

GOVERNANCE

INTRODUCTION

Governance is the foundation upon which the vision of the future of emergency communications must be built. A workable governance model must be agreed upon and implemented in order for any technical solution to succeed.

An examination of governance revolves around the legal and regulatory framework (laws and regulations) needed to facilitate the adoption, use, and handling of broadband technology at PSAPs. This includes issues related to coordination, funding, resource and data sharing, mutual aid,¹⁴ redundancy, interoperability, liability, privacy, and the use of memoranda of agreements, interagency agreements, and similar vehicles. This section contains recommendations for governance approaches based on a survey of existing governance structures and trends.

A number of states have developed legal and regulatory frameworks that enable the planning and implementation of NG9-1-1.¹⁵ These activities include legislation establishing new or updated governance structures, deploying IP connectivity, crafting and re-crafting funding mechanisms, and promoting coordination, mutual aid, and information and resource sharing. Though deployment progress varies, a handful of states and counties have issued requests for proposals (RFPs) for ESInets and other NG9-1-1 components, and commenced or completed some implementation.¹⁶

States that have established governance structures for deploying broadband networks such as NG9-1-1 are making the most progress. Governance bodies do not need to follow a particular approach - they can be state-driven, decentralized and locally-driven, or another format. But the common hallmark of success is to actively engage with local stakeholders, including PSAPs.

Key characteristics for governance success include:

- An inclusive, participatory statewide and/or regional governance structure that promotes coordination and collaboration
- Governance structures at the local levels for day-to-day management of 9-1-1 networks
- Champions among key stakeholder groups
- A strategic vision for the entire 9-1-1 ecosystem
- Sufficient, long-term funding mechanism with strong oversight, including no fee diversion
- Grant-making authority with incentives to achieve statewide goals
- Training support
- Rulemaking authority
- Cost efficiencies
- Enforcement authority
- Outreach and education
- Mechanisms to promote coordination, mutual aid, and information and resource sharing, including among public safety radio communications and the NPSBN

On the legislative front, states need to remove existing or legacy barriers to 9-1-1 modernization, update legislation to promote technology adoption and broadband network implementation, and craft new provisions to address the legal, regulatory, liability, and privacy concerns of a broadband environment.

THE GOVERNANCE ROLE

Governance is a fundamental concept in public safety communications. A governance structure is the underpinning for all that follows in establishing a broadband-rich environment for PSAPs across the country. Absent a sufficient governance structure, it is nearly impossible for PSAPs to carry out their

missions, regardless of the technology or human resources available.

State and local governing bodies can and should enact laws and regulations, and/or establish governance structures that help achieve certain goals afforded by broadband technology. States also need to remove existing legacy barriers to 9-1-1 modernization, update legislation to promote technology adoption and broadband network implementation, and craft new provisions to address the legal, regulatory, liability, and privacy concerns in a broadband environment.

Data-Driven Policy Development

Broadband technology presents opportunities to capture and analyze large amounts of data, which in turn can be used to inform policy development and strategic planning. A data-driven approach can help establish business cases for funding and resources, as well as measure the success of governance structures in promoting adoption of broadband technology, ensuring adequate staffing and funding, and meeting mission objectives. Accordingly, mechanisms should be put into place to capture and analyze the data flowing into and generated by PSAPs.

Most states today already collect data on expenditures of 9-1-1 fees, as evidenced by the requirement of the Federal Communications Commission (FCC) to [report annually to Congress](#) on 9-1-1 fee diversion practices, including the cost to provide 9-1-1 service, amount of 9-1-1 fees diverted to other purposes, and NG9-1-1 expenditures.¹⁷ This kind of data could be helpful for 9-1-1 authorities to plan for NG9-1-1 and develop sustainable funding mechanisms. Unfortunately, not all states possess a capability to collect and provide data. The data contained in the FCC's fee report help to illustrate the governance features that would be conducive to detailed data collection in the broadband environment:

- Common definitions and terminology (for example, of “NG9-1-1” and “cybersecurity”)
- Reporting through a common system to an entity that receives a centralized report

- Mandating or providing strong incentives for reporting by local governments
- Commonality in accounting systems across local governments
- Collecting data from all types of 9-1-1 service

Effective Coordination

Governance includes the laws and regulations enacted by state and local governments and regulatory agencies, as well as bodies and entities created by these governments that are charged with carrying out certain responsibilities.

Effective governance structures facilitate a more rapid and cost-effective transition to NG9-1-1.

