2021-2025

911 Strategic Plan

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INTRODUCTION

Status of the 911 System

Iowa's 911 system consists of 113 public safety answering points (PSAPs) across 99 counties. These PSAPs answer wireline, wireless, and VOIP emergency calls, as well as Text-to-911 messages from across the state. The wireline 911 system was launched in Iowa in 1988 and is managed by local 911 service boards. The funding to support the system is obtained through local contributions and a landline phone surcharge authorized by Iowa Code § 34A. Wireless 911 capability was added to the system beginning in 1998. It is funded through a wireless surcharge on wireless phone users' monthly bills and is managed by the Iowa Department of Homeland Security and Emergency Management (HSEMD) State 911 Program according to Iowa Code § 34A.7A. In 2012, the department converted the wireless 911 network from analog technology to an Emergency Services IP Network (ESInet), which is the backbone to the future of 911, referred to as a Next Generation 911 (NG 911).

Progress Towards Next Generation 911

The State of Iowa has established an Emergency Services IP network (ESInet) and implemented NG911 in a transitional state. The ESInet delivers 15MB to PSAPs and 100MB to the data centers. The NG core services deliver IP-based calls to the PSAPs.

The first phase of a multiphase effort into what is called the NG911 network has converted analog/copper trunking into the local PSAPs to a statewide, IP-based Ethernet network. The IP-based backbone was completed in November 2012 and leverages the Iowa Communications Network (ICN). The second phase of the network upgrade is nearly complete and includes updating individual PSAPs to IP-enabled call-handling equipment and logging recorders. Ninety-two percent of the state's PSAPs are fully end-to-end IP-enabled. As of January 2019, all but one of the local 911 PSAPs are capable of receiving Text-to-911. Work has also begun toward the State's virtual consolidation efforts, technologically merging the legacy wireline network with the Next Generation IP-based network, as well as sharing technology for call processing equipment at the PSAPs. Iowa

Code § 34A requires that each county in the state establishes a joint 911 service board that has authority over the local PSAP. Each board has the responsibility to develop a countywide 911 service plan, detailing the manner and cost for the implementation of the wireline and wireless 911 system for the PSAP geographical area. As of today, all 99 counties have approved countywide 911 service plans.

Current Iowa 911 Program Oversight

The 911 Program Manager was appointed by the Director of HSEMD with duties and responsibilities outlined in Iowa Code Chapter 34A to guide the technical, political, financial, and programmatic efforts of the State of Iowa 911 Program.

The 911 Program Manager is supported by the 911 Communications Council. The Council advises the HSEMD Director and the 911 Program Manager and makes recommendations for the operation of 911 at the State level. The 911 Communications Council is represented by:

- Department of Public Safety (DPS)
- Iowa State Sheriffs' and Deputies Association
- Iowa Peace Officers Association
- Iowa Emergency Medical Services (EMS) Association
- Iowa Professional Fire Fighters
- Iowa Firefighters Association
- Iowa National Emergency Number Association (NENA)
- Iowa Association of Public-Safety Communications Officials (APCO)
- Iowa Emergency Management Directors Association
- Iowa Telephone Association (one representative from a large provider and one representative from a small provider)
- Iowa Wireless Industry (one cellular representative, one personal communications service company representative)
- Iowa Geographic Information Council
- Auditor of the State (Ex Officio)

Local 911 Service Boards have been established at the county level (with one regional local service board) that are responsible for the local 911 service plans, management of the local 911 budget, and coordinating the operation of 911 with the 911 Program Manager.
The 911 surcharge of $1.00 for wireline is remitted directly to local 911 services boards. The wireless surcharge is remitted to HSEMD. The prepaid wireless surcharge is initially remitted to the Department of Revenue, who then transfers it to HSEMD. The prepaid rate is $.51. The fee explicitly covers the "Receipt and Disposition of the 911 Call", which excludes personnel and building costs.

The wireless surcharge of $1.00 per wireless device is distributed 60% to the local 911 services boards based on a formula that accounts for land area and calls counts (65% square area, and 35% call count). The remaining surcharge is distributed in the following priority order:

- 40% to State 911 Program for network costs
- $250,000 annually to State 911 Program for Program Administration
- $200,000 annually for Physical Consolidation Incentive Grant
- $100,000 annually for 911 Council Travel, Public Education and Training
- Operating Surplus

The State 911 Program does not have explicit authority to audit service providers to ensure the accuracy of the surcharge remittance. The Local 911 Service Boards can request quarterly extracts from the local providers to audit the wireline surcharge.
Local 911 Service Boards have historically been responsible for legacy 911, (excluding wireless) while the State 911 Program is responsible for wireless and NG911.

The State 911 Program Manager maintains collaboration with the Iowa Statewide Interoperable Communications Systems Board (ISICSB). The ISICSB is governed by Iowa Code Chapter 80.28 and 80.29 and is responsible for maintaining statewide interoperability.

Assessment Results

In 2019 the State 911 Program requested the National 911 Office conduct their Peer Assessment Program Review. This was an effort to analyze the State's progress towards

Next Generation 911 as well as provide a roadmap towards future efforts. The Assessment acted as a kick-off towards this comprehensive strategic plan.

The State 911 Assessment program established a comprehensive set of benchmarks based upon uniform goals for Next Generation 911 (NG911) across the United States and territories. The Assessment program uses a series of 83 guidelines that allow State 911 authorities to measure the progress and status of a state's 911 program. The assessment results are based upon consensus from a team of qualified assessors, composed of subject matter experts from diverse backgrounds and geographic areas, and were used to gauge the status of state and local programs, and to identify strengths and areas for improvement within the current 911 program. The results of the assessment are meant to serve as a tool to reveal areas for attention by the 911 program.

