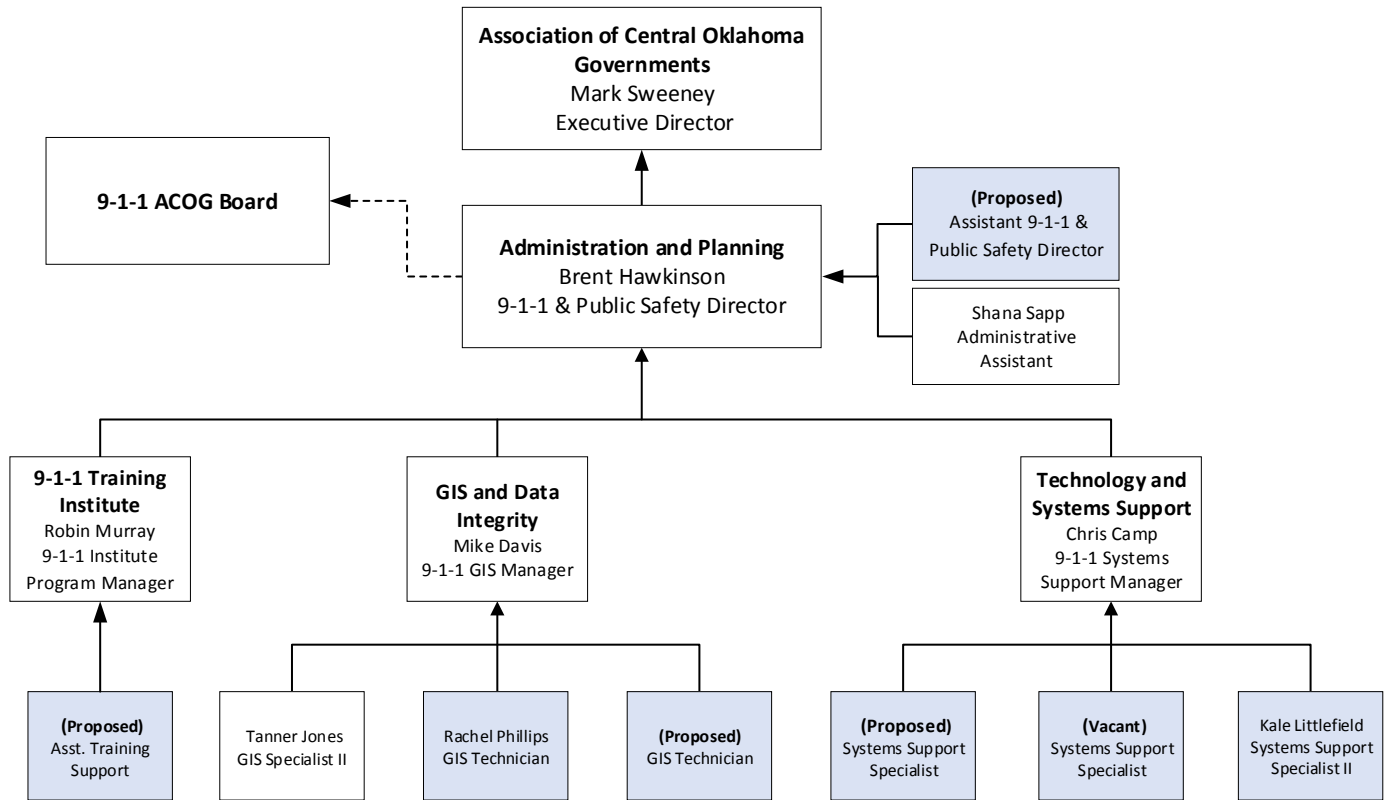


Figure 3: 9-1-1 & Public Safety Division – Proposed Staffing for Option 1

## 3.2 Option 2 – Owner/Operator Model

9-1-1 ACOG may choose to procure its NG9-1-1 system via an owner/operator model to eliminate dependence on a single vendor, or possibly multiple vendors. In this model, rather than contracting with a vendor or vendors to provide NG9-1-1 as a service, 9-1-1 ACOG would own its ESInet and some components of the NGCS. The owner/operator model provides flexibility to procure individual NG9-1-1 elements based on desired functionality and may provide 9-1-1 ACOG with greater flexibility to determine call routing.

