



Report for

Framework for the Management of the Ohio State-level ESInet



Prepared for

Ohio Department of Administrative Services

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1. INTRODUCTION

L.R. Kimball was contracted by the Ohio Department of Administrative Services to provide governance recommendations for a statewide emergency services IP network. This document recommends a Management Framework for the governance of that network. This section introduces the management structure that this Framework sets forth and provides a high level explanation of the events and situations that have prompted the need for a Management Framework for the State-level Emergency Services Internet Protocol Network (ESInet).

The goal of this document is to recommend a framework that sets the stage for the successful management of the State-level ESInet for optimal health and security. The ESInet will be a sophisticated, interconnected, enterprise-scale network-of-networks that relies upon complex technologies and highly skilled personnel to design, implement, operate and manage it. The State-level ESInet will be used by 9-1-1 and eventually, other emergency services.

This document recommends a management structure to successfully manage the State-level ESInet and it is limited in scope to the management of the State-level ESInet. The recommended management structure was designed to fit within the overall governance structure, but it does not address the other, non ESInet related, functions of the current structure.

The Ohio Legislature recognized the need to prepare the State of Ohio for Next Generation 9-1-1 (NG9-1-1) when it passed HB 360 in December 2012 that created a Statewide ESInet Steering Committee and assigned responsibility to generally advise the state on the implementation, operation, and maintenance of a statewide ESInet. The ESInet Steering Committee was tasked with the following:

- 1 On or before May 15, 2013, deliver an initial report to the speaker of the house of representatives, the president of the senate, and the governor providing recommendations for the state to address the development of a statewide emergency services internet protocol network, which recommendations shall include a review of the current funding model for this state's 9-1-1 systems and may include a recommendation for a reduction in wireless 9-1-1 charges;
- 2 Examine the readiness of the state's current technology infrastructure for a statewide emergency services internet protocol network;
- 3 Research legislative authority with regard to governance and funding of a statewide emergency services internet protocol network, and provide recommendations on best practices to limit duplicative efforts to ensure an effective transition to next-generation 9-1-1;
- 4 Make recommendations for consolidation of public-safety-answering-point operations in this state, including recommendations for accelerating the consolidation schedule established in section 128.571 of the Revised Code, to accommodate next-generation 9-1-1 technology and to facilitate a more efficient and effective emergency services system;
- 5 Recommend policies, procedures, and statutory or regulatory authority to effectively govern a statewide emergency services internet protocol network;
- 6 Designate a next-generation 9-1-1 statewide coordinator to serve as the primary point of contact for federal initiatives;
- 7 Coordinate with statewide initiatives and associations such as the state interoperable executive committee, the Ohio geographically referenced information program council, the Ohio multi-agency radio communications system steering committee, and other interested parties.

The ESInet Steering Committee presented the 130th Ohio General Assembly with a report that addressed the requirements of HB 360. In support of the ESInet Steering Committee's creation of that report, L.R. Kimball submitted a Regulatory Review Report to the ESInet Steering Committee that included research, analysis and recommendations related to statutory authority with regard to governance of a statewide ESInet. This Framework is an extension of that work to provide governance recommendations on the policies and procedures necessary to effectively govern a statewide ESInet and addresses the remainder of items 3 and 5 from HB 360, above.

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2. METHODOLOGY

L.R. Kimball researched and analyzed Ohio's current 9-1-1 governance structures and processes in order to recommend a management structure for the State-level ESInet that utilizes existing governance structures and limits duplicative efforts related to the management of 9-1-1 in Ohio.

The client identified a group of stakeholders to serve on a Governance Workgroup to provide input and feedback during the creation of the recommended Framework. The Workgroup held three conference calls from September 2013 to November 2013 to discuss proposed recommendations.

L.R. Kimball incorporated the Governance Workgroup's feedback and suggestions in the compilation of this Framework in addition to leveraging its industry experience with the development of ESInet Management Frameworks in other States.