The 83 guidelines illustrate what an effective 911 program and system encompasses but does not dictate how to achieve a result. States are not required to adopt the guidelines but are encouraged to review the results to highlight areas that may improve their program. The consensus guidelines served as an objective benchmark for the assessment of the status of a statewide 911 system. States are not required to adopt the guidelines; any established assessment process will be conducted voluntarily. Nine guideline categories constitute the basis for the consensus guidelines:

1. Statutory and Regulatory
2. Governance
3. Functional and Operational Planning
4. Standards
5. Security and Continuity of Operations
6. Human Resources and Training
7. Evaluation
8. Public Education
9. NG911 Maturity Model

The strategic plan will address the recommendations from this assessment to discuss, build, and improve on the current 911 program over the five year strategic plan period.

Looking Ahead

The State 911 Program is always looking forward to ensuring the program meets or exceeds national standards. Taking into consideration the 911 Assessment the program has identified areas of improvement and/or conversation that will be the focus of the program's time over the next 5 years and beyond.

SUMMARY OF PLAN ELEMENTS

Strategic Priorities

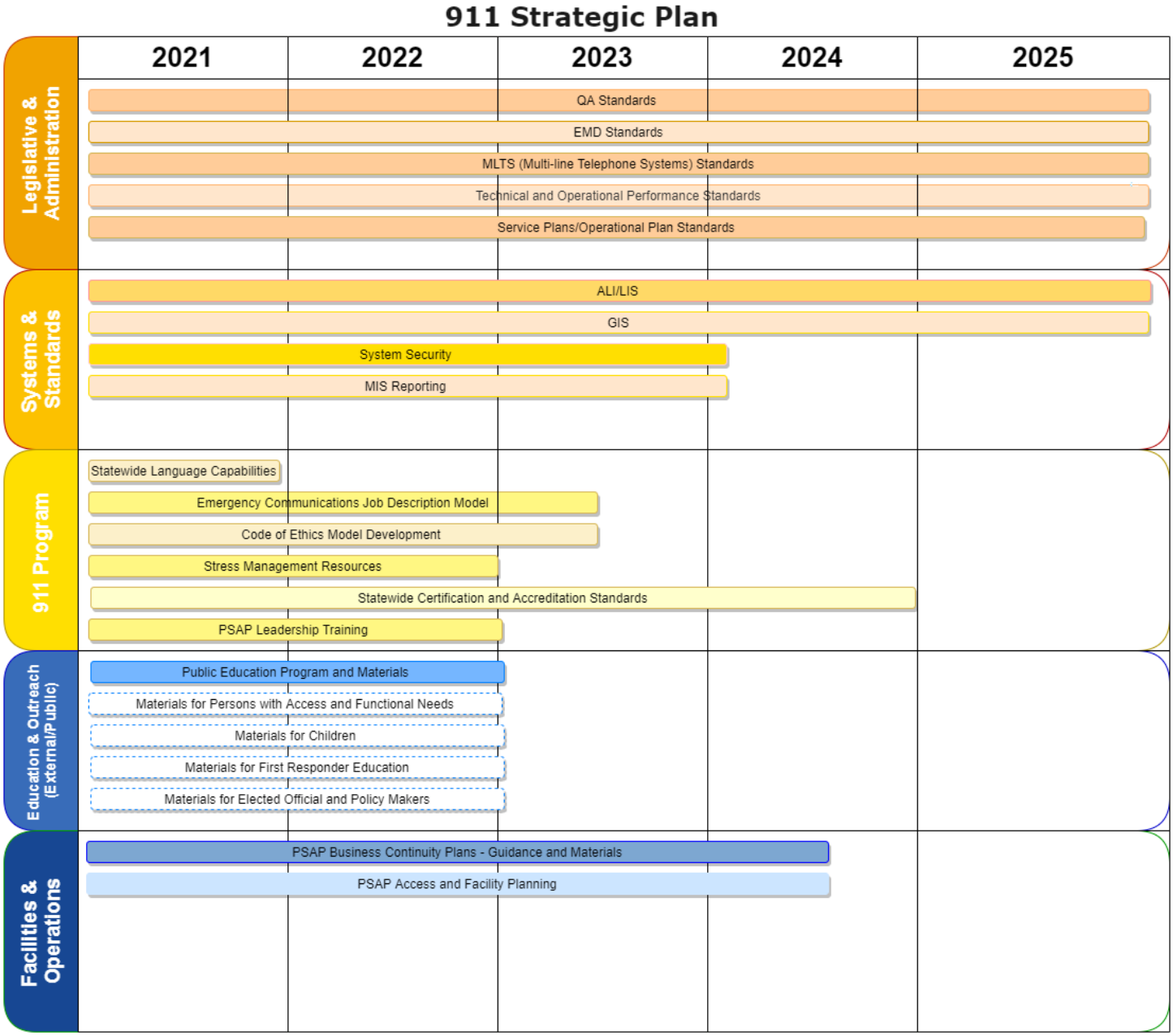
The State 911 Assessment Program evaluated the 83 guidelines as falling under one of four categories;

- Does Not Meet- This is for guidelines that did not meet the minimum criteria.
- Minimum Criteria- The rulemaking authority exists to establish standards.
- Advanced Criteria- The state has adopted and maintains current comprehensive standards.
- Superior Criteria- The state oversees and enforces current standards and has a mechanism for periodic review.

