



ILLINOIS STATEWIDE COMMUNICATION INTEROPERABILITY PLAN



September 2022

Developed by the Illinois Statewide Interoperability Executive Committee with
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LETTER FROM THE STATEWIDE INTEROPERABILITY COORDINATOR

Greetings,

As the Statewide Interoperability Coordinator (SWIC) for Illinois, I am pleased to present to you the 2022 Illinois Statewide Communication Interoperability Plan (SCIP). The SCIP represents the state's continued commitment to improving emergency communications interoperability and supporting the public safety practitioners throughout the State. In addition, this update meets the requirement of the current U.S. Department of Homeland Security grant guidelines.

Representatives from the Illinois SIEC and public safety agencies collaborated to update the SCIP with actionable and measurable goals and objectives that have champions identified to ensure completion. These goals and objectives focus on Governance, Technology and Cybersecurity, and Funding. They are designed to support our state in planning for emerging technologies and navigating the ever-changing emergency communications landscape. They also incorporate the SAFECOM/National Council of SWICs (NCSWIC) State Interoperability Markers which describe Illinois' level of interoperability maturity by measuring progress against 25 markers.

As we continue 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 the SCIP and become a nationwide model for statewide interoperability.

Sincerely,



Matthew Miller
Illinois Statewide Interoperability Coordinator



Chris Miller
Chair, Statewide Interoperability Executive Committee

INTRODUCTION



The SCIP is a one-to-three-year strategic planning document that contains the following components:

- **Introduction** – Provides the context necessary to understand what the SCIP is and how it was developed. It also provides an overview of the current emergency communications landscape.
- **Vision and Mission** – Articulates Illinois' vision and mission for improving emergency and public safety communications interoperability over the next one-to-three-years.
- **Governance** – Describes the current governance mechanisms for communications interoperability within Illinois as well as successes, challenges, and priorities for improving it. The SCIP is a guiding document and does not create any authority or direction over any state or local systems or agencies.
- **Technology and Cybersecurity** – Outlines public safety technology and operations needed to maintain and enhance interoperability across the emergency communications ecosystem.
- **Funding** – Describes the funding sources and allocations that support interoperable communications capabilities within Illinois along with methods and strategies for funding sustainment and enhancement to meet long-term goals.
- **Implementation Plan** – Describes Illinois' plan to implement, maintain, and update the SCIP to enable continued evolution of and progress toward the State's interoperability goals.

The Emergency Communications Ecosystem consists of many inter-related components and functions, including communications for incident response operations, notifications, alerts, and

warnings, requests for assistance and reporting, and public information exchange. The primary functions are depicted in the 2019 National Emergency Communications Plan.¹

Interoperability and Emergency Communications Overview

The Interoperability Continuum, developed by the Department of Homeland Security’s SAFECOM program and shown in Figure 1, serves as a framework to address challenges and continue improving operable/interoperable and public safety communications. It is designed to assist public safety agencies and policy makers with planning and implementing interoperability solutions for communications across technologies.