In an owner/operator model, multiple points of interconnection exist between the network, the CHE, the NGCS provider and the core service elements provided by 9-1-1 ACOG, which would be responsible for monitoring the network's operation and any core service elements being provided. 9-1-1 ACOG also would be responsible for managing carrier relationships and the migration of carriers to the NG9-1-1 network, and for supporting the ALI process. This would require a four-to-six-person network engineering team to provide 24 x 7 monitoring and support for the network and core elements.

MCP recommends hiring a network operations manager with CCIE<sup>7</sup> status or equivalent, and a minimum of five years' experience in a critical network environment, e.g., the healthcare, service provider or financial sectors. Three to five network support engineers also should be hired with CCNP<sup>8</sup> status or equivalent, as well as one to three years' experience; they would rotate being on call 24 x 7. At least one of the team members should have the ability to add new carriers to the network and one member should have expertise with a network monitoring tool as well as the Information Technology Infrastructure Library (ITIL) change-management processes.

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Option 2 assumes all staff identified for Option 1 plus the following:

- Network operations manager (1)
  - Network support engineers (3-5)
  - NGCS manager (1)
  - Application engineers (2-3)
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In addition, ACOG would need two to three application engineers with the ability to manage and provision the NGCS elements for policy routing and ALI. During the transition, they would need the ability to manage the legacy ALI database.

If this option is chosen, MCP recommends that ACOG hires a 9-1-1 systems integrator initially to manage the interconnection between all of the various elements. This model also would require a robust network monitoring tool that feeds into a ticketing system integrated through an application programming interface (API).

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<sup>7</sup> Cisco-Certified Internetwork Expert.

<sup>8</sup> Cisco Certified Network Professional.

Table 11: Option 2 Roles and Responsibilities

Position	Roles and Responsibilities
Hire a network operations manager	<ul style="list-style-type: none"> <li>• Manage 24 x 7 team of network support engineers</li> <li>• Responsible for onboarding carriers to the network or equivalent</li> <li>• Overall responsibility for maintenance and support of the ESInet and NGCS</li> <li>• Responsible for tracking all open trouble tickets and length of resolution time</li> </ul>
Hire network support engineers	<ul style="list-style-type: none"> <li>• 24 x 7 monitoring and support of the ESInet and NGCS</li> <li>• CCNP or equivalent</li> <li>• Responsible for resolving all open trouble tickets</li> <li>• Responsible for creating and utilizing ITIL change-management processes</li> <li>• Responsible for all system upgrades and maintaining overall system uptime.</li> </ul>
Hire an NGCS manager	<ul style="list-style-type: none"> <li>• Responsible for managing and provisioning the NGCS elements for policy routing and ALI</li> <li>• Responsible for provisioning the legacy ALI database</li> </ul>
Hire application engineers	<ul style="list-style-type: none"> <li>• Responsible for provisioning and maintaining NGCS applications for call routing and ALI, and for coordinating the legacy services transition and other core services not yet identified</li> </ul>

Table 12: Option 2 Opportunities and Challenges

Opportunities	Challenges
Eliminates dependence on vendor(s)	Increased points of failure
Allows greater flexibility to procure individual NG9-1-1 elements based on desired functionality	Higher level of vendor management required
Provides 9-1-1 ACOG with more control over call-routing decisions	Increased staff resources and investment of training in those resources is required
	May require an additional vendor to provide systems integration

