IOWA
STATEWIDE COMMUNICATION INTEROPERABILITY PLAN
2020 - 2023

NOVEMBER 2019

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U.S. Department of Homeland Security
Cybersecurity and Infrastructure Security Agency

DRAFT – INTERNAL WORKING DOCUMENT

LETTER FROM THE STATEWIDE INTEROPERABILITY COORDINATOR

Greetings,

I am pleased to provide to you the 2020 Iowa Statewide Communication Interoperability Plan (SCIP). This SCIP represents Iowa's continuous commitment to improving emergency communications interoperability and supporting our public safety practitioners throughout the state. Additionally, this is required by Department of Homeland Security (DHS) grant guidelines.

Members of the Iowa Statewide Interoperable Communications System Board (ISICSB) and public safety stakeholders from various disciplines, agencies, and jurisdictions within the State engaged in several webinars to review and revise the 2017-2020 SCIP. This collaborative effort culminated with an in-person SCIP Workshop on September 10-11, 2019. Participants of this effort worked to ensure the 2020 Enhanced SCIP includes governance, technology, and funding goals and objectives that support our state in planning for new technologies and navigating the ever-changing emergency communications ecosystem. These SCIP goals and objectives are intended to support the dissemination of best practices across Iowa and can be amended as relevant stakeholders see fit.

As we continue efforts to enhance interoperability, we must remain dedicated to improving our ability to communicate among disciplines and across jurisdictional boundaries. With help from public safety practitioners statewide, we will work to achieve the goals set forth in this SCIP and become a nationwide model for statewide interoperability.

Sincerely,

Chris Maiers
Statewide Interoperability Coordinator
Iowa Statewide Interoperable Communications System Board

TABLE OF CONTENTS

INTRODUCTION

Modernization of emergency communications components is facilitating the flow of information and communications among government agencies, the private sector, and the public, and in some cases, with entities from neighboring countries.

Vision

All emergency response entities in and around Iowa can access interoperable communications systems.

The deployment of statewide interoperable land mobile radio (LMR) networks such as the Iowa Statewide Interoperable Communications System (ISICS) FirstNet, wireless broadband networks, and applications will greatly influence incident operations as they become more prevalent and are more widely adopted by emergency responders. In addition to statewide radio networks and FirstNet, there are also efforts to update the Nation's 9-1-1 infrastructure to Next Generation 9-1-1 (NG9-1-1). The deployment of a nationwide public alerting system that uses traditional media, such as broadcast and cable, as well as Internet Protocol-based technologies to transmit alerts to mobile phones and other devices are nationwide efforts to update emergency communications infrastructure. When considering and preparing for these changes to the emergency communications landscape, Iowa has developed the Enhanced SCIP using a more holistic approach to strategic planning that incorporates the entire emergency communications ecosystem and the Interoperability Continuum.

The broader emergency communications ecosystem consists of many inter-related components and functions, including communications for incident response operations, notifications and alerts and warnings, requests for assistance and reporting, and public information exchange. The primary functions of the emergency communications ecosystem are depicted in the 2019 National Emergency Communications Plan.[1]

Mission

In accordance with the code of Iowa and established rules, develop and provide standardized interoperable public safety communications through existing governance structures to enhance and achieve the highest level of interoperable emergency communications statewide.

[1] 2019 National Emergency Communications Plan

The Interoperability Continuum was developed by SAFECOM and serves as a framework to address challenges and continue improving operable/interoperable and emergency communications.[2] It is designed to assist emergency response agencies and policy makers with planning and implementing interoperability solutions for voice and data communications. In an effort to align the lanes of the continuum to Iowa's committees and their work, an updated interoperability continuum shown in Figure 1 was developed to include the Finance and Security lanes during the previous 2017 SCIP workshop. These new lanes include milestones to guide progress towards improving interoperability.

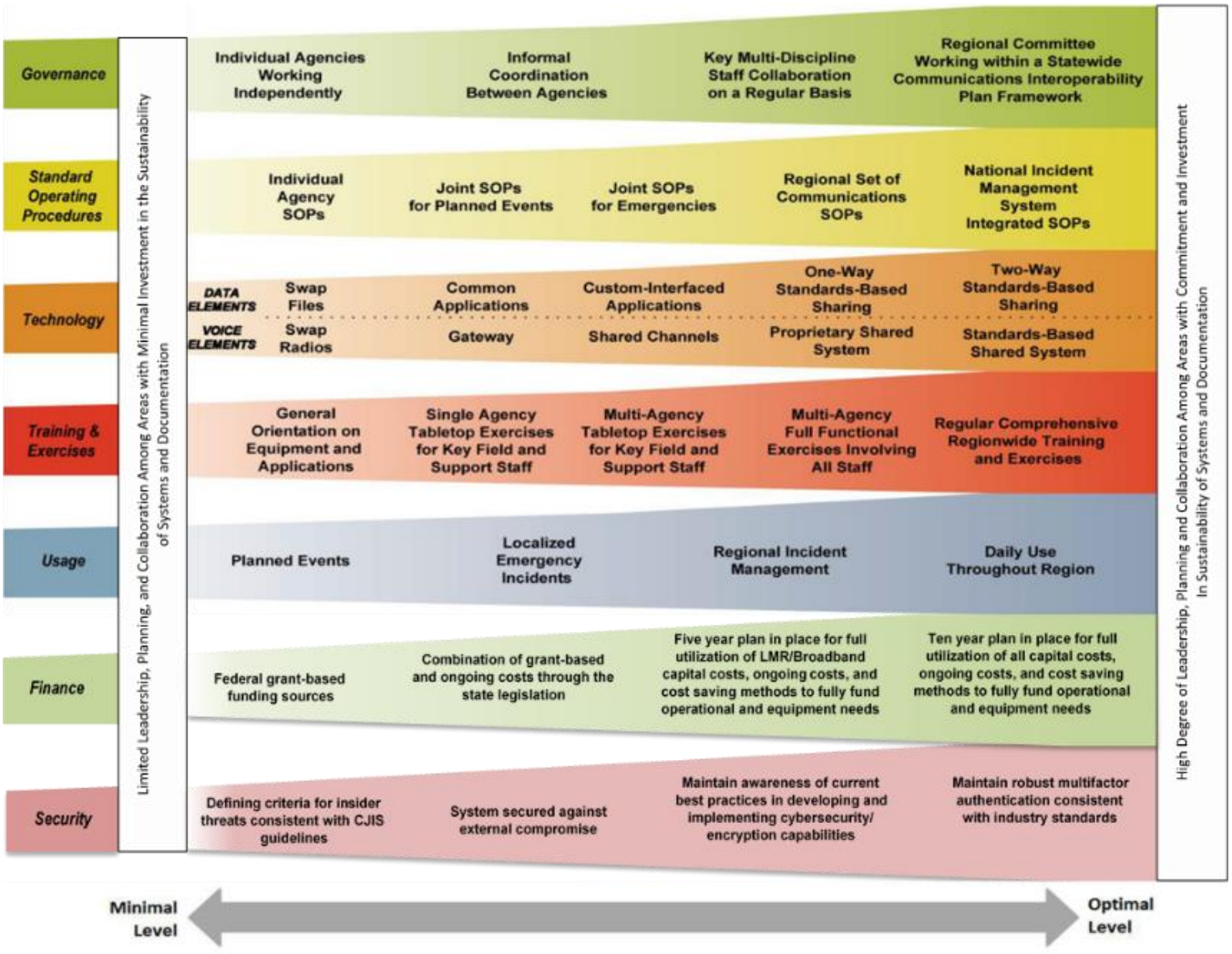

Figure 1: Iowa Interoperability Continuum

[2] SAFECOM Interoperability Continuum brochure

Iowa SCIP Overview

- **Overview of Strategic Goals, Objectives and Benefits:** Provides an executive summary of the Iowa SCIP goals and objectives and their intended benefits.