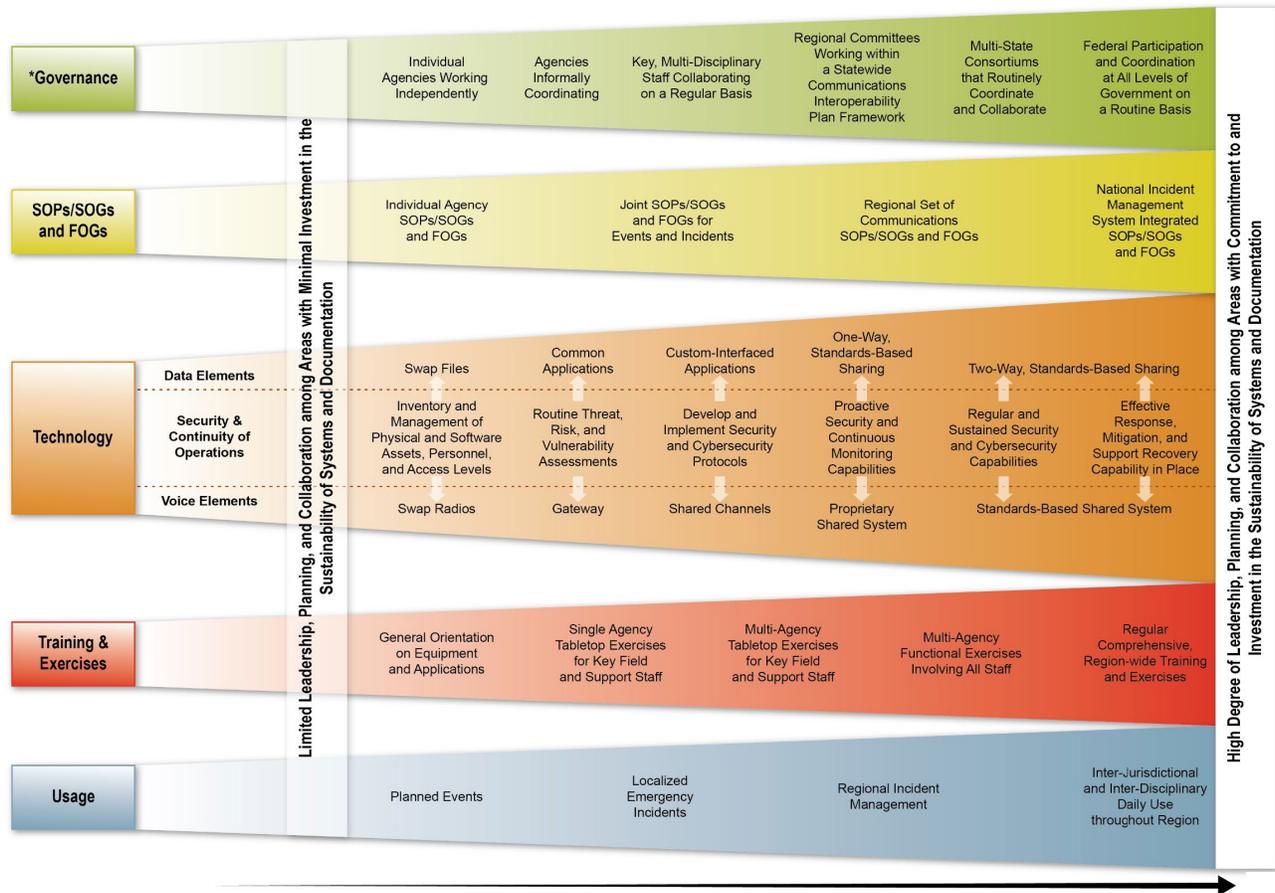


Figure 1: Interoperability Continuum

Interoperability is the ability of emergency response providers and relevant government officials to communicate across jurisdictions, disciplines, and levels of government as needed and as authorized. Reliable, timely communications among public safety responders and between public safety agencies and citizens is critical to effectively carry out public safety missions, and in many cases, saving lives.

Traditional voice capabilities, such as land mobile radio (LMR) and landline 9-1-1 services have long been and continue to be critical tools for communications. However, the advancement of

¹ [2019 National Emergency Communications Plan](#)

internet protocol-based technologies in public safety has increased the type and amount of information responders receive, the tools they communicate with, and complexity of new and interdependent systems. Emerging technologies increase the need for coordination across public safety disciplines, communications functions, and levels of government to ensure emergency communications capabilities are interoperable, reliable, and secure.

An example of this evolution is the transition of public-safety answering points (PSAPs) to Next Generation 9-1-1 (NG9-1-1) technology that will enhance sharing of critical information in real-time using multimedia—such as pictures, video, and text – among citizens, PSAP operators, dispatch, and first responders. While potential benefits of NG9-1-1 are tremendous, implementation challenges remain. Necessary tasks to fully realize these benefits include interfacing disparate systems, developing training and standard operating procedures (SOPs) and ensuring information security.

VISION AND MISSION

This section describes Illinois’ vision and mission for improving emergency and public safety communications interoperability:

Vision:

Illinois will have a continuing and sustainable emergency communications environment in which all public safety/public service agencies will be able to seamlessly communicate across disciplines and jurisdictions when necessary and appropriate.

Mission:

Illinois’ public safety/public service responders and officials will work together to develop, implement, and sustain a mission critical communication ecosystem that will satisfy the needs of the user community.

GOVERNANCE

Illinois’ interoperable governance body is the Statewide Interoperable Executive Committee (SIEC). It is composed of the Illinois Fire Chiefs Association, Illinois Sheriffs’ Association, Illinois State Police, Illinois Emergency Management Agency, Department of Public Health, Secretary of State Police, and the Department of Transportation. The SIEC has 3 standing subcommittees: Executive Subcommittee, Technology Subcommittee, and the Governance Subcommittee.

Illinois is reviewing the authority of the SIEC and desires to have the authority of the SIEC more well-defined. This would help to increase the legitimacy of the SIEC. Currently 9-1-1, alerts and warnings, broadband, and the STARCOM21 oversight committee do not have much involvement in the SIEC. STARCOM21 and 9-1-1 currently have their own governance bodies, while broadband and alerts and warnings do not. It would be advantageous for Illinois to incorporate the listed areas into the SIEC in some way to ensure that all the components of interoperability are represented. In addition,

Illinois would like to formally add the Illinois Department of Innovation and Technology (DoIT) into the SIEC. To accomplish this legislation would have to be updated.