In reviewing the assessment findings, the State 911 Program chose to include items that fell under the ‘Does Not Meet’ and ‘Minimum Criteria’ categories as the elements of this strategic plan. From there the guidelines were reviewed and placed into five categories: Legislative & Administrative, Systems & Standards, 911 Program, Education & Outreach (External/Public), and Facilities & Operations.

The figure on the next page depicts a timeline to guide the progress of this strategic plan as identified by the 911 Program.

STRATEGIC PLAN TIMELINE



PLAN COMPONENTS

Legislative and Administrative

Background

In 1988, the State of Iowa launched the 911 program for wireline through the establishment of the local 911 service boards. In 1998 wireless 911 was added under the authority of the Iowa Homeland Security and Emergency Management Department (HSEMD).

911 in the State of Iowa is Governed by:

- The Iowa Code Chapter 34A: 911 Emergency Telephone Systems
- Iowa Administrative Code Section 605, Chapter 10: 911 Telephone Systems
- NG911 Implementation and Operations Plan (Required by Administrative Rule for further governance)
- Iowa Code Chapter 80B.11C: Telecommunicator Training Standards

Within the State 911 Assessment, several guidelines that require administrative or legislative considerations were identified. The State 911 program will work with the 911 Council and PSAPs to review these guidelines and gather their recommendations and comments on each area. When acceptable, the State 911 Program will make recommendations or changes to state guidelines. At this time any conversation and recommendations will be on a suggestive basis only. The following guidelines will be considered and discussed over the strategic plan period.

QA Standards

Per the State 911 Assessment Program, the following guidelines were classified as not meeting the minimum criteria;

Guideline EV1: The State fosters the ongoing evaluation of statewide systems(s) quality performance.

Guideline EV2: The State has a comprehensive and standardized quality assurance (QA) process for call processing.

Guideline SR16: The statutory environment provides for a comprehensive quality assurance (QA) program for the 911 system.
Guideline SR17: The statutory environment provides comprehensive quality assurance (QA) for call handling.
The Assessment recommendation is that the 911 Program defines what a QA function is and adopts accepted minimum standards for QA and creates guidelines for the Joint 911 Service Boards to implement.

The 911 Program would like to modernize the State's Quality Assurance Standards to mirror those of the national industry organizations. Within Iowa Administrative Code Section 605 Chapter 10, there are voluntary NENA standards listed for PSAPs to consider. NENA has developed several standards since the Administrative Rule section was last updated that would address QA by PSAPs and telecommunicators (NENA-STA-020.1-2020; APCO/NENA ANS 1.107.1-2015).

The 911 Program will work with applicable entities, engage with stakeholders to discuss QA standards, and review standards for updating and implementation through meetings, surveys, and case studies between 2021-2025.

EMD Standards

Per the State 911 Assessment Program, the following guidelines were classified as not meeting the minimum criteria;
Guideline SR20: Statute exists for the provision of emergency medical dispatch (EMD).
Guideline SR21: Statutory environment provides for medical oversight of the policies and procedures governing the use of emergency medical protocols.
Guideline OP2: The state is pursuing the full implementation of emergency medical dispatch (EMD).
The Assessment recommendation is that the State 911 Program pursues, assess, and endorse acceptable EMD models and include them in a state 911 plan. Or look at incentivizing PSAPs to adopt EMD protocols or adopt a statewide program that encourages EMD at the PSAPs.

EMD Protocols provide telecommunicators critical, life-saving steps that are easily referenced to a caller during a medical emergency. These protocols are signed off on by medical authorities and are given to a caller before the arrival of EMS. When seconds count during a medical emergency, EMD protocols can be the difference between life and death.

In 2017, the State 911 Program surveyed PSAPs and found that approximately 20 PSAPs in the state provided EMD. The State 911 Program currently offers EMD through the Shared Services Program and cost shares with local jurisdictions that wish to participate in the program. While the number of PSAPs providing EMD for their jurisdictions has increased through the Shared Services Program, the State 911 Program would like to further increase the use of the protocols throughout the State. The State 911 Program will work with applicable entities to review EMD protocols. To do this the State 911 Program will engage with stakeholders through meetings, surveys, and case studies between 2021-2025.

MLTS (Multi-line Telephone Systems) Standards

Per the State 911 Assessment Program, the following guidelines were classified as not meeting the minimum criteria; *Guideline SR26: A Statute/regulation exists that addresses a multi-line telephone system (MLTS) statewide for 911*. The Assessment recommendation is that the State 911 Program office takes the steps necessary to address MLTS on a statewide basis. This effort will likely require a legislative change and should be considered when Iowa code 34A is amended.

The State 911 Program recognizes that there have been great technological strides in enterprise phone systems have occurred in the last 10-15 years. Technology has moved these systems to VoIP and Cloud-based technologies. Iowa Code and Administrative Rule have not maintained relevance as part of the technological strides. The State 911 Program and the State of Iowa desperately need to update the governance of MLTS. While the Federal Communications Commission has adopted some Federal Regulations such as Kari's Law and RAY BAUMs Act. The State 911 Program would like to have a better understanding if there are still gaps within the governance and operations of MLTS systems

in Iowa, and if so, analyze if those gaps are best filled through the legislative process. The State 911 Program will work with current MLTS providers and industry experts and plan to engage in research and conversation on this topic between 2021-2025.