- **Governance & Coordination:** Describes the current mechanisms for communications interoperability governance within the state along with successes, challenges, and priorities for improving governance within the evolving landscape.

- **Technology & Operations:** Describes the core systems used to support public safety communications within the state and the technological and operational enhancements needed to maintain and enhance interoperability across the emergency communications ecosystem.

- **Funding & Sustainment:** Describes the funding sources and allocations that support interoperable communications capabilities within the state along with methods and strategies for funding sustainment and enhancement of needed capabilities into the future.

- **ISICSB Committee Mission Statements and SCIP Goals & Objectives:** Provides each of the seven committee mission statements and their goals and objectives. Goals and objectives were leveraged by the successes and gaps that were previously identified in the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis created in 2017, depicted in Appendix B. Discussions with the ISICSB Committees verified that the SWOT analysis is still relevant and representative of the current status of Iowa.

- **Implementation Plan:** Describes how Iowa plans to implement, maintain, and update the SCIP to enable continued evolution of and progress toward its interoperability goals.

OVERVIEW OF SCIP GOALS AND OBJECTIVES

Governance & Coordination

Develop appropriate governance through creation of mission statements and assigned goals for each ISICSB committee.

Technology & Operations

Maintain existing systems and adopt emerging technologies with a focus on statewide LMR, Broadband, NG9-1-1, and Alerts and Warnings systems.

Funding & Sustainment

Approve a 5-year financial plan for the operation of Iowa's statewide system and broadband planning.

GOVERNANCE AND COORDINATION

Iowa Statewide Interoperable Communications System Board

Iowa established the Iowa Statewide Interoperable Communications System Board (ISICSB) in 2007. Under Code of Iowa 80.28 and 80.29, ISICSB's purpose is to develop, implement, and oversee policy, operations, and fiscal components of communications interoperability at the state and local level, as well as coordinate similar efforts at the federal level. The ultimate objective of the Board is to develop and oversee the operation of a statewide integrated public safety communication interoperability system. See Appendix D for the Code of Iowa 80.28 and 80.29.

Desired State of Governance

- Develops, implements, and oversees policy, operations, and fiscal components of communications interoperability
- Coordinates with local, state, and federal stakeholders

The Governor has established an annual reporting requirement on the status of the ISICSB. The Board has 19 voting members, including eight state department representatives, 11 local public safety members (law enforcement, fire, emergency medical service, emergency management) and one at-large member, all of which are voting members. There are also non-voting four ex officio legislative members.

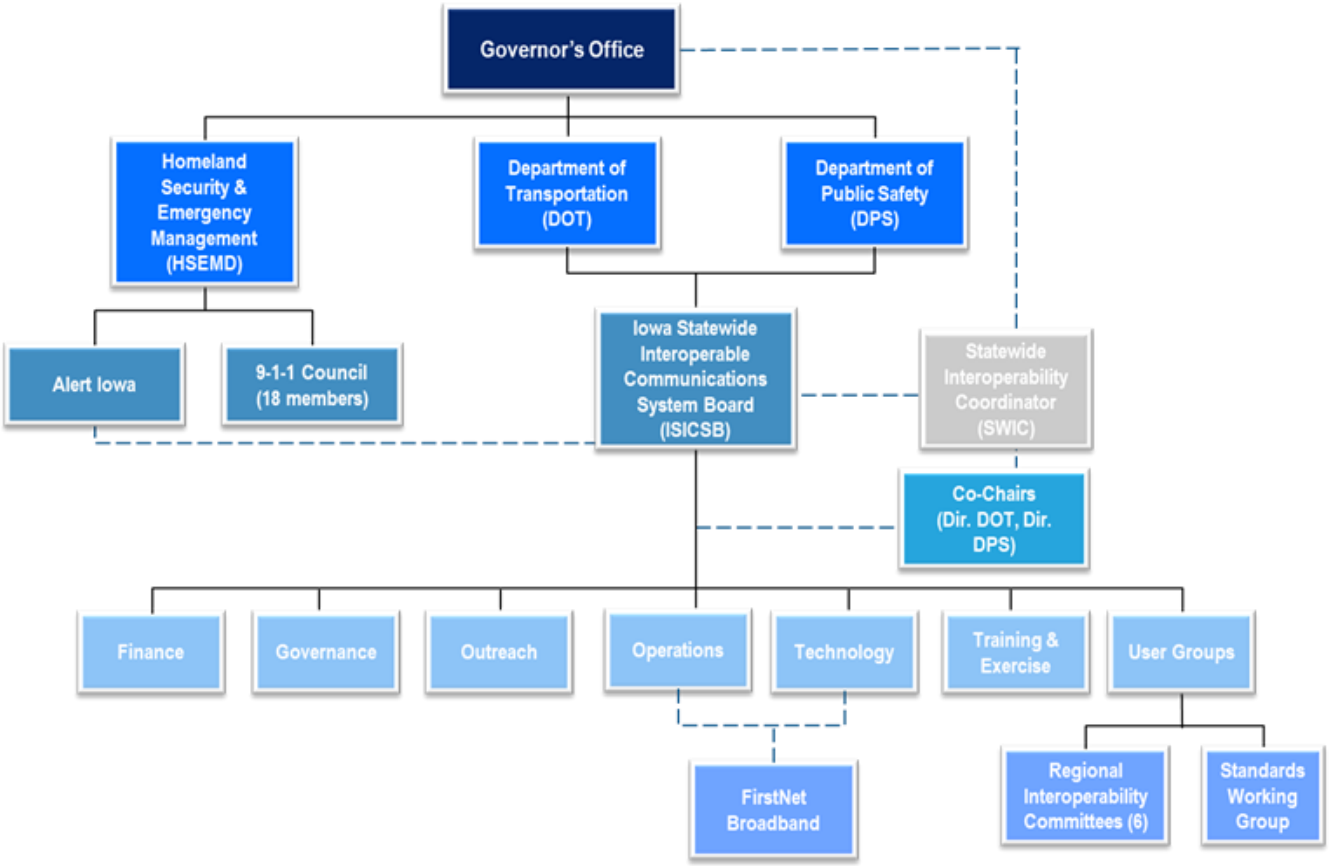

Figure 2: Emergency Communications Governance in Iowa

Creation of a Security Committee

During the previous SCIP Update in 2017, participants identified the need to establish a Security Committee. The creation of a new committee will require the Board to identify a Chair and Vice Chair. Since the ISICSB receives its direction from the Code of Iowa, they do not have a charter. Instead, the ISICSB has administrative rules that only require a simple vote of the Board to elect the positions of the Chair and Vice Chair.

General membership of the new committee, including the Chair and Vice Chair, will need to include people with cybersecurity expertise. The ISICSB will work to identify these members outside of its current structure because they may not have enough people with the specific technical skill sets required. This effort may pose the opportunity for the ISICSB's first public/private partnership. The Board will consider partnering with the Regents universities (University of Iowa, Iowa State University and University of Northern Iowa) to identify a mixed group of specialists who may not have any knowledge of public safety.

There is the possibility that this security committee will be a subcommittee, much like the Broadband subcommittee. Under the Technology Committee, the Security subcommittee's primary goal will be to assist the Regional Interoperability Committees (RICs), which are subcommittees of the User Group Committee.