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3. ROLES AND RESPONSIBILITIES RELATED TO THE STATE-LEVEL ESINET

3.1 Chain of Activities Related to ESInet Management

The Office of the State 9-1-1 Administrator (Office) should support the Technical-Standards Subcommittee (Technical Subcommittee), established in section 128.02(F)(1) of the Revised Code, to make policy recommendations to the ESInet Steering Committee in the form of plans. The Technical Subcommittee should review all recommendations and policies developed by the Office and should make a determination on whether or not to recommend the plan for approval and adoption by the ESInet Steering Committee. The Technical Subcommittee should seek input from the Public-Safety-Answering-Point-Operations Subcommittee (Operations Subcommittee), established in section 128.02(F)(1) of the Revised Code, on those policies and procedures that require local operations input.

3.2 Participants in ESInet Management

3.2.1 ESInet Steering Committee

3.2.1.1 ESInet Steering Committee Role Related to ESInet Management

The ESInet Steering Committee (Committee) should serve as the policy level of management. The Committee should retain its current structure and membership. The Committee has the authority to enter contracts and make rules for the ESInet.

It is recommended that a Rules Subcommittee be created to conduct all rulemakings in order to prevent any conflict of interest with the legislators that sit on the Committee. Legislators sitting on the Committee should not be eligible to sit on the Rules Subcommittee.

3.2.1.2 ESInet Steering Committee Responsibilities Related to ESInet Management

The ESInet Steering Committee should provide the strategic vision and policy level direction for the State-level ESInet and should approve policies, procedures and plans for the ESInet that are developed and recommended by Office staff and the Technical Subcommittee with input from the Operations Subcommittee, as necessary. It is recommended that the ESInet Steering Committee give deference to the recommendations of the subcommittees that represent ESInet user groups.

3.2.1.3 ESInet Steering Committee Tasks Related to ESInet Management

The nature of the tasks of the Committee is based on the functions of the State-level ESInet. Those tasks include:

- Provide guidance and assistance for the monitoring and management of the ESInet
- Enter several types of contracts for purposes of the ESInet:

- Managed service contracts with vendors
- Professional service contracts with subcontractors
 - Local Service Provider
 - Networks
 - Application provider interfaces and specifications for ESInet access
- Interlocal agreements between a regional ESInet and the State level ESInet to bind both to operating standards and requirements consistent with the delivery of service, protection and management of respective networks, services, and applications.
- In making its determination of approval of plans, policies and procedures recommended by the Office and the Technical Subcommittee, the Committee should consider whether the plan satisfies the standards already established the cost and effectiveness of the plan and/or the appropriateness of the plan or amendment in the establishment and operation of the state level ESInet.
- The Committee should notify the Technical Subcommittee of the approval or disapproval of the plan, policy or procedure. If the Committee disapproves the plan, it should specify the reasons for the disapproval and set a deadline for submission of a modified plan, policy or procedure.

3.2.2 Technical Subcommittee

3.2.2.1 Technical Subcommittee Role Related to ESInet Management

The Technical Subcommittee should serve as the procedural level of management. The Technical Subcommittee should retain its current structure and membership until the implementation of the ESInet. Following the implementation of the ESInet, the Technical Subcommittee should transition into the ESInet Technical Management Subcommittee and the Chair should appoint two new ESInet user representatives as ESInet Technical Management Subcommittee members within one year of the implementation of the ESInet.

The intent of the role of the Technical Subcommittee in the management of the ESInet is to provide for 9-1-1 entity collaboration on the management of the ESInet, collective decision-making and assurance that the needs of the 9-1-1 entities are met. The Technical Subcommittee should consult with the Operations Subcommittee on procedures that relate to and impact local operations.

While the Technical Subcommittee's work will continue with a 9-1-1 focus even after the interconnection of other types of emergency services to the State-level ESInet, it will be important to continue to incorporate all kinds of eventual system users into the management process. Therefore, as ESInet users change and are added, changes in the make-up of the Technical Subcommittee will be necessary.