Governance Structures

Effective governance structures facilitate a more rapid and cost-effective transition to NG9-1-1, and can provide centralized support or oversight, technical and operational expertise, planning assistance, and requirements or incentives that foster broadband deployment. Governing bodies do not need to follow a particular model to be effective. They can be state-driven, decentralized and locally-driven, or a hybrid approach.

The following are some illustrative examples:

- Pennsylvania amended its emergency services statute, which modernized the duties of the Pennsylvania Emergency Management Agency (PEMA), created the 9-1-1 Advisory Board to assist PEMA, established a 9-1-1 Fund (previously the Wireless E9-1-1 Emergency Services Fund), required development of an NG9-1-1 plan, extended liability protection to providers of NG9-1-1 technology, and modernized statutory definitions, by adding definitions of NG9-1-1 service and NG9-1-1 technology among others.¹⁸

PEMA can consult with the 9-1-1 Advisory Board to establish a statewide NG9-1-1 plan, including a statewide interoperable IP network using NG9-1-1

technology.¹⁹ The 9-1-1 Advisory Board, which consists of diverse stakeholders including at the local level, can advise the agency on plans to deploy NG9-1-1 technology, and promote sharing of information among the agency, 9-1-1 systems, and other state and local agencies relating to the operation and improvement of 9-1-1 systems.²⁰

- North Carolina enacted legislation that created an NG9-1-1 Reserve Fund, requires PSAPs to implement NG9-1-1, authorizes the 9-1-1 Board to establish purchasing agreements for statewide procurement, allows the PSAP grant account to be used for expenses to enhance the 9-1-1 system, amends liability for the 9-1-1 system, and updates the 9-1-1 statutes to include new technology.²¹

The [NC 9-1-1 Board](#) has 17 members including eight local officials, eight vendors, and a Chief Information Officer of the Department of Information Technology (IT) or Designee as Chair of the Board, and has a Technology Committee with an NG9-1-1 focus.²² The Board oversees statewide planning and implementation of 9-1-1. The Board is charged with (1) developing a 9-1-1 plan, (2) establishing policies, procedures, and standards for PSAPs and backup PSAPs, including for cooperative purchasing agreements or other contracts for the procurement of goods and services, and funding advisory services and training, (3) managing and distributing the 9-1-1 Fund, (4) investigating the revenues and expenditures associated with the operation of a PSAP to ensure compliance with restrictions on the use of 9-1-1 funds, (4) adopting rules necessary to perform its duties, and (5) producing or acquiring public education materials regarding the proper use of 9-1-1.²³

- Indiana established the [Statewide 9-1-1 Board](#) to oversee 9-1-1 implementation, including the administration of fees to fund local PSAPs and the operation of the statewide ESInet.²⁴ The Board can also adopt and enforce rules, and develop, maintain, and update a statewide 9-1-1 plan.²⁵ The Board consists of 15 members, including a number of local stakeholders.

Planning

Several states have enacted legislation that requires a 9-1-1 modernization study or the development of an NG9-1-1 plan:

- California passed legislation requiring the Office of Emergency Services to develop a plan and timeline of target dates for the testing, implementation, and operation of an NG9-1-1 emergency communication system, including text-to-911 throughout California.²⁶



- Colorado passed a law creating a Task Force on 9-1-1 Oversight, Outage Reporting, and Reliability for the purpose of studying issues surrounding and making findings and recommendations for the improvement and deployment of 9-1-1 service, which included studying and determining whether the current funding sources and amount of funding are sufficient for providing existing 9-1-1 service and transitioning to NG9-1-1 service.²⁷
- Georgia passed a Senate resolution that created a Senate Study Committee on 9-1-1 System Modernization.²⁸

Improving Operations

Resource and Data Sharing

Broadband technology, and NG9-1-1 by its nature, increases PSAPs' ability to share resources and data. For example, multiple PSAPs across a region or a state may share GIS, cybersecurity protection, or

even their workforce and agency-managed data for mutual aid. Effective governance can:

- Allow, promote, or require infrastructure, equipment, technology, and data sharing among PSAPs
- Require the development of uniform technical and operational procedures and standards
- Promote the creation of multijurisdictional entities and mutual aid agreements
- Encourage PSAPs to share information across jurisdictions

Examples: California requires the NG9-1-1 system, where consistent with public safety and technologically feasible, to incorporate shared infrastructure and elements of other public safety and emergency communications networks;²⁹ Pennsylvania enables PEMA and the 9-1-1 Advisory Board to establish and publish uniform 9-1-1 technology standards and promote information sharing among agencies;³⁰ and the Oklahoma 9-1-1 Management Authority encourages sharing of equipment, technology, and information among PSAPs.³¹