TECHNOLOGY AND OPERATIONS

Land Mobile Radio

The State of Iowa has many different land mobile radio (LMR) systems in place. Many are stand-alone, some are connected to the State's ISICS platform or can connect to that system via other methods, and most have the ability to use the VHF conventional interoperability channels statewide.

- About 70% of the State of Iowa is on non-Project 25 VHF conventional systems with a few areas having VHF P25 systems.
- Most of the state has access to discipline specific VHF mutual aid channels including Fire Mutual Aid (VFIRE21), Law Enforcement Assistance (LEA), and Law Enforcement Mutual Aid (VLAW31)
- The state has many 700/800 MHz systems, some of them are FDMA (Frequency Division Multiple Access) while others are TDMA (Time Division Multiple Access).
- Some agencies use a private vendor to provide their radio system infrastructure.
- The state has recently constructed a new 700/800 MHz P25 Phase II interoperable statewide system—ISICS. Currently there are approximately 14,500 users at an interoperable or operable communications capacity as of November 2019.

Desired State of Technology

- 100% of radios interface with ISICS and use the same nomenclature
- Program all radios with a standard interoperability template
- Increase local knowledge to enhance independence from vendors across communications ecosystem
- Greater public safety use of FirstNet
- 98% or better coverage of both indoor and outdoor LMR and Broadband networks
- Convergence of the Wireline and Wireless networks
- Improve security of warnings systems
- Update alerts and warnings
- Coordinate with agencies to push out alerts and warnings to the public

Mobile Broadband

Iowa currently uses multiple commercial vendors along with FirstNet to support broadband use. Data for public safety is currently being used for:

- Mobile data in the field
- CAD (Computer Aided Dispatch)
- Live streaming video
- OTAP (Over the Air Programming) of radios that allows the ability to reprogram or update talk groups over the air via the P25 LMR network or WiFi vs. physically touching each radio and may be an option in the future over LTE.
- AVL (Automatic Vehicle Location), this is the ability to track vehicle movement which is one feature that is part of the State of Iowa's MACH (Mobile Architecture for Communications Handling) mobile data system for law enforcement.
- TraumaHawk App -This is a smartphone app designed by the University of Iowa that allows first responders in the field the ability to send pictures of an accident to the receiving hospital to give the hospital a greater awareness of the extent of injuries and/or vehicle damage.
- Iowa has completed a pilot called Wi-Fi for School Emergencies (WISE). The WISE Pilot is designed around increasing police presence at schools by establishing outdoor wireless access points that law enforcement can use to upload dash and body camera video. The network may also be used during a school emergency.

Desired State of Outreach

- Outreach materials reviewed and updated annually
- Ongoing coordination with other ISICSB committees to obtain information for distribution
- Active engagement with public safety agencies and ISICSB Outreach Committee members
- Monthly ISICSB Outreach Committee meetings to review and update outreach methods
- Regularly disseminate peer shared success stories

Desired State of User Group

- 100% of eligible users have access to the ISICS platform
- Standardized Regional Interoperability Committee (RIC) reporting processes in place

9-1-1

The 9-1-1 Communications Council was established to serve in a consultative role with the 9-1-1 Program Manager and the Director of the Homeland Security and Emergency Management Department (HSEMD). The goal of the Council is to advise and make recommendations to the Director and Program Manager regarding implementation and development of the 9-1-1 system in Iowa. The ISICSB and 9-1-1 Communications Council lead and support interoperable and emergency communications-related efforts in Iowa. These two groups exist as separate but as coordinated entities who share a common vision and mission. Several of the Council members sit on at least one of the ISICSB seven committees.

Desired State of Operations

- Legacy system plans are complete and align to the ISICS
- Leave no agency behind
- Procedures are regularly updated to reflect current communications ecosystem
- Operational plans are supported by communications infrastructure
- Collaborate with the Iowa 9-1-1 Council for standard operating procedure development for Next Generation 9-1-1 (NG9-1-1)

Alerts and Warnings

The Alert Iowa Notification System is the state's primary alert system but is not used by every agency. Other systems used include: Code RED, Reverse 9-1-1 and Everbridge. Iowa stakeholders have stated the value of incorporating alerts and warnings and National Weather Service's Forecast Offices on its statewide LMR system – ISICS.

Desired State of Training

- Standardized training across the state
- Joint COMMEX program organized by RICs on a rotating schedule
  - Yearly RAGBRAI exercise
  - Second exercise to be determined on a yearly basis by organizing RICs
  - Include non-traditional agency participation (ex. schools)

FUNDING SUSTAINABILITY

ISICSB, as well as other commissions in Iowa, are not given a stand-alone budget, rather funds are distributed through the state's Department of Public Safety (DPS). Currently, the Board receives annual appropriations to fund activities including training and travel. From 2007 to 2010, the Board also received a total of $12.1 million in grants, primarily from the Public Safety Interoperability Communications Grant (PSIC) and the Interoperable Emergency Communications Grant Program (IECGP). This platform will be under the joint purview of the DPS and the DOT. Iowa is currently using a State and Local Interoperability Grant Program's (SLIGP) grant to partially fund a full-time SWIC as well as a FirstNet Outreach Coordinator and support staff.

Desired State of Finance

- Sustainable funding across the communications ecosystem
- Establish and maintain five-year funding plan

9-1-1 Surcharges

Iowa operates off a one dollar per month per line 9-1-1 surcharge for both wireline and wireless numbers. The 9-1-1 surcharge is split between local 911 Service Boards and the State Homeland Security and Emergency Management Department (HSEMD). The HSEMD keeps 40% of the wireless surcharge, and the local service boards keep the remaining 60%, in addition to 100% of the wireline surcharge. HSEMD also receives $.51 for each prepaid use as a pass-through from the Department of Revenue.[3]

Maintenance Costs for the ISICS Platform

Maintenance has been built into a 10-year contract with Motorola for the ISICS platform. After the warranty ends following the third year after final system acceptance, the state will be responsible for the maintenance costs which are $1.6 million annually. Funding needs to be identified to pay for the maintenance when it arises. The estimated power costs for the platform will be $275,000 a year for all 90 sites. DPS is also responsible for the cost of the state-built sites.

Five-Year Funding Plan

The ISICSB Finance Committee has developed a five-year funding plan to establish processes and procedures involving expenditures on ISICS and FirstNet, which includes the following:

- Identifies ISISCB's role regarding the sustainability and maintenance of the system
- Identifies the $1.6 million needed for annual maintenance costs after 2023
- Funding of control stations and other equipment for local agencies to access ISICS

[3] 2019 State 911 Assessment Report for Iowa

ISICSB COMMITTEE GOALS AND OBJECTIVES

Finance Committee			
Mission Statement: The Finance Committee identifies potential funding streams and coordinates existing funds for interoperable communications priorities.			
Goal #	**Goals**	**Objectives**	**Benefits**
1.	*Develop appropriate process and procedures for acquiring resources, administering processing payments using state and grant funds for enhancement, deployment, and operation of ISICS and a five-year financial plan to be reviewed every two years*	• Develop and maintain annual fiscal processes which meet GAAP/GAAS requirements for ISICS Project	• Process developed and implemented for acquiring resources, processing payments using state or grant funds promotes transparency • Development and administration of a 5-year financial plan promotes transparency
2.	*Develop and maintain appropriate process and procedures for acquiring resources, administering processing payments using state and grant funds for enhancement, deployment and operation of broadband data network and a five-year financial plan to be reviewed every two years*	• Develop annual fiscal processes which meet GAAP/GAAS requirements for statewide data network	• Process developed and implemented for acquiring resources, administering and processing payments of state or grant funds promotes transparency • Development and administration of a 5-year financial plan promotes transparency
3.	*Develop and maintain an appropriate process and procedure for administering all financial assets consistent with national best practices in accounting and auditing*	• Develop and maintain annual fiscal process which meet GAAP/GAAS and GASB for administering state and federal funds consistent with Code of Iowa and grant guidelines • Align with the grant process developed by the ISICSB	• Establishes known processes and procedures for budgeting, accounting, inventorying and auditing all financial assets of ISICSB whether state or grant funds