Technical and Operational Performance Standards

Per the State 911 Assessment Program, the following guidelines were classified as meeting the minimum criteria; *Guideline ST3: The state has defined PSAP performance standards*. The Assessment recommendation is that the State 911 Program work with the 911 Communications Council to establish minimum performance guidelines for PSAP call handling statewide, in addition to identifying what call processing metrics are needed to measure compliance with the established minimum performance guidelines. Performance standards include technical and operational standards such as call answering (timeliness, call overflow, and call overload), call protocols or interrogation, reliability, redundancy, congestion control, quality of service, and Teletypewriter (TTY) testing.

Standardization will become increasingly more important to enable the seamless interconnectivity between local, regional, and state 911 systems that will be required for NG911. The same level of service should be provided in rural areas as in metropolitan areas.

The State 911 Program recognizes that current Technical and Operational performance standards are referenced in the Iowa Administrative Code. Many of these have fallen out of date. While some standards are listed as mandatory, others are listed as voluntary. The State 911 Program would like to conduct a thorough review of what is currently in the Administrative Code for technical and operational standards. Determine if any of the voluntary standards should be made mandatory, as well as analyze modern standards produced from national industry organizations, such as NENA-INF-011.2-2020. The State 911 Program plans to engage research and conversation on this topic between 2021-2025.

Service Plans/ Operational Plan Standards

Per the State 911 Assessment Program, the following guidelines were classified as meeting the minimum criteria; *Guideline NG8: The state has adopted comprehensive operational*

planning. The Assessment recommendation is to provide more oversight and guidance when it comes to planning management and support for NG911.

The State 911 Program recognizes that the current requirements for local 911 Service Board Plans are prescribed in Section 605 Chapter 10 of Iowa Administrative Rule. Operational Plans should include aspects of execution; oversight; plan management; and efforts to support on-going evolution with the planning of NG Core Services, ESInet and PSAP operations, and the transition to the NG911 processing model and services.

Many of the existing plan requirements are rooted in a basic 911 environment, and are not relevant or need significant updates for a Next Generation 911 environment. Statewide, many of these local plans have not been fully updated since 1990, despite several requests by the State 911 Program. The State 911 Program would like to analyze and develop new 911 plan requirements, along with a mechanism for ensuring compliance with periodic or required updates. The State 911 Program plans to engage research and conversation on this topic between 2021-2025.

Systems and Standards

Background

The State 911 Program was asked by the National 911 Office annually to provide an estimate of how the State is progressing towards Next Generation 911 adoption. There are nine data elements: Governance, Routing/Location, GIS, Core Services, ESInet, Call Handling, Security, Operations, and Operational Interfaces, that have been identified as the NG911 Maturity Model to identify states that are advancing NG911 capabilities and components as developed by the Task Force on Optimal PSAP Architecture. The following are the rating levels achieved by the state of Iowa in each category with a brief explanation from the most recent annual report as provided by the State 911 Program to the National 911 Office:

For the purposes of this data collection, if 90 percent or more of your 911 Authorities are at a specific maturity level, then you can rate your state as having completed that maturity level

- Governance- Rating: Intermediate. Governance addresses the structured oversight of the 911 Authorities and identifies whether there is a governing body with documented and tracked planning and implementation efforts. Coordination indicates whether all participating entities within the jurisdictional scope have agreed upon cooperation and going forward strategies and plans. Funding and Resources indicate that the funding and resources necessary to execute the NG911 plan have been identified or a strategy is in place to secure those funds and resources as necessary points during the plan execution. The governance structure is ongoing, providing the coordination and administration of the entire NG911 service system after implementation.
- Routing and Location- Rating: Transitional. Routing and location define the systematic approach that is used to determine 911 call routing and the supporting data functions. Legacy 911 calls are processed by relating the calling telephone number to an Emergency Services Number (ESN) that then defines the primary and secondary PSAPs. NG911 utilizes geospatial routing by using the caller's location information and a set of PSAP jurisdictional polygons to determine the primary PSAP. A "pure" NG911 implementation assumes OSPs have changed how they deliver 911 calls, but it is not realistic or expected that OSPs will change together or even all complete their changes any time soon. Therefore, the model is complicated by mechanisms to "transition" from legacy methods to NG911 methods. The legacy ALI DBMS provides location information based on the caller's telephone number and it or its equivalent is required until all OSPs deliver location information with their 911 call setup messages or provide LIS capabilities. The National Forest Guide is a capability necessary when Nationwide OSPs require a capability to determine to which ESInet to direct a given 911 call. "Hierarchical Forest Guides Populated" indicates a provisioning capability for various Forest Guides to share the routing polygon (ESInet or PSAP Jurisdictional boundary) information.
- GIS Data- Rating: Intermediate. GIS Data is a fundamental element of NG911 but is not utilized for legacy 911 call routing. These selection items define steps to plan, process, and utilize GIS data for NG911. Selection items are included that represent the NENA i3 functional elements that receive and utilize GIS data to complete call routing functions. The exchange of jurisdictional boundaries indicates an automated

mechanism where an ESInet ECRF (or Forest Guide function) automatically keeps a neighboring ESInet ECRF (or Forest Guide function) updated with its jurisdictional polygons to allow for 911 call hand-offs and call transfers. GIS data is also utilized with NG911 for the Location Validation Function (LVF) and to support mapping services for the PSAPs.