Some PSAPs have used tools such as memoranda of understanding (MOUs) and interlocal agreements to facilitate resource and data sharing. For example, the Mendocino Next Generation 9-1-1 project in California, which aimed to provide a network-based NG9-1-1 service among three PSAPs, [began with a MOU](#).³² The Counties of Southern Illinois Next

Generation 9-1-1 Project was formed through an interlocal agreement allowing a number of counties to [share an NG9-1-1 system](#), including an ESInet.³³ In Ohio, counties that wanted to participate in the OARnet ESInet Test Pilot Program were [required to sign MOUs](#).³⁴ In Wyoming, the Laramie County Combined Communications Center, the City of Laramie Police Department, and the Laramie/Albany County Records and Communications Center [entered into a MOU](#) in furtherance of the deployment of NG9-1-1 and an ESInet, which enabled the sharing of customer premise equipment to improve 9-1-1 call taking and dispatching services.³⁵ In its 2016 Statewide 9-1-1 Plan, Pennsylvania planned to [develop and execute a MOU](#) with any PSAP, public safety agency, or critical infrastructure facility that is requesting connectivity to the Commonwealth ESInet by the end of 2017.³⁶ The Michigan Upper Peninsula 9-1-1 Authority ESInet Project was formed by 15 counties entering into an [interlocal agreement](#).³⁷ The Kansas 9-1-1 Coordinating Council [stated](#) a MOU will be “executed between the Council and any PSAP electing to subscribe to the NG9-1-1 System prior to ordering of related hardware, software, and connectivity.”³⁸ And Southeast 911, a Nebraska Joint entity, formed an [interlocal agreement](#) that provides for a Regional Governing Committee “to facilitate the planning and coordinate the delivery of emergency communications services including Enhanced 9-1-1 (E 9-1-1) and emerging services such as next generation 9-1-1 (NG9-1-1).”³⁹

Redundancy

The increased connectivity between PSAPs that will continue with the growth of broadband technology creates new opportunities to ensure redundancy. Some laws and regulations explicitly require NG9-1-1 systems to have redundancy built into the network or include redundancy as an element in the definition of NG9-1-1 or NG9-1-1 network.

Example: North Carolina requires the 9-1-1 Board to ensure individual PSAP plans incorporate a backup PSAP.⁴⁰

Interoperability

Laws and regulations across all states should uniformly ensure seamless interoperability among PSAPs, ESInets, originating networks,

FirstNet, and other government and public safety enterprise networks. This will be key to ensuring that all PSAPs have the technical capabilities for interoperability including for mutual aid, as well as for increasing competition, achieving economies of scale for the costs of equipment and services, and enabling public safety to keep pace with advances in the commercial sector.

Example: Virginia requires the 9-1-1 Services Board to establish standards for an ESInet and core NG9-1-1 services to ensure that enhanced public safety telephone services seamlessly interoperate within the Commonwealth and with surrounding states.⁴¹

Governance also has a non-technical role for achieving interoperability. State and local governments can encourage mutual aid capabilities through the formation of agreements between PSAPs, counties, municipalities, or other local entities.

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Examples: In Pennsylvania, PEMA is “to cooperate with county and regional 9-1-1 systems to develop interconnectivity of 9-1-1 systems through the establishment, enhancement, operation and maintenance of an Internet protocol network.”⁴² Additionally, legislation empowers counties to execute mutual aid agreements and cross-service agreements necessary to implement their 9-1-1 plans.⁴³ According to Connecticut law, municipalities may enter into an interlocal agreement to jointly perform any function.⁴⁴ Oklahoma legislation states that PSAPs may enter into local cooperative agreements.⁴⁵ Kentucky law states that “any local government, or any combination thereof, may with the approval of their governing bodies enter into an interlocal cooperation agreement creating a joint 9-1-1 emergency service.”⁴⁶

Keeping Pace with Advanced Technology

Technology Adoption

As technology continues to evolve, coordinating entities can help by offering centralized support (at the state or regional level) to assist with planning or provide technical and operational expertise. Further, state coordinating entities typically solicit and reflect the input of a variety of key stakeholders, which helps drive adoption and buy-in of newer technologies throughout the 9-1-1 community. When technology solutions are developed and led by a coordinating body with stakeholder involvement, there is greater likelihood of technology adoption, particularly if the solution meets operational needs and is cost-effective.