3.2.2.2 Technical Subcommittee Responsibilities Related to ESInet Management

The Technical Subcommittee should advise Office staff on the development of policies, procedures and plans necessary for the operation of the ESInet. The Technical Subcommittee should also advise the ESInet Steering Committee on technical matters, as needed. The Technical Subcommittee should seek input from the Operations Committee on those policies and procedures that the Technical Subcommittee determines require local operations input.

3.2.2.3 Technical Subcommittee Tasks Related to ESInet Management

- The Technical Subcommittee should advise the ESInet Steering Committee on matters regarding the management of the State-level ESInet including:
 - Policies and procedures for the interconnection of 9-1-1 authorities
 - Policies and procedures for the interconnection of other services
 - Security policies and procedures
- The Technical Subcommittee should make recommendations to the ESInet Steering Committee through the development and submission of one plan or multiple plans for review and approval. The plans should describe the Technical Subcommittee's recommendations regarding the establishment, administration, operation and management, of the state level ESInet. The Technical Subcommittee should develop and submit the following plans or plan that contains the following, outlined in detail in the Plans section later in this document:
 - Strategic Planning for the ESInet
 - Network Technical Operations for the State-level ESInet
 - Cost Allocation Planning for the State-level ESInet
- The Technical Subcommittee should seek input from the Operations Subcommittee on procedures that relate to and impact local operations.
- The Technical Subcommittee should update and/or submit plans to the ESInet Steering Committee once annually.
- Plans should be written and compiled by Office staff in coordination with the Technical Subcommittee and should be reviewed and adopted by the Technical Subcommittee before being presented to the ESInet Steering Committee for approval and adoption.

3.2.3 Operations Subcommittee

3.2.3.1 Operations Subcommittee Role Related to ESInet Management

The existing Operations Subcommittee should advise the Technical/ESInet Technical Management Subcommittee and the ESInet Steering Committee on policies and procedures that require local 9-1-1 operational input including:

- Policy Routing – For example, input regarding the appropriate routing of calls between PSAPs that consider backup needs and specialties of local agencies.
- Administrative Issues – For example, input regarding the information that should be shared between agencies when access is shared such as PSAP Call Volume Reports.
- Change management scheduling – For example, input on when changes are made based on local needs and schedules.
- Logging and statistics – For example, input regarding the kinds of data that local agencies need the system to log.

3.2.4 The Office of the State 9-1-1 Administrator

3.2.4.1 Office Role Related to ESInet Management

The Office of the State 9-1-1 Administrator should serve as the operations level of management for the ESInet. The volunteer based make-up of the Technical Subcommittee will not allow for the dedicated day-to-day time and effort that will be needed to operate the ESInet and create and update policies and procedures for that operation. Therefore, it is recommended that an Office be organized under the State Chief Information Officer (CIO) (steering committee chair).

3.2.4.2 Office Responsibilities Related to ESInet Management

The Office Responsibilities related to ESInet management include:

- Management of the day-to-day operation of the ESInet
- Development of the policies and procedures for the ESInet in conjunction with the Technical Subcommittee
- Implementation of policies and procedures
- Updating the ESInet Steering Committee and Technical Subcommittee on the daily technical functions of the ESInet and advise on any needs of the ESInet
 - The Office should have authority to make day to day decisions regarding the operation of the ESInet.
 - The ESInet Steering Committee's review and approval should be required before any policies and procedures are implemented for the ESInet.

In addition to the operation of the ESInet the Office should be responsible for:

- Transition from legacy 9-1-1 system to NG9-1-1
- Administration and oversight of NG9-1-1 core and related future services
- Statewide compliance with ESInet Operational and Technical requirements
- Uniform public education message for NG9-1-1
- Oversight of the collection and disbursement of funds
- Interface with the federal government in regard to grants and other projects