- NG911 Core Service Elements- Rating: Intermediate. The central Core Services functions provide the logical processing interactions between the delivery of calls and data from the OSE, additional data, and delivery to PSAPs, and provide the features to support the management of how the NG911 service accomplishes this under normal and abnormal conditions. NG Core Service Element capabilities are an itemized list of the functional capabilities defined by the NENA i3 architecture. As stated in the NENA i3 specification, it is not appropriate to identify a box or component that performs the functional services, but instead just to identify that the infrastructure somehow does accomplish the functional capabilities defined for each item. Except for the “Border Control Function (BCF)”, this area of interest does not apply to IP Selective Router (IPSR) scenarios. These selection items become relevant when the NG911 transitional architecture is implemented through the time period that the NG911 end-state is achieved, e.g., when all OSPs deliver 911 services via IP protocols and include delivery of location information at call setup time. NG Core Service operations, organizational planning, and staffing are discussed in the relevant Important Considerations section below.
- Network (OSE and ESInet)- Rating: Intermediate. The network area capabilities represent the various technology mechanisms for connecting external entities to either a legacy selective router or functions within an ESInet for the purposes of processing 911 calls. Legacy call circuit mechanisms are primarily TDM based technology (e.g., SS7, CAMA), and NG911 moves to IP based technology with application-specific protocols such as SIP and RTP. In some cases, IP technology can be deployed as a replacement for a legacy TDM technology before completely embracing the NENA i3 defined functional interface model, such as an OSP using IP technology call delivery to an ESInet IP Selective Router without including a location object representing the caller’s location. E2 Circuits are the legacy Wireless

capabilities to retrieve location information and will be required until all OSPs that allow location update transactions deliver caller's location information at call setup time. ESInet to ESInet connections will occur as neighboring jurisdictions implement ESInets and require the ability to exchange 911 calls.

- PSAP Call Handling System and Applications- Rating: Intermediate. Legacy Call Handling Systems are defined by their use of CAMA trunk interfaces and legacy ALI interfaces. The first step toward NG911 is upgrading call handling equipment to be IP technology-based system and optionally may include replacing the legacy CAMA TDM circuits with the ATIS defined IP technology based transitional RFAI protocol. The NENA i3 defined functional entities interact with PSAP CHS and other applications via the IP based interface protocols referenced within the NENA i3 specification. An i3 PSAP would implement all the NENA i3 defined protocols (including SIP, RTP, HTTPS, LoST, and HELD) and the i3 compliant software to allow interaction with NG Core Service functions. An i3 PSAP Multimedia Call Handling System, which includes a terminating ESRP, is required to be present in an NG911 end-state system. Mapping is the capability to display the caller's location information on a map at the PSAP's 911 Call Handling positions. Interim Text-to-911 (SMS) is the capability of an OSP provided Text Control Center (TCC) to message to a PSAP, but, ultimately the TCC can interface to the NENA i3 functional elements that then deliver Text-to-911 to the PSAP CPE while incorporating NG911 policy rules. Multimedia refers to both Real-Time Text (RTT) capabilities and services such as a PSAPs ability to receive video from external sources as a data application. Logging & Recording at the PSAP is per local PSAP functions.
- Security Maturity Level- Rating: Intermediate. Security includes capabilities, operations, and best practices expected at the ESInet, the NENA i3 functional elements, PSAP, and all external-facing interfaces
- Operations Maturity Level- Rating: Intermediate. Operations planning addresses aspects of execution, oversight, plan management, and efforts to support on-going evolution with the planning of NG Core Services, ESInet, and PSAP operations and the transition to the NG911 processing model and services.

- Optional Interfaces Maturity Level- Rating: Intermediate. Optional Interfaces address services and interfaces that interconnect with the ESInet but apply beyond NG Core Services' primary functions, although these functions may otherwise appear necessary and prudent. Any and all optional interfaces must comply with all applicable industry interface standards and shall not interfere with or impact the function or security of the NG911 systems.

The State 911 Program currently uses NENA i3 as the 911 Standard in Iowa. All contracts and progress towards Next Generation 911 are done with full i3 compliance in mind. This is adopted by reference in the NG911 Operations Plan but is not codified through the Iowa Code or Administrative Rule. The State 911 Program should analyze and determine if a more formal i3 adoption should be codified.

ALI/LIS

Per the State 911 Assessment Program, the following guidelines were classified as meeting the minimum criteria; *Guideline NG2: The State should provide the 911 call routing and location using an ALI database, geospatial routing, and Location Information Servers (LIS).* The Assessment recommendation, keeping in mind that around 80% of calls in the State are wireless, is that the State focuses on enabling the transition to an i3-based NG911 system for wireless calls.

The State 911 Program recognizes that as part of the transition to NG911 in the state of Iowa, the State 911 Program needs a greater understanding and roadmap towards the components of GeoSpatial routing. The State 911 Program will work with industry partners to identify necessary steps geared towards implementing LIS/ECRF/LVF and transitioning away from legacy ALI and MSAG components of E911. The State 911 Program plans to engage research and conversation on this topic between 2021-2025.

GIS

Per the State 911 Assessment Program, the following guidelines were classified as meeting the minimum criteria; *Guideline NG3: GIS data practices and capabilities should be*

established. The Assessment recommendation is that the State 911 Program, in conjunction with the 911 Communications Council, establishes an NG911 GIS data plan.

The State 911 Program has encouraged local NG911 GIS development through local grants for several years. The grants encourage and reward local jurisdictions to create, update, and maintain NG911 GIS data. For the previous five years, the State 911 Program has contracted with GeoComm to provide a statewide GIS database as well as to conduct QA/QC on the local data that is submitted. This effort will eventually lead to GIS-based MSAG, and GIS-based call routing. The State 911 Program will continue to rely on industry partners to guide the next steps in the evolution of GIS-based call routing through this strategic plan period.