On the other hand, outdated state laws and regulations can have the opposite effect by presenting obstacles to adoption of broadband technology including NG9-1-1. These tend to focus on legacy, circuit-switched technologies and processes, such as continued reference to tariffs and local access and transport areas (LATAs) as defined by the regulated telephone companies, and contain outdated or insufficient funding and liability protection schemes. Many state regulations still treat 9-1-1 service as a single-provider system accompanied by legacy requirements which do not translate well to a competitive NG9-1-1 market, and the resulting disincentives to new entrants can be significant.

Examples of legacy technology regulations include 9-1-1 system service provider (SSP) certification restrictions, and regulations that impede IP-based routing. These obstacles can impact a variety of stakeholders, including PSAPs, carriers, technology companies, and 9-1-1 SSPs. A 9-1-1 SSP certification requirement can delay entities that offer NG9-1-1 services to PSAPs for many months, or simply prevent some SSPs from providing broadband technology or services to PSAPs.

Additionally, a key feature of broadband and NG9-1-1 architecture is the IP-based routing of calls. IP-based routing assumes the presence of databases and servers to properly route the call and is completely different than the network components that support legacy 9-1-1 systems. Rather than using IP-based

routing, legacy networks use selective routers owned and operated by incumbent local telephone companies. Thus, absent modification, existing laws and regulations may inhibit IP-based routing and thus NG9-1-1 architecture. In some cases, it may only take updating existing laws and regulations to account for NG9-1-1.⁴⁷

Procurement

With the expanded range of technologies made available through broadband comes the opportunity for a much larger ecosystem of manufacturers and service providers. The FirstNet legislation embraced this opportunity for first responder communications by imposing a number of requirements on procurement practices and equipment.⁴⁸ Similarly, changes in state or local laws or regulations may be needed to ensure that procurement practices (such as requests for proposals) are fair, open, transparent, and competitive. In this way, states can expand the potential pool of vendors. Further, states and localities can use procurement vehicles to explore synergies among broadband networks purchased for other state agencies to meet the transport, capacity, and redundancy requirements for NG9-1-1.

Funding

Insufficient funding mechanisms impede the deployment of NG9-1-1 systems, as does the current practice of some states in diverting fees collected for 9-1-1 purposes. Many state and local funding mechanisms do not adequately account for new services that offer emergency communications in an NG9-1-1 environment. For example, 9-1-1 funding mechanisms that are specific to legacy 9-1-1 access technologies would not apply to or sufficiently account for all types of services delivering broadband information to PSAPs including NG9-1-1. Moreover, once funding sources are established or expanded as the case may be, states may need to modernize allowable costs to account for broadband-based technologies.

A statewide funding mechanism can help ensure that NG9-1-1 service is provided and adopted throughout the state, in cities and rural communities, and everywhere in between. The authority to conduct audits and take enforcement actions can ensure that fees are being collected properly and actually spent on improving and

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enhancing 9-1-1 services, rather than being diverted to other non-9-1-1-related uses. PSAPs need a funding mechanism that is dependable, protected, and sustainable.

Legal Protections

A broadband environment introduces a number of additional legal issues to PSAP operations. Action by federal, state, and local governments becomes increasingly necessary in order to permit proper use and adoption of broadband-enabled technologies and data. These matters can be addressed through legislation, regulations, or MOUs and other interlocal agreements.

Liability

As a matter of public policy, federal and state liability protection can encourage private companies to innovate and serve the 9-1-1 community. Some states have modernized their 9-1-1 legislation to explicitly extend liability protection beyond legacy service providers to voice over IP (VoIP) and NG9-1-1 providers.⁴⁹ Liability protections can address issues ranging from those related to 9-1-1 systems and services to the disclosure or release of subscriber information. Additionally, MOUs and interlocal agreements among cities and counties or PSAPs may also determine the extent of liability of each party to the agreement.

In the Next Generation 9-1-1 Advancement Act of 2012, Congress extended the parity of protection from liability to a provider or user of NG9-1-1 services, a PSAP, and the officers, directors, employees, vendors, agents, and authorizing government entity (if any) of such provider, user, or PSAP.⁵⁰ In other words, for NG9-1-1, the liability protection is to be not less

than the scope and extent of immunity or other protection from liability that any particular state currently offers. Therefore, that still leaves open vulnerabilities where, for example, a state currently ties protection to telephone company tariffs that may be too inflexible to extend to NG9-1-1, or in states that presently have no liability protections.