3.2.4.3 Office Tasks Related to ESInet Management

- Create policies, procedures and plans for the ESInet in coordination with the Technical Subcommittee for submittal to the ESInet Steering Committee for review and approval
- Assist and advise the Technical Subcommittee and the ESInet Steering Committee in carrying out their respective responsibilities
- Address network management and outages on a daily basis, as needed, and update the Technical Subcommittee and the ESInet Steering Committee regularly
- Make recommendations to the Technical Subcommittee and the ESInet Steering Committee on necessary ESInet upgrades or changes for the efficient operation of the ESInet
- Make the Technical Subcommittee aware of entities interested in interconnection with the ESInet so that the Technical Subcommittee can make a recommendation to the Steering Committee

3.2.4.4 Staffing Needs

The Office will require a full-time staff in order to support the everyday needs of the 911 Program Office. In addition to a 9-1-1 Administrator who should serve as the face of the Office to the public and the Legislature, deal with legislative requests and advocate for the Office, the Office will need a staff with specialized skillsets that include; network operations, Geographic Information System (GIS) data, PSAP training, certification and standards and certification for network and operational standards.

The staff could be State hires or contractors depending on whether each position is temporary or ongoing. Some of the skillsets needed for these positions may change over time due to the constant evolution of 9-1-1 and the resulting needs of the Office.

3.3 Plans

3.3.1 Strategic Planning

The Office and the Technical Subcommittee should prepare a strategic plan to make its recommendation to the ESInet Steering Committee as to how the State-level-ESInet is to be established, administered, operated and managed. Strategic planning should also include:

- Strategic direction for the development, operation and management of the state-level ESInet for the five state fiscal years following the submission of the plan
- Goals and objectives relating to the state-level ESInet
- Priorities for the state-level ESInet
- Identification of major issues relating to the development, operation and management, and improvement of the state-level ESInet
- Recommendations for long-range policy guidelines for the state-level ESInet
- Assessment of the progress made toward meeting the goals and objectives of the previous strategic plan, including a survey of the current degree of establishment and operation of ESInets throughout the state, including:
 - State-level ESInet;
 - Regional ESInets
 - Interconnection of regional ESInets to the State-level ESInet
 - A survey of 9-1-1 entities' participation in and/or implementation of regional level ESInets
 - Public Education

3.3.2 Network Technical Operational Planning

The Office and the Technical Subcommittee should prepare a Network Technical Operational Plan to make a recommendation to the Steering Committee as to the establishment of administrative, technical and operational requirements to assure the security and performance of the state-level ESInet and interconnection to the state-level ESInet. Network operational planning should also include:

- Projected costs of network operations for the two State fiscal years following the submission of the plan

- Tactical direction for the operations, management and performance of the State-level ESInet and for interconnection to the state-level ESInet for the five state fiscal years following the submission of the plan
- Initiation and maintenance the Change Management Process
- Incident Management
- Security Needs
- Quality Control
- Contingency planning from all interconnecting regions and vendors
- Initiation and maintenance of exit strategy process for disconnection

3.3.3 Cost Allocation Planning

The Office and the Technical Subcommittee should prepare a cost allocation plan to make a recommendation to the ESInet Steering Committee as to the identification of cost components of the state-level ESInet and how such costs are to be allocated. Cost allocation planning should also include the following:

- Projected costs of ESInet operations for the two state fiscal years following the submission of the plan
 - Strategic direction for the on-going identification and allocation of ESInet costs, for the five state fiscal years following the submission of the plan
 - Identification of components and costs for :
 - State-level ESInet;
 - Interconnection of any regional ESInets.
 - Identification of components and costs to be shared
 - Methodology for allocating any shared costs
 - Contingencies for lack of funding or partial funding for the components and costs

3.4 Reporting

3.4.1 Annual Report

The ESInet Steering Committee, with input and assistance from the Technical Subcommittee and the Office, should issue an Annual Report outlining its activities and achievements throughout the year, evaluating the operation of the ESInet and providing recommendations for the future. The Annual Report should provide information about current practices and issues, as well as statistical information about the ESInet, including a detail of any agreements established with entities needing interface to the state ESInet. The report should also identify interesting new developments for the State-level ESInet and among ESInet interconnectors and interfaces.

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