Governance Committee			
Mission Statement: The Governance Committee develops and coordinates the policy and procedural operations of the ISICSB and ensures it functions within the law in a public and transparent manner.			
Goal #	**Goals**	**Objectives**	**Benefits**
4.	*Develop and update appropriate governance through creation of policy and procedure statements for enhancement, deployment and operation of ISICS*	• Develop policies as requested • Disseminate policies as needed	• Promotes a shared understanding of governance involving the statewide system
5.	*Develop and update appropriate governance through creation of policy and procedure statements for enhancement, deployment and operation of a statewide broadband network*	• Develop policies as requested • Disseminate policies as needed	• Promotes a shared understanding of governance involving statewide broadband network
6.	*Establish and maintain a process to administer grant funds or communications assets*	• Develop policies as requested • Disseminate policies as needed	• Promotes awareness of how grant funds and communications assets are invested

Operations Committee			
Mission Statement: The Operations Committee collaborates and develops the operational protocols and procedures for interoperable communications.			
Goal #	**Goals**	**Objectives**	**Benefits**
7.	*At the end of five years 95% of all public safety radios have direct access to ISICS*	• Identify public safety agencies that need access • Define what direct access to ISICS means • Establish operational policies for ISICS access • Deliver recommendation/documentation to ISICSB	• Advances interoperability statewide by connecting dispatch centers to ISICS
8.	*Annually review existing ISICS policies and ISICS draft policies and make recommendations to Standards Working Group*	• Review and document recommendations to the Standards Working Group representative	• Creates an opportunity to update ISICS policies
9.	*Align and update legacy plans, including system failures*	• Identify, review and update existing communications plans and include a system failure plan • Deliver recommendation / documentation to ISICSB	• Creates an opportunity to address issues with existing communications plans

Outreach Committee			
Mission Statement: The Outreach Committee builds coalitions to support and promote interoperable public safety and emergency communications by providing clear and pertinent information to stakeholders and decision makers.			
Goal #	**Goals**	**Objectives**	**Benefits**
10.	*To develop and deliver outreach materials for use in making decisions to become a user of ISICS*	• As needed, identify if a plan needs to be developed to respond to changes with ISICS • Develop outreach materials specific to elected officials and targeted audiences	• Promotes awareness of benefits of becoming an ISICS user
11.	To develop, update, and deliver outreach materials for use in making decisions to become a user of the public safety broadband network	• Leverage guidance and input from the Broadband sub-committee • As needed, identify if a plan needs to be developed to respond to changes with broadband • Develop Iowa-specific materials from broadband providers • Develop outreach materials specific to elected officials and targeted audiences	• Promotes awareness of benefits of becoming a broadband network user
12.	*Approach and educate elected officials and staff*	• Develop an outreach plan • Engage association partners • Identify most pertinent information to include in high-level one-pagers for elected officials	• Creates "interoperability champions" to advocate on behalf of ISICSB priorities involving funding and other needs to advance interoperability statewide

Technology Committee			
Mission Statement: The Technology Committee researches emerging technologies and standards to develop technical recommendations and procedures to enhance interoperable public safety and emergency communications.			
Goal #	**Goals**	**Objectives**	**Benefits**
13.	*To lead technological solutions for voice interoperability*	• Publish standards for interoperable communications equipment • Publish interoperability programming guide	• Supports interoperability involving voice across communications equipment
14.	*To lead technological solutions for data interoperability*	• Create minimum standards for interoperable communications equipment • Make recommendation to ISICSB to adopt standards	• Supports interoperability involving data across communications equipment
15.	*Investigate voice and data convergence and differentiating the needs of public safety*	• Investigate technology • Choose best course of action • Make recommendations	• Identifies planning considerations for the convergence of voice and data

Training & Exercises Committee			
Mission Statement: The Training and Exercise Committee provides training opportunities on interoperable communications and procedures for planned and unplanned events.			
Goal #	**Goals**	**Objectives**	**Benefits**
16.	*Develop and provide standard core training for interoperable communications across the various state regions*	• Maintain and update guidelines defining standard core training • Embed communications training within existing state training institutions	• Promotes consistent training across state regions
17.	*Expand the statewide core group of trainers who would be able to teach necessary COMU positions classes and increase COMU awareness*	• Create a COMU awareness outreach program for recruitment and dissemination of information through the Outreach Committee • Seek Train-the-Trainer classes	• Increases the number of trainers to promote more training and organization of statewide COMU program
18.	*Develop a cost analysis of training to augment future budgetary planning*	• Obtain training funding	• Identifies funding needs for training
19.	*Increase the number of credentialed COMU personnel*	• Increase opportunities to complete position task book • Increase regional training opportunities with the inclusion of an enhanced COMMEX program	• Maximizes support during planned and unplanned events

User Group Committee			
Mission Statement: The User Group Committee, comprised of authorized users, coordinates access and usage policies for use of or interfacing with the ISICS platform and public safety broadband systems.			
Goal #	**Goals**	**Objectives**	**Benefits**
20.	*Develop processes and vet the application process for access to the ISICS interoperable communications platform within state or grant resources.*	• Add efficiencies to application process • Determine resource needs for an objective evaluation of Level 3 and 4 resource users	• Decreases application process time relative to number of applications per user level • Encourages increased number of users
21.	*Develop processes for guidance on broadband data interoperable communications platform within state or grant resources.*	• Identify and deploy process to assist in the application for broadband access	• Decreases application process time relative to number of applications per user level • Encourages increased number of users
22.	*Strengthen all RICs*	• Travel to every county to conduct outreach to all stakeholders • Listen and accept feedback • Identify meeting frequency and appropriate tasks • Continue to solicit local input for consideration	• Increases RIC user attendance, participation, and investment

IMPLEMENTATION PLAN

Evaluation / Progress Measurement

Iowa's SCIP is owned and managed by the ISICSB. Through the Code of Iowa, the ISICSB has both authority to, and is responsible for, making decisions regarding the SCIP and is responsible for its implementation and maintenance. The SCIP goals align with the Code of Iowa in order to ensure compliance and tied to a budget funding stream to ensure their completion.

The ISICSB will add the goals assigned to the committees as a formal agenda item for its regular meetings. Appendix C outlines each committee's assigned SCIP goals and objectives, metrics of success and action plan based on the 2019 workshop. Committee members are expected to utilize developed action plans to implement their respective areas of the SCIP. All goals and objectives ownership will be led by their respective committee. During the 2019 SCIP workshop, goals were also given timelines and additional owners to support the leading efforts of each committee as seen fit.

Each Committee Chair or their designee will provide regular status updates to monitor work, or lack thereof, done by the Committee, subcommittee or working group to track progress and address as needed. These status updates will contribute to the state's Annual Report to the Governor and Legislature. The ISICSB will also conduct a thorough review of the SCIP on a biennial basis to update goals and objectives to address identified needs and advancements involving statewide emergency communications capabilities.

DHS Support

As of federal fiscal year 2019, the DHS Cybersecurity and Infrastructure Security Agency (CISA) Emergency Communications Division (ECD) is supporting states and territories in baselining progress against 25 State Interoperability Markers. This tool was developed by looking at best practices along the SAFECOM Interoperability Continuum to highlight emergency communications strengths and gaps, support measurement of 2019 NECP implementation, and provide a framework for developing and tracking SCIP goals. State Interoperability Markers help ECD provide targeted technical assistance in the form of training and resources offered through its Interoperable Communications Technical Assistance Program (ICTAP). Iowa's baseline 2019 Markers can be found in Appendix D.