Two recent examples of updated liability protections can be found in legislation passed by North Carolina and Connecticut. Under North Carolina law, liability is extended to NG9-1-1 system providers: “Except in cases of wanton or willful misconduct, a voice communications service provider, and a 9-1-1 system provider or next generation 9-1-1 system provider, and their employees, directors, officers, vendors, and agents are not liable for any damages in a civil action resulting from death or injury to any person or from damage to property incurred by any person in connection with developing, adopting, implementing, maintaining, or operating the 9-1-1 system or in complying with emergency-related information requests from State or local government officials.”⁵¹ This includes but is not limited to “(1) The release of subscriber information related to emergency calls or emergency services. (2) The use or provision of 9-1-1 service, E9-1-1 service, or next generation 9-1-1 service. (3) Other matters related to 9-1-1 service, E9-1-1 service, or next generation 9-1-1 service.”⁵²

Connecticut law extends liability protection to NG9-1-1 systems by stating: “No telephone company, certified telecommunications provider, provider of wireless telecommunications service, as defined in section 28-30b, as amended by this act, pursuant to a license issued by the Federal Communications Commission, provider of prepaid wireless telecommunications service, voice over IP service provider or the officers, directors, employees, vendors or agents of any such company or provider shall be liable to any person or entity for release of the information specified in this section or for any failure of equipment or procedure in connection with the enhanced 9-1-1 service, an emergency notification system, or the next generation 9-1-1 telecommunication system established under sections 28-25 to 28-29b.”⁵³

Privacy

The introduction of multimedia content, mobile apps, social media, video (including video chatting), drone surveillance, etc. will lead to the collection and use of additional types and larger amounts of information than that collected and used in a legacy environment. New technologies will incorporate human recognition capabilities and a person’s location, enhanced with additional context that can predict future locations and add more personally identifiable data. Related to privacy is the cybersecurity of devices and data, which is addressed separately in this report.

A growing number of state laws and regulations address the disclosure of certain types of consumer data, and may also limit the types of data that can be collected and retained. The availability of broadband data from a growing number of potential sources will require a framework guiding what records may be relied upon or require authentication, and how the records are to be used, stored, protected, accessed, and disposed of by PSAPs. MOUs and interlocal agreements can be employed to address which parties are responsible for the collection, control, and retention of data, and which parties are responsible if a data disclosure occurs. Individual PSAPs may need to amend their privacy or data policies so that they are suitable for a broadband environment.

Public Records

The definition of a public record may need to be updated to include new forms of personal identification information other than name, address, and telephone number, such as pictures, video, and text. For example, Maine updated its confidentiality of system information law to include “personally identifying information of a caller to a public safety answering point,” meaning “any information that directly or by reasonable inference might disclose the identity of or personal information about a specific person or persons.”⁵⁴

Other legal issues in a broadband environment that require renewed attention include chain of evidence, the Freedom of Information Act (FOIA), and the Health Insurance Portability and Accountability Act (HIPAA), etc.

FINDINGS

Governance Structures Can Facilitate NG9-1-1 Deployments

Many states have established NG9-1-1 governance structures, ranging from approaches that are top-down and state-driven to those that are decentralized and locally or regionally driven. Regardless of the approach, state structures typically include some level of local participation and provide for a 9-1-1 coordinating entity that is often charged with duties and responsibilities such as planning and implementing 9-1-1, administering and distributing 9-1-1 funds, establishing necessary policies, procedures, and rules, entering into contracts and agreements, monitoring and responding to technological change, assisting with training, and reserving to individual jurisdictions more localized management of 9-1-1 systems.

Outdated Laws and Regulations Impede NG9-1-1

Some states maintain outdated legislation and regulations that focus on legacy, circuit-switched technologies and processes or have outdated or insufficient funding and liability protection schemes, which present obstacles to adoption of broadband technology, and particularly NG9-1-1. A sufficient and enforceable funding mechanism is especially important to sustain an NG9-1-1 system and to promote broadband technology adoption and use. Additionally, lack of state or local laws that enable or at least permit establishment of appropriate governance structures can impede adoption of broadband technology and NG9-1-1 deployment.

State Laws and Regulations Need Updating

Before, during, and after the transition to an NG9-1-1 network, states will need to take steps to enact or modify laws and regulations. A number of states have already taken steps and updated or introduced 9-1-1 legislation to modify or include a 9-1-1 funding mechanism, encompass NG9-1-1 and broadband technologies, enable IP connectivity, and promote coordination, mutual aid, and information and resource sharing within and among PSAPs and other public safety entities.⁵⁵

States Lack a Common Definition of NG9-1-1

Aside from the common reference to IP-enabled communications, state definitions and requirements for NG9-1-1 vary significantly. Some say NG9-1-1:

- Enables the user of a communications service to reach an appropriate PSAP by sending the digits 9-1-1 via any technological means⁵⁶
- Must be designed to “provide access to emergency services from all connected communications sources and to provide multimedia data capabilities for [PSAPs] and other emergency services organizations”⁵⁷
- Is a system that “provides standardized interfaces” and conforms to the federal definition of NG9-1-1 services⁵⁸
- Provides “a hosted solution with redundancy built in”⁵⁹
- Allows “immediate transfer of 9-1-1 calls, caller information, photos, and other data statewide”⁶⁰
- Provides “a secure environment for emergency communications”⁶¹

The lack of common definitions creates confusion. Developing cost estimates, obtaining federal funding, procuring NG9-1-1 services through RFPs, and managing expectations are made more difficult as a result. ■

RECOMMENDATIONS: GOVERNANCE

States Should Establish a State-Level Coordinating Entity

- States should establish a coordinating entity that actively engages with local stakeholders, including PSAPs. The specific type of coordinating entity can vary. More important is that a governance structure exists to aid in the planning, implementation, and management of NG9-1-1 and broadband technologies, and that it incorporates local participation and local control. A statewide or regional coordinating entity will help to achieve economies of scale, cost savings, coordination, and interoperability, among other benefits.
- A coordinating body can also serve to establish a strategic vision for the entire 9-1-1 ecosystem. The vision should detail what the state wants to achieve and include a framework for conveying this vision to policymakers, PSAPs, and the public. Early-adopting states can create these frameworks to act as a blueprint for planning and deployment in later-adopting states.

States should establish a coordinating entity that actively engages with local stakeholders, including PSAPs.

- Congress should continue to provide incentives as conditions of NG9-1-1 related grant programs for states to establish a single officer or governmental body to serve as the coordinator of implementation of NG9-1-1 services (but not vest such coordinator with legal authority to implement NG9-1-1) and coordinate its grant application with the local PSAPs.⁶²

States should ensure that diversion of 9-1-1 fees does not occur.

States Should Update 9-1-1 Funding Mechanisms

- States should establish and oversee a sufficient, enforceable, technology-neutral funding mechanism. During the transition period to NG9-1-1, states will need to continue to fund both the existing legacy 9-1-1 system and the costs associated with planning and implementing NG9-1-1 and other broadband-related systems. Funding mechanisms should also anticipate long-term needs such as maintenance, upgrades, new requirements, etc.
- States should ensure that diversion of 9-1-1 fees does not occur. Creating a separate 9-1-1 fund can help ensure that 9-1-1 fees are not commingled with other state monies and thus less likely to be diverted for other non-9-1-1 related purposes. It would be beneficial to specifically devote a portion of 9-1-1 spending to NG9-1-1 planning and implementation.
- Funding mechanisms will also benefit from legislation or regulations that specifically mandate what 9-1-1 funds may be used for, and empower a coordinating entity to audit the provision and use of 9-1-1 funds, and take enforcement action if funds are not being remitted properly or are not being utilized properly by receiving entities.

Other Roles for States or Coordinating Entities

- Provide training support to localities and PSAPs. This can be in the form of funding, training materials, training programs, etc.
- Have effective rule-making authority and enforcement authority.
- Ensure redundancy and interoperability in the NG9-1-1 system.
- Collect and analyze data, which in turn can be used to inform policy development and strategic planning.
- Promote coordination, mutual aid, and information and resource sharing within and among PSAPs. This can be accomplished in part by enabling the creation of interlocal and mutual aid agreements or memorandums of understanding between localities and PSAPs.
- Encourage PSAPs to develop or update operational, technical, security, privacy, and training policies for an NG9-1-1, broadband environment.
- Ensure that NG9-1-1 networks and equipment be built to widely deployed commercial standards, and other standards approved through organizations such as ANSI that accredit the procedures of standards development organizations to ensure openness, balance, consensus, and due process, that are commonly used in public safety communications, and that are proven to achieve and maintain seamless interoperability among PSAPs, ESNets, originating networks, FirstNet, and other government and public safety enterprise networks.

Outreach and Education

- States and coordinating entities should conduct outreach and education for policymakers, PSAPs, and the public to advance NG9-1-1 progress and adoption of broadband technology.
 - This could include explaining how technology is shaping the 9-1-1 landscape, the benefits of NG9-1-1, the funding and other challenges PSAPs face, and how FirstNet and other broadband technologies will be integrated into the 9-1-1 system.
- States and coordinating entities should also monitor changes and trends in NG9-1-1 and broadband technologies in order to continuously update outreach and education for policymakers, PSAPs, and the public.