## Association of Central Oklahoma Governments – 9-1-1 & Public Safety Division Option 2 – Owner/Operator Model

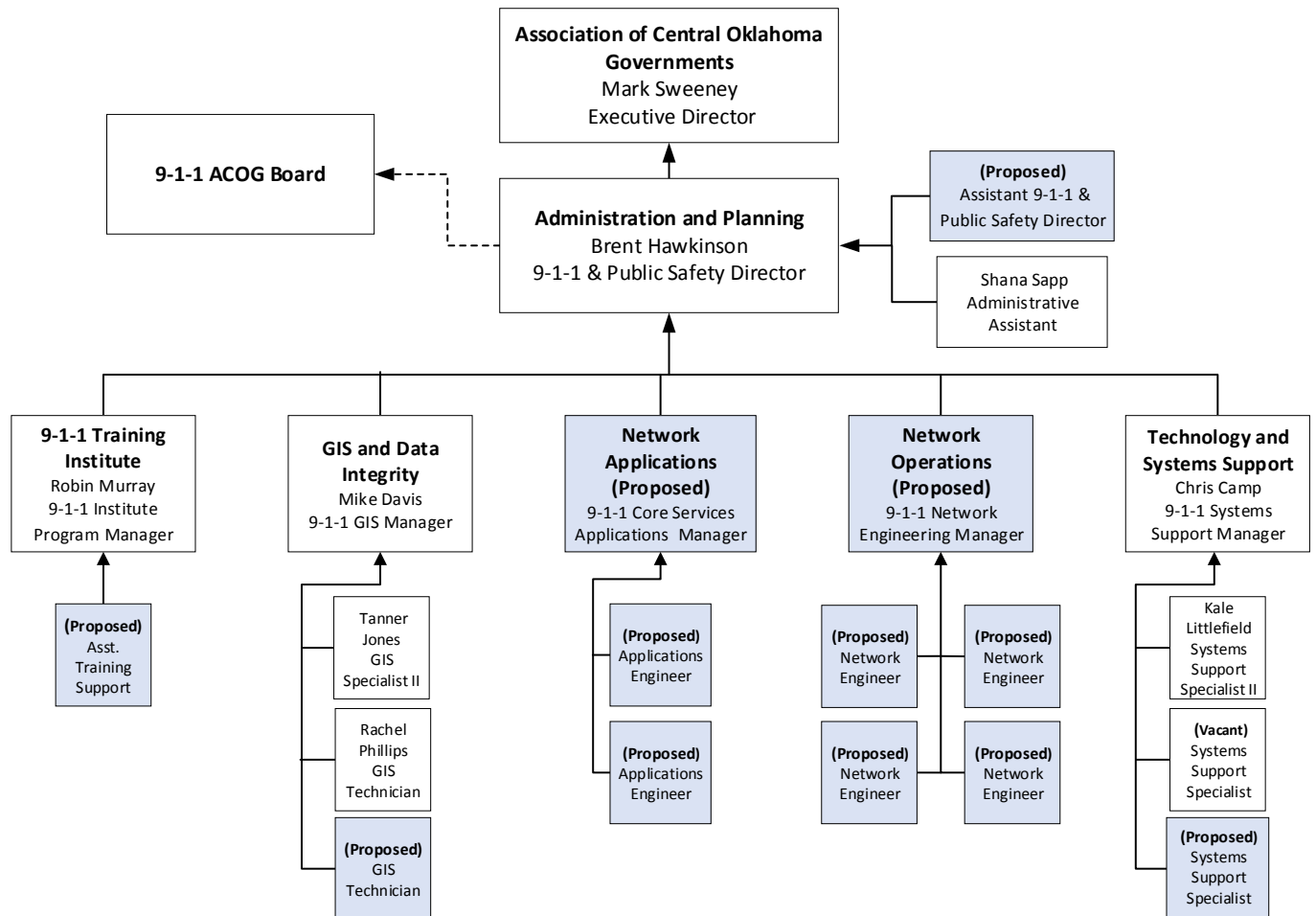


Figure 4: 9-1-1 & Public Safety Division – Proposed Staffing for Option 2

## 4 Projected Timeline

Recommendations	Outcomes	Report Reference	Owner
Priority One – Within 6 months			
Document duties and responsibilities for each position	<ul style="list-style-type: none"> <li>Allows anyone to step into a role and do the job functions faster</li> </ul>	Section 2.1.2	
Create detailed job descriptions and well-defined job functions for all ACOG's 9-1-1 staff	<ul style="list-style-type: none"> <li>Employee performance, morale, and job satisfaction will be improved by clearly defined roles and responsibilities and consistent application of the performance metrics</li> </ul>	Section 2.1.3	
Hire an assistant 9-1-1 director	<ul style="list-style-type: none"> <li>Position will coordinate with functional areas and will support contract management</li> <li>Position will support and inform ACOG's executive director and 9-1-1 director regarding client-agency projects and those of the State 9-1-1 Coordinator's Office.</li> <li>Position will allow the executive leadership to focus on leadership activities and not on daily management tasks</li> </ul>	Section 2.1.1	
Hire an additional GIS technician	<ul style="list-style-type: none"> <li>Sharing the addressing workload with the current technician</li> <li>Freeing the GIS specialist and manager for other work</li> </ul>	Section 2.2	
Hire a specialist to support training and education	<ul style="list-style-type: none"> <li>Succession planning and career path to 9-1-1 Institute program manager position</li> <li>Provides support to, and backup for, the manager, as well as additional functionality for training and other educational programs</li> <li>Supports ACOG's PID</li> </ul>	Section 2.4	
Backfill the vacant system specialist position and hire an additional system specialist	<ul style="list-style-type: none"> <li>Provides coverage for support of client agencies and enables system specialists to rotate on-call support</li> </ul>	Section 2.3	