ICTAP offerings of interest for Iowa include:

- Communications Unit Leader (COML)
- Communications Unit Technician (COMT)
- COML Train-the-Trainer
- State / Regional Tactical Interoperable Communications Plan (TICP)
- Electronic Tactical Interoperable Communications Field Operations Guide (eFOG) Development
- Leveraging Broadband Technologies and Data Operability / Interoperability in Support of Public Safety
- Encryption Planning and Usage
- Incident Tactical Dispatcher (INTD)

Requests for technical assistance are coordinated through the Iowa SWIC on an annual basis. For more information, states, tribes, and territories are encouraged to work with their SWIC and ECD sector coordinator. For more information, contact ECD coordinator Jim Lundsted: James.Lundsted@cisa.dhs.gov or ECD@cisa.dhs.gov

APPENDIX A: ACRONYMS

CISA	Cybersecurity and Infrastructure Security Agency
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit
DHS	Department of Homeland Security
ECD	Emergency Communications Division
GAAP	Generally Accepted Accounting Practices
GAAS	Generally Accepted Auditing Standards
HSEMD	Homeland Security and Emergency Management Department
ISICS	Iowa Statewide Interoperable Communications System
ISICSB	Iowa Statewide Interoperable Communications System Board
LMR	Land Mobile Radio
MHz	Megahertz
NECP	National Emergency Communications Plan
NG9-1-1	Next Generation 9-1-1
P25	Project 25
PSAP	Public Safety Answering Point
RIC	Regional Interoperability Committee
SCIP	Statewide Communication Interoperability Plan
SWIC	Statewide Interoperability Coordinator
SWOT	Strengths, Weaknesses, Opportunities, Threats Analysis
VHF	Very High Frequency

APPENDIX B: SWOT ANALYSIS

	LMR	Broadband	Code of Iowa Duties	Alerts & Warnings
Strengths	• Deployed Iowa Statewide Interoperable Communications System (ISICS), P25 Statewide Radio System • Deploying LMR backbone across the state • Local participation • Procedures and policies address and prepare for conventional systems and new technologies (i.e., eliminating interference issues) • Public Safety Answering Points (PSAPs) are preparing for the ISCIS	• Established broadband committee • Collaborating with Governor's Office • State public safety uses data frequently • Dedicated broadband for public safety at school locations (WISE) • One of the first states to define public safety grade	• Guiding 700MHz network buildout • Dedicated funding stream • Current committee structure is responsive to planning needs • Established public/private partnerships (Motorola – LMR) • FirstNet Broadband subcommittee hosting fourth public/private partnerships summit • Strived to partner with local exchange carriers for FirstNet • Collaborating with local utility companies • Outreach and information sharing • Adopted FPIC encryption • Strong collaboration between 9-1-1 Board and state interoperability board	• Most counties use Alert Iowa--Statewide system for alerts and warnings, incorporates reverse 9-1-1, integrates IPAWS • Outdoor and indoor warning systems • Paging systems
Weaknesses	• Diversity of radio frequency use • Tactical Interoperability Communications Plan (TICP) not current • Funding • Outreach and education on ISCIS • CASM adoption • No master RFP to provide to local stakeholders • Legislature allocated surplus 9-1-1 funds to build and implement statewide radio • Unpredictability of long-term funding	• Stakeholders have limited broadband technical knowledge • Reliance on commercial carriers for information • No dedicated funding stream	• No authority to enforce decisions • No ability to administer grants • Interoperability continuum does not emphasize cybersecurity • Need additional subject matter expertise for new and evolving technology • Lack of succession planning	• Multiple points of contact for alerts and warnings • Lack of standards

	LMR	Broadband	Code of Iowa Duties	Alerts & Warnings
Opportunities	• Identifying funding to pay for 8-year commitment to Motorola • Clearly define interface • Inclusion of public service as users • Identifying overall funding stream/source of revenue for grants to continue expanding system • Access to ISCIS from every PSAP and department • Create buy in and involve local stakeholders with new and evolving technology • Adding a representative from each county (99) on subcommittees • Developing a regional governance system	• Expanding ICSIC • Adopting FirstNet • Development of applications • Sharing information with all stakeholders and decision makers	• Leveraging voting seat on Telecommunications Industry Association (TIA) • Create grant funding method to push grants to locals	• Some counties still have the opportunity to join Alert Iowa • Addressing Alerts & Warnings in the SCIP
Threats	• Funding • Not been strategic in the deployment of grant resources • Sensitivities between LMR and 9-1-1 due to allocation of surplus 9-1-1 funds • Other vendors pre-P25 system and subscribers' loyalty agencies rely on consultants to address technology • Lacking technical expertise • Local stakeholders listen to vendors rather than technical experts • Vendor recommendations may not serve vision for interoperability • Lacking enforcement of public safety grade • Cost of service and devices • General distrust of state and federal solutions			

APPENDIX C: SCIP GOAL IMPLEMENTATION & MEASUREMENT

FINANCE COMMITTEE					
Goals	**Metrics for Success**	**Objectives**	**Action Plan**	**Timeline**	**Owner(s)**
Develop appropriate process and procedures for acquiring resources, administering processing payments using state and grant funds for enhancement, deployment, and operation of ISICS and a five-year financial plan to be reviewed every two years	• Process developed and implemented for acquiring resources • Process in place for administering and processing payments of state or grant funds • Development and administration of a five-year financial plan	• Develop and maintain annual fiscal processes which meet GAAP/GAAS requirements for ISICS Project	• Identify costs of operation and sustainment • Identify more resources or efficiencies to ensure the budget aligns with the Board's goals • Each committee, at the direction of the Board, will submit priorities to the Finance Committee, making sure they align with the budget process, to decide whether it is within the budget • Compare last few years of expenditures to project the five-year plan and continue to revise it on a two-year basis	Annually (by end of state fiscal year – June 30)	**Finance Committee,** Governance Committee
Develop and maintain appropriate process and procedures for acquiring resources, administering processing payments using state and grant funds for enhancement, deployment and operation of broadband data network and a five-year financial plan to be reviewed every two years	• Process developed and implemented for acquiring resources • Process in place for administering and processing payments of state or grant funds • Development and administration of a five-year financial plan	• Develop annual fiscal processes which meet GAAP/GAAS requirements for statewide data network	• Identify costs of operation and sustainment • Identify more resources or efficiencies to ensure the budget aligns with the Board's goals • Each committee, at the direction of the Board, will submit priorities to the Finance Committee, making sure they align with the budget process, to decide whether it is within the budget • Compare last few years of expenditures to project the five-year plan and continue to revise it on a two-year basis	Annually (by end of state fiscal year – June 30)	**Finance Committee,** Governance Committee

Develop and maintain an appropriate process and procedure for administering all financial assets consistent with national best practices in accounting and auditing	• Coordinate with other committees to identify their on-going financial needs • Procedure in place and working for budgeting, accounting, inventorying and auditing all financial assets of ISICSB whether state or grant funds	• Develop and maintain annual fiscal process which meet GAAP/GAAS and GASB for administering state and federal funds consistent with Code of Iowa and grant guidelines • Align with the grant process developed by the ISICSB	• Compliance with state and grant policies • Ensuring records are available for audits/oversight	Annually (by end of state fiscal year – June 30)	**Finance Committee,** Governance Committee