System Security

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria; *Guideline NG7: The state maintains system security.* The Assessment recommendation is that the State 911 Program, in conjunction with the 911 service provider(s) conducts a security audit of the 911 system, including the ingress network from the Originating Service Providers (OSPs) and the egress ESInet access to the PSAPs.

The State 911 Program recognizes the need to analyze and determine what parts of the 911 system should be prioritized for investment in greater cybersecurity. This should be a part of a holistic plan that addresses state 911 equipment/systems, as well as PSAP education, and investments where appropriate at the local level. The State 911 Program plans to engage research and conversation on this topic between 2021-2025.

MIS Reporting

The State 911 Assessment Program did not review a guideline related to Management Information Systems, MIS, but see the value in PSAPs having this tool. MIS is a PSAP data reporting and management tool. The State 911 Program currently has access to very rudimentary data information. As part of the transition and upgrade to Comtech's Next Generation Core Services (NGCS) operating system, we anticipate a wide variety of

information available. MIS is an offering local PSAPs can purchase as part of the Shared Service program. The State 911 Program should analyze the information available and determine if an additional investment would be warranted in richer data information. The State 911 Program plans to engage research and conversation on this topic between 2021-2025.

911 Program

Background

The State 911 Program oversees administrative aspects of the state 911 program which includes oversight of 911 grants, budgets, NG911 Implementation, and the dissemination of pertinent 911 information. Much focus has been placed on the transition to NG911 in recent years and will continue to be a significant focus for the foreseeable future. The State 911 Program will also look at review programmatic guidelines that were identified in the State 911 Assessment and implement them statewide. The following products and areas of improvement will be reviewed during this strategic plan period.

PSAP Shared-Space

In the process of preparing the strategic plan, it became apparent that there needs to be a way to disseminate information to the PSAPs in the state quickly and efficiently that fosters information sharing. The State 911 Program has identified the need for a shared drive/folder with subsections for information and projects where the State 911 program and PSAPs can share materials. The creation of this shared-space will encompass many of the products that will be created throughout the Strategic Plan. The implementation of this shared-space will be completed by year-end 202, and products will be added throughout the five-year Strategic Plan period.

The categories of the shared-space will be as follows:

- SOP/SOG
- Human Resources
- Outreach and Communications Materials

- Facility Plans and Materials
- Schedules/ Scheduling

Categories are subject to change as the shared-space develops. PSAPs will be allowed to shape the content and development throughout the process.

Statewide Language Capabilities

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria; *Guideline OP3: Provisions exist for language interpretation capabilities statewide.* The Assessment recommendation is that the State 911 Program requires all PSAPs to have or provide access to an approved language interpretation resource for non-English speakers.

Per ADA Title II and Administrative Rule Section 605 Chapter 10 (10.14(2)*(l)*) Iowa requires TTY capability in every PSAP. Iowa also has 98 out of 99 counties that are capable of Text-to-911. The policy does not however mandate a requirement for PSAPs to purchase language line capabilities for those who are non-English/non-native language speakers. The State 911 Program recognizes the importance of being able to access 911 services through a person's language of preference and commits to exploring options that provide this service to all PSAPSs in Iowa.

The program will look into options to provide language line access to all PSAPs in the state of Iowa, along with the top languages to be identified as necessary/common in the state. This will be done by exploring software and services available through current vendors in the 911 program and within existing State contracts. Once one or more options are identified, the State 911 Program will work with applicable State partners to ensure the necessary languages are represented for translation.
Upon identification of available translation services, PSAPS will be provided with information and any necessary training and information. The State will continue to encourage PSAPs to utilize translation services. The implementation is planned to be completed by the end of 2021.

Statewide Certification and Accreditation Standards

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria; *Guideline SR19: The statutory environment provides for professional certification and accreditation.* The Assessment recommendation is that standards for certifications and accreditation be developed beyond the required 40-hour basic training to encourage professional development.

The State 911 Program along with the 911 Council is exploring training opportunities and guidance to create and expand the training offered within the state of Iowa. A baseline knowledge study has already been conducted to solicit feedback from PSAPs on the current state of training and future development. During this strategic plan, applicable partners will continue to review and explore training within the state and make recommendations and changes where warranted.

PSAP Leadership Training

The State 911 Assessment Program did not specifically address PSAP Leadership Training as a guideline, however, the State 911 Program has come to recognize the value and necessity of providing training to PSAP leadership throughout the state.

The proposed training will be provided multiple times a year to PSAP leadership. Modes of training may incorporate online and in-person classes. The content of the training will include:

- A brief history and overview of the 911 system in Iowa
- Review of the laws and rules that govern 911 system regulations
- Review of the different governing bodies within the 911 system
- Review administrative forms and requirements, such as due dates, individual forms, etc.
- Review funding sources such as grants, surcharges, etc.
- Outline operational information

This training will be designed for incoming and current PSAP leadership and a way to stay connected and up-to-date with State 911 Program information and procedures.

Emergency Communications Job Description Model

Per the State 911 Assessment Program, the following guideline was classified as not meeting the minimum criteria; *Guideline HR3: All emergency communications staffing positions have an associated job description.* The Assessment recommendation is that the state uses existing local job descriptions to develop a model that would meet the minimum criteria.

The State 911 Program recognizes that PSAPs in Iowa are inherently different and have different needs. Some telecommunicators serve as jailors and have peripheral duties. PSAPs/telecommunicators have different employer/employee relationships throughout the state. While local PSAPs and various agency departments are ultimately responsible for developing job descriptions that meet their unique needs, the State 911 Program currently encourages PSAPs to share their descriptions.