Recommendations	Outcomes	Report Reference	Owner
Involve at least on 9-1-1 ACOG board member in strategic vision planning	<ul style="list-style-type: none"> <li>Board member will be able to report back to the 9-1-1 ACOG board and client agencies and to advocate for the strategic vision</li> </ul>	Section 2.1.1	
Form a team to create 9-1-1 ACOG policies and procedures for use by both ACOG 9-1-1 staff and client agencies	<ul style="list-style-type: none"> <li>All stakeholders will have access to policies and procedures and clearly understand workflows and decision-making processes</li> </ul>	Section 2.1.3	
Identify in 9-1-1 ACOG bylaws the timeline of when agendas and meeting minutes are due to board members	<ul style="list-style-type: none"> <li>Publishing dates times when agendas items are due and when agendas and meeting minutes should be delivered to board members sets guidelines and expectations for administrative personnel and members to follow</li> </ul>	Section 2.1.2	
Priority Two – 6 to 12 Months			
Provide in-depth financial statements to the 9-1-1 ACOG board itemizing costs for equipment and support; ask several PSAPs of varying size to provide the same	<ul style="list-style-type: none"> <li>Maintains transparency with the 9-1-1 ACOG Board</li> <li>Provides the 9-1-1 ACOG board with information needed to make informed decisions</li> </ul>	Section 2.1.1	
Add detailed job descriptions and responsibilities, as well as functional procedures, to the PayCom employee self-Serve repository, which contains ACOG's employee handbook	<ul style="list-style-type: none"> <li>One-stop shop for all employee-related information</li> </ul>	Section 2.1.3	
Create a formal onboarding process for new employees; keep records for each employee regarding their orientation	<ul style="list-style-type: none"> <li>A clearer understanding of overall agency goals and objectives, as well as the purpose and importance of the job functions</li> <li>A successful transition into the new role</li> </ul>	Section 2.1.2	
Include more training on what 9-1-1 and NG9-1-1 means to each functional area; provide an overview	<ul style="list-style-type: none"> <li>Provides more context around the roles and responsibilities of each position</li> </ul>	Section 2.1.2	

Recommendations	Outcomes	Report Reference	Owner
for new employees regarding 9-1-1 ACOG's mission and the functional areas			
Review and document the 9-1-1 fund receipt-and-distribution process	<ul style="list-style-type: none"> <li>Formalized process will ensure that the team understands the role and purpose they have in the process, as well as guard against the possibility of theft or embezzlement of 9-1-1 funds</li> </ul>	Section 2.1.2	
Conduct an outside audit of ACOG's financial processes to identify any potential liability exposure	<ul style="list-style-type: none"> <li>Reduce risk exposure and liability</li> <li>Opportunity to identify mitigation actions – if discovered</li> </ul>	Section 2.1.2	
Review and document invoice-payment process	<ul style="list-style-type: none"> <li>Ensures that payments are made according to contracted rates and alerts team to any changes in billing from vendors for follow-up and necessary contract changes</li> </ul>	Section 2.1.2	
<p>Create a documented process for making changes or updates to the strategic plan, including who is to conduct the review; who has the authority to make changes; and how those changes will be adopted</p> <p>Create a schedule for—at a minimum— annual review of the plan regarding any modifications or updates</p>	<ul style="list-style-type: none"> <li>Clear policy and a documented process ensures those responsible are informed and changes to the plan are documented</li> <li>Regularly scheduled reviews help to keep the plan current so that when it is needed, the information and procedures are accurate</li> </ul>	Section 2.1.3	
Consider sharing overload work with ACOG Transportation Planning Services Division's GIS professionals	<ul style="list-style-type: none"> <li>A holistic GIS dataset for transportation and emergency services would be efficient</li> </ul>	Section 2.2	
Use or upgrade the ticket system to track service	<ul style="list-style-type: none"> <li>Actionable data for improving response time to requests, identifying strengths and weaknesses of systems</li> </ul>	Section 2.3	