Amend Laws and Regulations that Impede 9-1-1

- States should remove barriers to 9-1-1 modernization within existing legislation. This includes outdated, legacy-based regulations such as 9-1-1 SSP certification requirements and regulations that impede IP-based routing. Regulations should instead promote competition, IP connectivity, and broadband technologies.
- States should update legislation and regulations to promote technology adoption and NG9-1-1 implementation, and address new and existing legal, regulatory, funding, liability, security, and privacy concerns in a broadband environment. This could include creating legislation and regulations that comprehensively and uniformly define and promote NG9-1-1, create a coordinating entity, establish or expand a 9-1-1 funding mechanism, extend liability protection to NG9-1-1 service providers and systems, and address privacy, cybersecurity, and data security in an NG9-1-1 environment.

States should update legislation and regulations to promote technology adoption and NG9-1-1 implementation.

State Procurement

States should follow fair, open, transparent, and competitive procurement practices.

State Coordination

Where feasible, states should coordinate FirstNet and NG9-1-1 implementation.

Role of the U.S. Congress

Congress should establish a substantial grant program to modernize 9-1-1 services across the country as a national imperative. APCO will continue its efforts to achieve federal legislation that would help ensure that all PSAPs have the resources needed to upgrade in approximately the same timeframe, while leaving to the responsibility of state and local governments to address funding for workforce, training, and sustainability. A grant program can be used to serve certain objectives, such as to achieve and maintain seamless interoperability including through use of widely deployed commercial standards, promote information and resource sharing, drive cost efficiencies, require use of open and competitive procurement practices, ensure states create sustainable funding mechanisms to support continued operations, and prevent fee diversion.

Further, Congress has the opportunity to fund additional research and development to assist with the development of technologies to advance NG9-1-1. This can be patterned after the [existing public safety wireless communications research and development program](#) that the FirstNet legislation assigned to the National Institute of Standards and Technology (NIST).

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Notes

- 14 Throughout this report, “mutual aid” is meant to be comprehensive, including the exchange of resources and services for field units as well as PSAP-centric practices such as 9-1-1 call overflow to another PSAP.
- 15 The research concerning actions occurring within the states towards NG9-1-1 is based on publicly available information, and is subject to change. Progress varies among states, and implementation of NG9-1-1 is a fluid process. States that have recently updated their legislation to account for NG9-1-1 include: Connecticut, Idaho, Illinois, Iowa, Kentucky, Louisiana, Maryland, Minnesota, Montana, Nebraska, New Mexico, North Carolina, Oklahoma, Pennsylvania, Rhode Island, Tennessee, and Virginia. Other states such as California, Colorado, Georgia, and Ohio have enacted legislation that requires studies related to the modernization of the 9-1-1 system.
- 16 States in which some NG9-1-1 progress has occurred at either the state, regional, or local level include: Alabama, Alaska, Arizona, California, Colorado, Delaware, Florida, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Washington, D.C., and Wisconsin.
- 17 Eighth Annual Report to Congress on State Collection and Distribution of 911 and Enhanced 911 Fees and Charges, Federal Communications Commission, at 13-18, 60-66, 70-80 (Dec. 30, 2016), at https://transition.fcc.gov/pshs/911/Net%20911/Net911_Act_8thReport_to_Congress_123016.pdf.
- 18 35 Pa. Cons. Stat. §§ 5302-14, 5398-99 (2015).
- 19 *Id.* at § 5303(a).
- 20 *Id.* at § 5303(b).
- 21 N.C. Gen. Stat. §§ 143B-1400-16 (2015).
- 22 911 Board and Committees, North Carolina Department of Information Technology, at <https://it.nc.gov/about/boards-commissions/911-board/911-board-and-committees>.
- 23 N.C. Gen. Stat. § 143B-1402.
- 24 Statewide 911 Board, at <https://www.in911.net/911-board.html>.
- 25 Ind. Code § 36-8-16.7-27.
- 26 Cal. Gov’t Code § 53121(a) (2014).
- 27 Colo. Rev. Stat. §§ 29-11-301(1)(a), 302(1) (2016).
- 28 Ga. Senate Resolution 1203 (2014).
- 29 Cal. Gov’t Code § 53121(b).
- 30 35 Pa. Cons. Stat. § 5303.
- 31 Okla. Stat. tit. 63 § 2864 (2016).
- 32 Mendocino Next Generation 9-1-1 Project, California Office of Emergency Services, at <http://www.caloes.ca.gov/PublicSafetyCommunicationsSite/Documents/9-1-1%20Fact%20Sheet-%20Mendocino%20Next%20Generation%209-1-1%20Project.pdf>.
- 33 Donny Jackson, Counties of Southern Illinois (CSI) Begin Operations on Next-gen 911 System Provided by Ng-911, Inc., Urgent Communications (Jul. 7, 2015), at <http://urgentcomm.com/ng-911/counties-southern-illinois-csi-begin-operations-next-gen-911-system-provided-ng-911-inc>; Counties of Southern Illinois Next Generation 9-1-1 Project, Jackson County 9-1-1, at <http://jc911.org/index.php/nextgen-9-1-1-project>.
- 34 Ohio 9-1-1 Newsletter, Ohio 9-1-1 Program Office (Apr. 2016), at <http://911.ohio.gov/Portals/0/ESINet%20Steering%20Committee/April%202016%20Newsletter.pdf>.
- 35 Memorandum of Understanding for Next Generation 911 Hosted Customer Premise Equipment for Laramie County Combined Communication Center and Laramie/Albany County Records and Communication Center, at <https://www.cityoflaramie.org/AgendaCenter/ViewFile/Item/1236?fileID=1579>.
- 36 Commonwealth of Pennsylvania Statewide 9-1-1 Plan, Pennsylvania Emergency Management Agency, at 26 (Jul. 2016), at <http://www.pema.pa.gov/planningandpreparedness/Documents/9-1-1%20plans%20guides%20and%20templates/PEMA%20Statewide%209-1-1%20Plan.pdf>.
- 37 Gary Johnson & Thom Sumbler, Upper Peninsula 9-1-1 Authority ESInet Project (2015), at https://www.michigan.gov/documents/msp/2015_Interop_Conference_UP_528924_7.pdf.
- 38 “The MOU establishes the expectations of the Council for the PSAPs, and the responsibilities of the Council to the PSAPs.” Kansas Statewide NG911 System: the Technology and Cost, Kansas 911 Coordinating Council, at 14 (Mar. 2015), at <http://www.kansas911.org/>.
- 39 Second Amended and Restated Interlocal Cooperation Agreement Southeast Region 911 Communication Services Procurement and Delivery, at <https://lincoln.ne.gov/city/council/agenda/2015/111615/15r231a.pdf>.
- 40 N.C. Gen. Stat. § 143B-1402(a)(1).
- 41 Va. Code §§ 56-484.12, 56-484.14 (2016).
- 42 35 Pa. Cons. Stat. § 5303.
- 43 *Id.* at § 5304.
- 44 Conn. Gen. Stat. § 7-148cc (2001).
- 45 Okla. Stat. tit. 63 § 2849.
- 46 Ky. Rev. Stat. § 65.760 (2016).