GOVERNANCE COMMITTEE					
Goals	**Metrics for Success**	**Objectives**	**Action Plan**	**Timeline**	**Owner(s)**
Develop and update appropriate governance through creation of policy and procedure statements for enhancement, deployment and operation of ISICS	• Review ISICSB policies within 60 days	• Develop policies as requested • Disseminate policies as needed	• Actively communicate with other committee chairs • Identify the policies needed • Dissemination of policies	60 days upon receipt	**Governance Committee**
Develop and update appropriate governance through creation of policy and procedure statements for enhancement, deployment and operation of a statewide broadband network	• Review ISICSB policies within 60 days	• Develop policies as requested • Disseminate policies as needed	• Actively communicate with other committee chairs • Identify the policies needed • Dissemination of policies	60 days upon receipt	**Governance Committee**
Establish and maintain a process to administer grant funds or communications assets	• Process is adopted by ISICSB	• Develop policies as requested • Disseminate policies as needed	• Maintain knowledge of other states best practices and lessons learned while being mindful of the IA grant process • Work with and support the ISICSB and relevant committees • Develop a process for the planning, drafting, and execution of grants	90 days	**Governance Committee**, agencies with per view over grants, Finance Committee

OPERATIONS COMMITTEE					
Goals	**Metrics for Success**	**Objectives**	**Action Plan**	**Timeline**	**Owner(s)**
At the end of five years 95% of all public safety radios have direct access to ISICS	• The number of public safety radios connected to ISICS	• Identify public safety agencies that need access • Define what direct access to ISICS means • Establish operational policies for ISICS access • Deliver recommendation/documentation to ISICSB	• Promote the goal to public safety agencies with the Outreach Committee • Request potential opportunities for funding public safety agencies from the Finance Committee • Work with the Outreach Committee to provide information on how public safety agencies can join ISICS	January 2025	**Operations Committee**, ISICSB, SWIC, Outreach Committee, RICs
Annually review existing ISICS policies and ISICS draft policies and make recommendations to Standards Working Group	• The number the ISICSB received from the committee vs the number delivered • Complete annual review	• Review and document recommendations to the Standards Working Group representative	• Operations representative receives draft policies or updated existing policies and then provides them to the Operations committee members for feedback • Collaborate with other committees and provide initial feedback during the drafting of policies prior to being submitted for review	Ongoing	**Operations Committee**, RICs
Align and update legacy plans, including system failures	• Completion of plan	• Identify, review and update existing communications plans and include a system failure plan • Deliver recommendation/ documentation to ISICSB	• Compile copies of all known legacy communications plans • Develop rubric for assessment • Identify the lines of authority for the plans • Make recommendations to the entity that has authority of the plan • Incorporating the RPCs in the ISICSB structure • Make a recommendation to the Governance Committee for the realignment of the plans	Ongoing	**Operations Committee**, responsible entities

OUTREACH COMMITTEE					
Goals	**Metrics for Success**	**Objectives**	**Action Plan**	**Timeline**	**Owner(s)**
To develop, update, and deliver outreach materials for use in making decisions to become a user of ISICS	• Final coverage mapping disseminated via social media messaging • Outreach process reviewed and updated by the end of the state fiscal year • Outreach materials routinely developed for ISICS to be distributed on a monthly basis	• As needed, identify if a plan needs to be developed to respond to changes with ISICS • Develop outreach materials specific to elected officials and targeted audiences	• Seek out feedback from various stakeholders and their respective agencies to determine if a plan needs to be developed • Identify key targeted audiences, tailor message for the specific groups • Monitor changes and progress and ensure our message is representative of the current status • Tailor messages specifically for state and local elected officials, boards and committees, containing statistics, cost-analysis, and benefits to public safety personnel	**Develop:** as needed, ongoing **Update:** Annually (initial update Jan. 2021)	**Outreach Committee**, User Group Committee, RICs
To develop, update, and deliver outreach materials for use in making decisions to become a user of the public safety broadband network	• Outreach process for the public safety broadband network reviewed and updated by the end of the state fiscal year • Outreach materials routinely developed for the public safety broadband network to be distributed on a monthly basis	• Leverage guidance and input from the Broadband sub-committee • As needed, identify if a plan needs to be developed to respond to changes with broadband • Develop Iowa-specific materials from broadband providers • Develop outreach materials specific to elected officials and targeted audiences	• Establish a communications process between the Outreach Committee and other committees to obtain more information for distribution • Seek board approval for any materials to be developed identifying public safety broadband connectivity in the State of Iowa • Tailor messages specifically for state and local elected officials, boards and committees, containing statistics, cost-analysis, and benefits to public safety personnel • Identify key legislators on funding committees and invite them to trainings and other communications-related events	**Develop:** as needed, ongoing **Update:** Annually (initial update Jan. 2023)	**Outreach Committee**, FirstNet/Broadband Subcommittee, FirstNet Vendors

Approach and educate elected officials and staff	• Outreach program development complete • Number of engagement/participants involved in outreach program • High-level informational one-page documents developed	• Develop an outreach plan • Engage association partners • Identify most pertinent information to include in high-level one-pagers for elected officials	• Tailor messages specifically for state and local elected officials, boards and committees, containing statistics, cost-analysis, and benefits to public safety personnel • Identify key legislators on funding committees and invite them to trainings and other communications-related events • Maintain an information repository with current status of emergency communications ecosystem	**Materials developed and approved by** May 2020 **Deliver:** July 2020 + Annually reviewed and updated	**Outreach Committee**, ISICSB, SWIC + Deputy SWIC, Finance Committee

TECHNOLOGY COMMITTEE					
Goals	**Metrics for Success**	**Objectives**	**Action Plan**	**Timeline**	**Owner(s)**
To lead technological solutions for voice interoperability	• Publish state specific findings • Coordinate with Standards Working Group to develop technical standards related to voice interoperability	• Publish standards for interoperable communications equipment • Publish interoperability programming guide	• Determining minimum and optimal ISICS system capabilities when it is fully built out • Maintain the minimum standards for subscriber equipment to operate on system • Maintain programming and configuration standards to include current and legacy technologies • Maintaining awareness of new and emerging communications technologies	Initial List and Programming Guide Published: June 2020, Ongoing	**Technology Committee**
To lead technological solutions for data interoperability	• Publish state specific findings • Coordinate with Standards Working Group to develop technical standards related to data interoperability	• Create minimum standards for interoperable communications equipment • Make recommendation to ISICSB to adopt standards	• Identify minimum and optimal broadband capabilities • Establish minimum technical rules for operational conduct • Develop a policy for bring your own device • Identify which devices public safety will use • Evaluating applications, data interoperability, and application interaction • Maintaining awareness of new and emerging data technologies and applications	Target Minimum Standards: September 2021, Ongoing	**Technology Committee**
Investigate voice and data convergence and differentiating the needs of public safety	• Publish staff studies on findings	• Investigate technology • Choose best course of action • Make recommendations	• Attend conferences • Keeping up on trade publications • Networking with others • Develop best practices • Increase information sharing efforts in simplified terms • Participating in standards groups • Explore broadband PTT application options	Initial Report: End of 2021, Ongoing	**Technology Committee**, Operations Committee, Governance Committee