Recommendations	Outcomes	Report Reference	Owner
requests and produce management reports	<p>receiving least and most requests, and determining which agencies need the most support, and, perhaps, a technology audit</p> <ul style="list-style-type: none"> <li>Educates leadership regarding the costs of providing the service and the need for personnel</li> </ul>		
Priority Three – 12 to 24 Months			
Enhance the disaster-recovery plan to identify roles and responsibilities and to define communication, data, operation and technology policies during an outage	<ul style="list-style-type: none"> <li>Clearly defined roles</li> <li>More seamless and efficient operations during disaster situations</li> </ul>	Section 2.1.3	
Review and update 9-1-1 ACOG's disaster-recovery Plan regularly; involve board members, director, staff members, client agencies, stakeholders, local media, and ACOG partners in the review	<ul style="list-style-type: none"> <li>Processes to update disaster-recovery plans regularly will ensure that the plans always are current and reflect the operations in place</li> <li>Helps to train and educate all those involved so that when a disaster needs to be mitigated, all are informed and useful</li> </ul>	Section 2.1.3	
Create and then train internal staff and client-agency personnel on crisis communications plan processes and procedures	<ul style="list-style-type: none"> <li>Mutually agreed-upon processes that are developed, understood and trained on will help to ensure efficient management of communications during an event. Just like training exercises regarding a possible event, exercising the communications plan will help to ensure efficiency</li> </ul>	Section 2.1.3	
Assign plan maintenance to appropriate staff	<ul style="list-style-type: none"> <li>Assigning plan maintenance to the appropriate staff member(s) ensures responsibility for keeping the plan current and accurate</li> </ul>	Section 2.1.3	
Utilize experienced and credentialed external GIS resources to conform GIS datasets to statewide NG9-1-1 standards	<ul style="list-style-type: none"> <li>Transition to NG9-1-1 mapping datasets will be a temporary endeavor</li> <li>Mitigate high data-maintenance needs</li> </ul>	Section 2.2	

Recommendations	Outcomes	Report Reference	Owner
Create an educational program for the 9-1-1 Training Institute staff.	<ul style="list-style-type: none"> <li>• Site visits and exposure to APCO training out of state</li> <li>• National APCO conference attendance</li> <li>• Maintain training certifications and learn about new training opportunities</li> <li>• Train-the-trainer is an investment in staff that improves the training program and outcomes</li> </ul>	Section 2.4	
Provide teaching tools necessary for the institute's programs	<ul style="list-style-type: none"> <li>• Upgraded classroom</li> <li>• Photoshop and PowerPoint for presentations</li> </ul>	Section 2.4	
Provide opportunities for institute program manager to contribute to 9-1-1 ACOG board member education by giving training presentations and attending Oklahoma 9-1-1 Management Authority meetings	<ul style="list-style-type: none"> <li>• Education about 9-1-1 ACOG training programs will inform upper levels of management, enable information sharing, and encourage engagement and communication by training staff at all levels of the organization</li> </ul>	Section 2.4	

## 5 Conclusion

This report summarizes the findings from MCP's review and analysis of 9-1-1 ACOG's current ACOG workforce and its capabilities. It presents recommendations and options for 9-1-1 ACOG's transition to an NG9-1-1 environment, which ultimately will improve infrastructure and training support to its client agencies.

While ACOG has knowledgeable and skilled 9-1-1 staff, NG9-1-1 will add to the level of expertise required and depending on the implementation path chosen—managed service or owner/operator model—will require different numbers and types of positions for the organization to function optimally. Both options, however, assume that even if 9-1-1 ACOG did not plan to transition to NG9-1-1, filling current vacancies and adding other positions are necessary. Following the recommendations in this report can provide the organization with immediate and long-term continued success that will move 9-1-1 ACOG toward the desired “ideal” state.

The first step in improving an already welcomed service to the client agencies is to take the identified areas of risk and translate them into opportunity. Now that ACOG has completed a 9-1-1 workforce-optimization assessment, recommendations have been developed and prioritized to improve upon the foundational work that is already in place and to establish metrics form measuring progress moving forward.

With this assessment and the recommendations herein, ACOG is poised for 9-1-1 workforce success in the migration to either a managed service or owner/operator model for implementing NG9-1-1 within its region.

The strategic initiatives that subsequently will be included in a strategic plan can serve as a roadmap to helping 9-1-1 ACOG and its client agencies overcome ACOG staffing struggles and implement effective programs that identify the right people and put them in the right seats while making a conscious effort to sustain and retain quality personnel.