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- 47 Other examples abound. For instance, states that seek to deregulate retail IP-based services should exercise care to not inadvertently deregulate or remove incentives to promote IP-based networks serving public safety.
- 48 FirstNet is required to issue “open, transparent, and competitive requests for proposals,” and “promote competition in the equipment market” by requiring equipment be built to “open, non-proprietary, commercially available standards” that are further capable of being used by any public safety entity and by multiple vendors. 47 U.S.C. §§ 1426(b)(1)(B), (b)(2)(B).
- 49 States that have updated their liability provisions include North Carolina, Connecticut, Pennsylvania, Montana, Tennessee, and New Mexico.
- 50 47 U.S.C. § 1472.
- 51 N.C. Gen. Stat. § 143B-1413(a).
- 52 *Id.*
- 53 Conn. Gen. Stat. § 28-28a(d).
- 54 Me. Rev. Stat. tit. 25, § 2929 (2015).
- 55 States that have recently updated their legislation to incorporate NG9-1-1 include: Connecticut, Idaho, Illinois, Iowa, Kentucky, Louisiana, Maryland, Minnesota, Montana, Nebraska, New Mexico, North Carolina, Oklahoma, Pennsylvania, Rhode Island, Tennessee, and Virginia. Other states such as California, Colorado, Georgia, and Ohio have enacted legislation that requires studies related to the modernization of the 9-1-1 system. Michigan and New Jersey have legislation pending.
- 56 N.C. Gen. Stat. § 143B-1400(20).
- 57 Neb. Rev. Stat. § 86-471(1) (2016).
- 58 Okla. Stat. tit. 63 § 2862(a)(3).
- 59 50 Ill. Comp. Stat. 750/15.6b(a)(4) (2015) (lapsed).
- 60 *Id.* at 750/15.6b(a)(3) (lapsed).
- 61 N.M. Stat. Ann. § 63-9D-3(T)(6) (2017).
- 62 Note that incentivizing effective governance structures does not include the regionalization or consolidation of PSAP facilities, functions, equipment, or services. Regionalization and consolidation must be a local decision.