TRAINING AND EXERCISE COMMITTEE					
Goals	**Metrics for Success**	**Objectives**	**Action Plan**	**Timeline**	**Owner(s)**
Develop, review, update, and provide standard essential training for interoperable communications across the various state regions	• Development of training materials • Number of people trained • Standards and training tracker database established and maintained	• Maintain and update guidelines defining standard core training • Embed communications training within existing state training institutions	• Define what standard core training courses would be • Develop lesson plans for those courses that do not already have them • Divide classes across the state for easier access	Materials developed: January 2022	**Training Committee**, RICs, Outreach Committee
Expand the statewide core group of trainers who would be able to teach necessary COMU positions classes and increase COMU awareness	• Increase number of trainers so that at least two COML classes can be scheduled per year • Number of people trained	• Create a COMU awareness outreach program for recruitment and dissemination of information through the Outreach Committee • Seek Train-the-Trainer classes	• Continue the partnership with ECD and increase regional Train-the-Trainer opportunities to increase cadre of instructors • Identify trainers in strategic regions throughout the state	Identify Trainers: January 2023 Develop trainer experience: January 2026	**Training Committee**, Outreach Committee
Develop a cost analysis of training to augment future budgetary planning	• Delivery of a cost analysis document	• Obtain training funding	• Research and apply for grant opportunities • Reduce the cost of travel to attend trainings • Provide coverage of trainee backfill expenses for agencies	Annual updates	**Training Committee**, Finance Committee
Increase the number of credentialed COMU personnel	• Increase the number of people on the credentialing list	• Increase opportunities to complete position task book • Increase regional training opportunities with the inclusion of an enhanced COMMEX program	• Minimize the costs of the initial training • Increase the number of communications related full-scale and tabletop exercises/trainings • Cover the expenses of currently credentialed person to provide opportunities • Coordinate training with the Homeland Security and Emergency Management Department State Training Officer	January 2023	**Training Committee**, RICs, HSEMD

USER GROUP COMMITTEE					
Goals	**Metrics for Success**	**Objectives**	**Action Plan**	**Timeline**	**Owner(s)**
Develop processes and vet the application process for access to the ISICS interoperable communications platform within state or grant resources.	• In five-ten years, 100% of eligible users have access to the ISICS platform • Decrease application process time relative to number of applications per user level	• Add efficiencies to application process • Determine resource needs for an objective evaluation of Level 3 and 4 resource users	• Create single point of coordination for all applications and necessary paperwork • Develop electronic repository for paperwork and workflow for all the paperwork • Identifying who has expertise for coverage needs for Level 3 and 4 users. System administrator • Revisit applicant review panel concept	As needed, ongoing	**User Group Committee**, technical liaison
Develop processes for guidance on broadband data interoperable communications platform within state or grant resources.	• Process developed • Number of users assisted, applied for and approved	• Identify and deploy process to assist in the application for broadband access	• Develop a process or certification for applicants for PSBN to confirm they are a true Public Safety entity (as needed) • Provide options of vendors and vendor information to applicants (as requested)	January 2023	**User Group Committee**, Technology Committee
Strengthen all RICs	• Increase in RIC user attendance, participation, and investment	• Travel to every county to conduct outreach to all stakeholders • Listen and accept feedback • Identify meeting frequency and appropriate tasks • Continue to solicit local input for consideration	• SWIC to visit every county in State over the next two years to continue outreach, assist with PSBN issues, and assess interest level in joining RICs • Identification of role and benefit of a strong RIC- possibly a white paper showcasing successes in Iowa • Encourage Outreach Committee to push out useful information to relevant associations • Encourage those involved in RIC to provide some reporting mechanism back to the full board • Create place where RICs can post information, ask questions, share resources. Establish RIC reporting process • Promote RIC as conduit for locals into ISICS board; a place for information to be exchanged between the board and the end users/local agencies	Ongoing, January 2022	**User Group Committee**, SWIC and Deputy SWIC, ISICSB, RIC Chairs and Vice Chairs, Outreach Committee

APPENDIX D: STATE INTEROPERABILITY MARKERS

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
Governance	1	**State-level governing body established (e.g., SIEC, SIGB).** Governance framework is in place to sustain all emergency communications	Governing body does not exist, or exists and role has not been formalized by legislative or executive actions	Governing body role established through an executive order	Governing body role established through a state law	
	2	**SIGB/SIEC participation.** Statewide governance body is comprised of members who represent all components of the emergency communications ecosystem.	Initial (1-2) Governance body participation includes: ☐Communications Champion/SWIC ☐LMR ☐Broadband/LTE ☐9-1-1 ☐Alerts, Warnings and Notifications	Defined (3-4) Governance body participation includes: ☒Communications Champion/SWIC ☒LMR ☒Broadband/LTE ☒9-1-1 ☐Alerts, Warnings and Notifications	Optimized (5) Governance body participation includes: ☐Communications Champion/SWIC ☐LMR ☐Broadband/LTE ☐9-1-1 ☐Alerts, Warnings and Notifications	
	3	**SWIC established.** Full-time SWIC is in place to promote broad and sustained participation in emergency communications.	SWIC does not exist	Full-time SWIC with collateral duties	Full-time SWIC established through executive order or state law	
	4	**SWIC Duty Percentage.** SWIC spends 100% of time on SWIC-focused job duties	SWIC spends >1, <50% of time on SWIC-focused job duties	SWIC spends >50, <90% of time on SWIC-focused job duties	SWIC spends >90% of time on SWIC-focused job duties	
	5	**SCIP refresh.** SCIP is a living document that continues to be executed in a timely manner. Updated SCIPs are reviewed and approved by SIGB/SIEC.	No SCIP OR SCIP older than 3 years	SCIP updated within last 2 years	SCIP updated in last 2 years and progress made on >50% of goals	
	6	**SCIP strategic goal percentage.** SCIP goals are primarily strategic to improve long term emergency	<50% are strategic goals in SCIP	>50%<90% are strategic goals in SCIP	>90% are strategic goals in SCIP	

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
		communications ecosystem (LMR, LTE, 911, A&W) and future technology transitions (5G, IoT, UAS, etc.). (Strategic and non-strategic goals are completely different; strategy -- path from here to the destination; it is unlike tactics which you can "touch"; cannot "touch" strategy)				
	7	**Integrated emergency communication grant coordination.** Designed to ensure state / territory is tracking and optimizing grant proposals, and there is strategic visibility how grant money is being spent.	No explicit approach or only informal emergency communications grant coordination between localities, agencies, SAA and/or the SWIC within a state / territory	SWIC and/or SIGB provides guidance to agencies and localities for emergency communications grant funding but does not review proposals or make recommendations	SWIC and/or SIGB provides guidance to agencies and localities for emergency communications grant funding and reviews grant proposals for alignment with the SCIP. SWIC and/or SIGB provides recommendations to the SAA	
	8	**Communications Unit process.** Communications Unit process present in state / territory to facilitate emergency communications capabilities. Check the boxes of which Communications positions are currently covered within your process: ☒COML ☒COMT ☐ITSL ☐RADO ☒INCM ☐INTD	No Communications Unit process at present	Communications Unit process planned or designed (but not implemented)	Communications Unit process implemented and active	Add more credentialing INTD and ITSL

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
		☐AUXCOM ☐TERT				
SOP/SOGs	9	**Interagency communication.** Established and applied interagency communications policies, procedures and guidelines.	Some interoperable communications SOPs/SOGs exist within the area and steps have been taken to institute these interoperability procedures among some agencies	Interoperable communications SOPs/SOGs are formalized and in use by agencies within the area. Despite minor issues, SOPs/SOGs are successfully used during responses and/or exercises	Interoperable communications SOPs/SOGs within the area are formalized and regularly reviewed. Additionally, NIMS procedures are well established among agencies and disciplines. All needed procedures are effectively utilized during responses and/or exercises.	
	10	**TICP (or equivalent) developed.** Tactical Interoperable Communications Plans (TICPs) established and periodically updated to include all public safety communications systems available	Regional or statewide TICP in place	Statewide or Regional TICP(s) updated within past 2-5 years	Statewide or Regional TICP(s) updated within past 2 years	No Statewide TICP, regional TICPs in place
	11	**Field Operations Guides (FOGs) developed.** FOGs established for a state or territory and periodically updated to include all public safety communications systems available	Regional or statewide FOG in place	Statewide or Regional FOG(s) updated within past 2-5 years	Statewide or Regional FOG(s) updated within past 2 years	
	12	**Alerts & Warnings.** State or Territory has Implemented an effective A&W program to include Policy, Procedures and Protocol measured through the following characteristics:	<49% of originating authorities have all of the four A&W characteristics	>50%<74% of originating authorities have all of the four A&W characteristics	>75%<100% of originating authorities have all of the four A&W characteristics	Need to follow up, good process with Amber Alerts, will provide additional information