During the Strategic Plan performance period, the State 911 Program will work to streamline the sharing process and create best practices and guidance for PSAPs on job descriptions by taking into consideration current descriptions, input from PSAPs, and nationally recognized standards and competencies. The final product will be made accessible to the state PSAPs and is planned to be completed by mid-2023 and is planned to be housed in the newly created online shared-space.

Code of Ethics Model Development

Per the State 911 Assessment Program, the following guideline was classified as not meeting the minimum criteria; *Guideline HR2: The state recommends PSAPs have a professional code of ethics for communicators.* The Assessment recommendation is that the 911 Program encourages a Code of Ethics to be implemented in all PSAPs.

The State 911 Program will approach this assessment recommendation similarly and work to gather examples and guidance from PSAPs, and nationally recognized standards and competencies. The final product will be made accessible to the state PSAPs and is planned

to be completed by mid-2023, and is planned to be housed in the newly created online shared-space.

Stress Management Resources

Per the State 911 Assessment Program, the following guideline was classified as not meeting the minimum criteria; *Guideline HR8: The state has a comprehensive stress management program accessible statewide.* The Assessment recommendation is that the State 911 Program encourages PSAPs to develop stress management programs within their respective PSAPs.

The State 911 Program recognizes that PSAPs may have different capabilities when it comes to building a stress management program. The current 40-hour basic telecommunicator course includes stress management training, and many local entities have human resource sponsored stress management resources. The State 911 Program will look to explore and research additional materials and resources, including NENA-STA-002.1-2013 for stress management, and include them into the shared-space environment.

Education and Outreach (External/Public)

Background

Public education campaigns are a successful tool for conveying messages to the public and other entities about 911 history and use since the introduction of 911 services over 50 years ago. New technologies, such as text-to-911, and updates to Next Generation 911 underscore the continuing need to educate the public at large of the capabilities of the 911 system.

The State 911 Program recognizes not only the need to educate the public at large, but to ensure that education and outreach efforts are modified and targeted to diverse populations, including persons with access and functional needs, children, first responders, and elected officials and policymakers. Education and outreach content will be created based on

recommendations from the assessment and will focus on the below outreach areas using NENA standards and national examples to create materials and resources.

Public Education Program and Materials

Per the State 911 Assessment Program, the following guideline was classified as not meeting the minimum criteria; *Guideline PE1: The state has an effective public education program that includes information about the capabilities and appropriate use of 911*.
The Assessment recommendation is that the State 911 Program creates a Public Education Plan.

Currently, the program does provide information to the public through the State 911 Program webpage, text-to-911 outreach, and social media posts and press releases during National Telecommunicator Week. Steps have already been taken to enhance the education and outreach materials for the 911 Program. The Iowa Department of Homeland Security website is currently being redone and the new 911 Program page will include more information for PSAPs and the general public. In recent years, HSEMD has done radio PSA's and social media campaigns related to text to 911. $100,000 annually is dedicated to 911 Council Travel, Training, and Public Education. Funding has been made available to PSAPs or use by HSEMD for public education efforts.

The 911 Program will take steps to widen the scope of materials and information available to the public, and create a comprehensive outreach program. Products created as part of the plan will be vetted by appropriate agencies and feedback will be asked of PSAPS before materials are finalized. Materials will encompass information for all demographics, but special consideration will be given to the categories mentioned hereafter and should be created by the end of 2022.

Materials for Persons with Access and Functional Needs

Per the State 911 Assessment Program, the following guideline was classified as not meeting the minimum criteria; *Guideline PE3: The state has identified special needs populations and developed specific educational programs for each.* The Assessment

recommendation is that the State 911 Program should coordinate expanded educational outreach programs for communities with access and functional needs, and evaluate the effectiveness of program activities.

The State 911 Program recognizes the need to create materials that follow all ADA guidelines and also address the unique issues faced by persons with disabilities and access and functional needs when it comes to accessing 911 resources. Components of an outreach plan for this demographic will include;

- Considerations of font size, color, and placement on all materials created,
- The translation of materials into multiple languages,
- The creation of materials in digital or other formats for those who require media in non-standard formats.

To ensure the materials and content are compliant the State 911 Program will be seeking feedback from other agencies and groups within the state as well as subject matter experts.

Materials for Children

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria; *Guideline PE4: The state has specific 911 educational programs for children at all grade levels.* The Assessment recommendation is that the 911 Program continues to provide education to all age groups, including children, through targeted materials.

Teaching children how to use 911 is an important part of their education. The State 911 Program is committed to developing content to foster education in all age groups. Materials will be created that fall into two categories, kids and teens. Examples of the content may include, activity books, word searches, games, hand-outs, videos, and more. The goal is to create progressive materials that can be used to teach children and teens about the 911 program, and when to use 911.

Materials for Emergency Responder Education

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria; *Guideline PE5: The state has an educational program for emergency responders.* The Assessment recommendation is that emergency responders, including, but not limited to; emergency management professionals, are provided with education about the capabilities and appropriate use of 911 through the creation and distribution of educational materials and the possible addition of materials to the training curriculum.

The State 911 Program is housed within the Iowa Department of Homeland Security and Emergency Management, which allows the program to take advantage of existing relationships with Emergency Management Agencies in the state to promote and distribute 911 information. The State 911 Program will ensure the sharing of all materials on 911 education and programs are shared with these agencies after their creation.
Efforts will be made to reach out to the Iowa Law Enforcement Academy (ILEA) and other responder training organizations, such as and Fire Service Training Bureau, to collaborate on training content in the future.