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
		(1) Effective documentation process to inform and control message origination and distribution (2) Coordination of alerting plans and procedures with neighboring jurisdictions (3) Operators and alert originators receive periodic training (4) Message origination, distribution, and correction procedures in place				
Technology	13	**Radio programming.** Radios programmed for National/Federal, SLTT interoperability channels and channel nomenclature consistency across a state / territory.	<49% of radios are programed for interoperability and consistency	>50%<74% of radios are programed for interoperability and consistency	>75%<100% of radios are programed for interoperability and consistency	Standard is not followed for naming
	14	**Cybersecurity Assessment Awareness.** Cybersecurity assessment awareness. (Public safety communications networks are defined as covering: LMR, LTE, 911, and A&W)	Public safety communications network owners are aware of cybersecurity assessment availability and value (check yes or no for each option) ☒LMR ☒LTE ☐9-1-1/CAD ☐A&W	Initial plus, conducted assessment, conducted risk assessment. (check yes or no for each option) ☐LMR ☐LTE ☐9-1-1/CAD ☐A&W	Defined plus, Availability of Cyber Incident Response Plan (check yes or no for each option) ☐LMR ☐LTE ☐9-1-1/CAD ☐A&W	
	15	**NG911 implementation.** NG911 implementation underway to serve state / territory population.	Working to establish NG911 governance through state/territorial plan. • Developing GIS to be	More than 75% of PSAPs and Population Served have: • NG911 governance established through	More than 90% of PSAPs and Population Served have: • NG911 governance established through	

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
			able to support NG911 call routing. • Planning or implementing ESInet and Next Generation Core Services (NGCS). • Planning to or have updated PSAP equipment to handle basic NG911 service offerings.	state/territorial plan. • GIS developed and able to support NG911 call routing. • Planning or implementing ESInet and Next Generation Core Services (NGCS). • PSAP equipment updated to handle basic NG911 service offerings.	state/territorial plan. • GIS developed and supporting NG911 call routing. • Operational Emergency Services IP Network (ESInet)/Next Generation Core Services (NGCS). • PSAP equipment updated and handling basic NG911 service offerings.	
	16	**Data operability / interoperability.** Ability of agencies within a region to exchange data on demand, and needed, and as authorized. Examples of systems would be: - CAD to CAD - Chat - GIS - Critical Incident Management Tool (- Web EOC)	Agencies are able to share data only by email. Systems are not touching or talking.	Systems are able to touch but with limited capabilities. One-way information sharing.	Full system to system integration. Able to fully consume and manipulate data.	Can chat, have Web EOC, no CAD to CAD, working on deploying shared services
	17	**Future Technology/Organizational Learning.** SIEC/SIGB is tracking, evaluating, implementing future technology (checklist)	☒LMR to LTE Integration ☒5G ☐IoT (cameras) ☐UAV (Smart Vehicles) ☒UAS (Drones) ☒Body Cameras ☒Public Alerting Software ☐Sensors ☐Autonomous Vehicles ☒MCPTT Apps ☐Wearables			

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
			☐Machine Learning/Artificial Intelligence/Analytics ☒Geolocation ☒GIS ☐Situational Awareness Apps-common operating picture applications (i.e. Force Tracking, Chat Applications, Common Operations Applications) ☐HetNets/Mesh Networks/Software Defined Networks ☐Acoustic Signaling (Shot Spotter) ☒ESInet ☐'The Next Narrowbanding' ☐Smart Cities			
Training & Exercises	**18**	**Communications Exercise objectives.** Specific emergency communications objectives are incorporated into applicable exercises Federal / state / territory-wide	Regular engagement with State Training and Exercise coordinators	Promote addition of emergency communications objectives in state/county/regional level exercises (target Emergency Management community). Including providing tools, templates, etc.	Initial and Defined plus mechanism in place to incorporate and measure communications objectives into state/county/regional level exercises	
	19	**Trained Communications Unit responders.** Communications Unit personnel are listed in a tracking database (e.g. NQS One Responder, CASM, etc.) and available for assignment/response.	<49% of public safety agencies within a state / territory have access to Communications Unit personnel who are listed in a tracking database and available for assignment/response	>50%<74% of public safety agencies within a state / territory have access to Communications Unit personnel who are listed in a tracking database and available for assignment/response	>75%<100% of public safety agencies within a state / territory have access to Communications Unit personnel who are listed in a tracking database and available for assignment/response	
Usage	**20**	**Communications Usage Best Practices/Lessons Learned.** Capability exists within jurisdiction to share best practices/lessons learned (positive and/or negative) across all lanes of the Interoperability Continuum	Best practices/lessons learned intake mechanism established. Create Communications AAR template to collect best practices	Initial plus review mechanism established	Defined plus distribution mechanism established	

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
		related to all components of the emergency communications ecosystem				
Outreach	21	**WPS subscription.** WPS penetration across state / territory compared to maximum potential	<9% subscription rate of potentially eligible participants who signed up WPS across a state / territory	>10%<49% subscription rate of potentially eligible participants who signed up for WPS a state / territory	>50%<100% subscription rate of potentially eligible participants who signed up for WPS across a state / territory	
	22	**Outreach.** Outreach mechanisms in place to share information across state	SWIC electronic communication (e.g. SWIC email, newsletter, social media, etc.) distributed to relevant stakeholders on regular basis	Initial plus web presence containing information about emergency communications interoperability, SCIP, trainings, etc.	Defined plus in-person/webinar conference/meeting attendance strategy and resources to execute	
Lifecycle	23	**Sustainment assessment.** Identify interoperable component system sustainment needs;(e.g. communications infrastructure, equipment, programs, management) that need sustainment funding. (Component systems are emergency communications elements that are necessary to enable communications, whether owned or leased - state systems only)	< 49% of component systems assessed to identify sustainment needs	>50%<74% of component systems assessed to identify sustainment needs	>75%<100% of component systems assessed to identify sustainment needs	

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
	24	**Risk identification.** Identify risks for emergency communications components. (Component systems are emergency communications elements that are necessary to enable communications, whether owned or leased. Risk Identification and planning is in line with having a communications COOP Plan)	< 49% of component systems have risks assessed through a standard template for all technology components	>50%<74% of component systems have risks assessed through a standard template for all technology components	>75%<100% of component systems have risks assessed through a standard template for all technology components	No component risk assessment for LMR
All Lanes	25	**Cross Border / Interstate (State to State) Emergency Communications.** Established capabilities to enable emergency communications across all components of the ecosystem.	Initial: Little to no established: ☒Governance ☒SOPs/MOUs ☒Technology ☒Training/Exercises ☒Usage	Defined: Documented/established across some lanes of the Continuum: ☐Governance ☐SOPs/MOUs ☐Technology ☐Training/Exercises ☐Usage	Optimized: Documented/established across all lanes of the Continuum: ☐Governance ☐SOPs/MOUs ☐Technology ☐Training/Exercises ☐Usage	