Materials for Elected Official and Policy Makers

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria; *Guideline PE2: The state has a 911 education program for appointed/elected officials and policymakers.* The Assessment recommendation is that the State 911 Program continues public education efforts with state legislators, and help to develop and coordinate public education programs for local governments using national programs as examples. The State 911 Program will work to create new content and materials to help facilitate understanding of the 911 program for elected officials and policymakers.

Facility and Operations

Background

Historically PSAPs in Iowa have been given autonomy over their facility design, security, and operations. Within Iowa Code § 34A-10.14 Minimum operational and technical standards exist, where PSAPs are asked to ensure facility operations by providing access control and security to their PSAP as well as provide emergency electrical power. Any additional plans, including continuity planning, is left to the discretion of the PSAP.

The State 911 Program has created redundancy in the state systems to ensure the continuity of calls within the state should an incident occur, and continuity of operations plans exist within the State 911 Program office. Within this strategic plan, the State 911 Program will look into any materials or tools that can be created or shared with PSAPs to provide information and planning on creating or maintaining the building and facility security and continuity of operations at the PSAP level.

PSAP Business Continuity Plans – Guidance and Materials

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria; *Guideline SC1: The state has business continuity of operations plans (COOP) for 911 to ensure continuous operations.* The Assessment recommendation is that the Joint 911 service board should submit a COOP plan annually to the Iowa 911 Program and or provide guidance for PSAPs on how to conduct an operational impact analysis to form a continuity plan.

The State 911 Program recognizes the need for continuity planning for organizations and will work to identify guidance and materials that can be provided to PSAPs. Nationwide standards exist, such as NENA-INF-019.2-2016, NENA-INF-020.2-2017, and NENA-INF-017.3-2018, and that provide recommendations for plans and standard operating procedures. These plans will be reviewed and collaboration and input from subject matter experts will be sought to create a guide and/or resources for a database.

PSAP Access and Facility Planning

Per the State 911 Assessment Program, the following guideline was classified as meeting the minimum criteria;

Guideline SC6: The state has a plan for physical security and access control.

Guideline SC7: PSAP Facilities and system facilities are planned, designed, and constructed according to accepted site selection standards and best practices.

The recommendation is that the State 911 Program updates Iowa Code to require adherence to accepted national standards for PSAPs. Joint 911 Service Boards should submit their physical security plans to the State 911 Program on an annual basis.

Currently, Iowa Administrative Code Section 605 Chapter 10.14(2) gives basic requirements for emergency power and 10.14(4) identifies voluntary standards. The State 911 Program will review this along with national standards to ensure guides and materials are available to PSAPs and will also engage subject matter experts in conversation through meetings and surveys to explore future options to ensure PSAP security standards are where they need to be in the state of Iowa.

CONCLUSION

The State 911 Program has embarked on this planning effort with the future of the 911 program in mind, and to create the highest level of 911 program resiliency possible. The plan represents the program's commitment to making improvements in many of the areas identified in the State 911 Assessment and to create effective programs and partnerships to engage with the 911 community to serve the community.

The 911 program looks forward to undertaking the actions identified throughout the plan to gather input and perspective from the broader 911 community. We'd also like to thank all who contributed to the 911 Peer Assessment along with those who provided feedback and guidance towards the strategic plan. We also want to provide our gratitude in advance, for the work that is yet to be undertaken. The work identified in this Strategic Plan will take a great amount of effort, time, and discussion, and we acknowledge and thank all partners in advance for the undertaking to begin.

GLOSSARY OF ACRONYMS

ADA	Americans with Disabilities Act
ALI	Automatic Location Information
ANI	Automatic Number Information
APCO	Association of Public-Safety Communications Officials
BCF	Border Control Function
CAMA	Centralized Automated Message Accounting
CHS	Call Handling System
CLC	Call Logic Center
COOP	Continuity of Operations Plan
CPE	Call Processing Equipment
DBMS	Data Base Management System
DPS	Department of Public Safety
E2	Type of Interface Circuit
ECRF	Emergency Call Routing Function
EMD	Emergency Medical Dispatch
EMS	Emergency Medical Service
ESInet	Emergency Services IP Network
ESN	Emergency Services Number
GIS	Geographical Information System
HELD	HTTP Enabled Location Delivery
HSEMD	Iowa Department of Homeland Security and Emergency Management
HTTP	Hypertext Transport Protocol
ICN	Iowa Communications Network
ILEA	Iowa Law Enforcement Academy
IP	Internet Protocol
IPSR	IP Selective Router
ISICSB	Iowa Statewide Interoperable Communications Systems Board
LEC	Local Exchange Carrier
LIS	Location Information Servers
LoST	Location to Service Translation
LVF	Location Validation Function
MB	Mega Byte
MIS	Management Information Systems
MLTS	Multi-line Telephone System
NENA	National Emergency Number Association
NG	Next Generation

NGCS	Next Generation Core Services
OSE	Originating Service Environment
OSP	Originating Service Provider(s)
PSA	Public Service Announcement
PSAP	Public Safety Answering Point
QA	Quality Assurance
QC	Quality Control
RTP	Real Time Protocol
RTT	Real-Time Text
SIP	Session Initiation Protocol
SMS	Short Message Service
SOG	Standard Operating Guide
SOP	Standard Operating Procedures
TCC	Text Control Center
TDM	Time Division Multiplexing
TTY	Teletypewriter
VoIP	Voice Over Internet Protocol