During the SCIP workshop, discussions were had about the lack of a legislative champion for public safety communications related issues. Having legislators in support of SIEC goals and initiatives would greatly expand the impact that the SIEC could make in interoperable communications. Another major focus of workshop discussions was increasing education and outreach. One way to do this is to establish the SIEC website as the source to find emergency communications related information. The website would include standards and best practices and information on emerging broadband technologies.

Illinois’ governance structure is depicted in Figure 2.

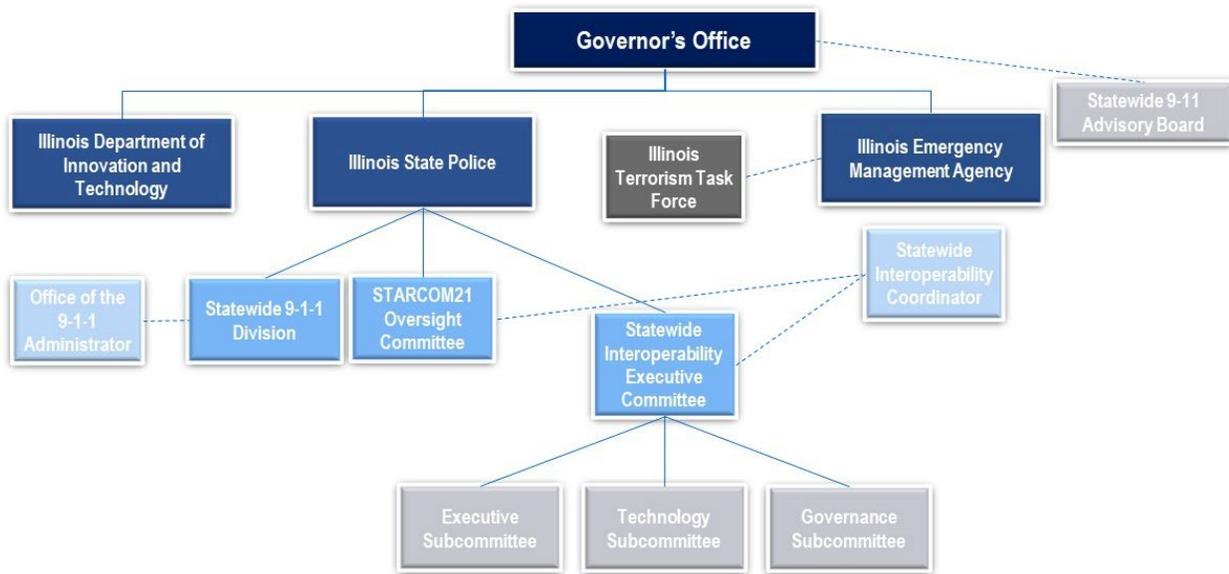


Figure 2: Illinois Governance Structure

The following table outlines goals and objectives related to Governance:

Governance	
Goal	Objectives
1. Expand representation of the SIEC to include the emergency communications ecosystem	1.1 Identify current membership and the gaps
	1.2 Add representation of DoIT into SIEC
	1.3 Identify if and how 9-1-1, alerts and warnings, LMR, broadband, and STARCOM21 oversight can be incorporated into SIEC
2. Identify and establish legislative champions for public safety communications efforts	2.1 Create concise outreach message to engage identified legislative champions
	2.2 Conduct outreach to legislative, local government entities, and stakeholder associations
3. Align governance of emergency communications to include 911,	3.1 Review state statutes pertaining to public safety emergency communications for potential alignment
	3.2 Develop recommendations for statute revisions

Goal	Objectives
cybersecurity, STARCOM21 oversight, LMR, & A&W	3.3 Find opportunities for cross membership and coordination between different emergency communications/public safety entities
	3.4 Identify recommendations for increased authority for SIEC
4. Increase education and outreach of the SIEC to stakeholders	4.1 Develop an outreach and education plan for the SIEC (as funding allows)
	4.2 Establish SIEC website as information clearing house for emergency communications, to include standards and best practices
	4.3 Include information on SIEC website about broadband emerging technology and services

TECHNOLOGY AND CYBERSECURITY

Land Mobile Radio

STARCOM21 is Illinois' statewide public radio system. The SIEC and the SWIC want to ensure that there are two STARCOM21 radios per county. One would be for the county's major PSAP and the other would go to the county's Emergency Management Agency (EMA). This is discussed further in the funding section of this document. Going forward it is a priority for the Illinois SIEC to create a policy defining the criteria of a cache radio. Another point of discussion during the SCIP workshop was the need for an easy-to-follow template to be created by the SIEC to aid counties in updating their Tactical Interoperable Communications Plan (TICP)/Communications Survey and Mapping (CASM) tool. Maintaining updated governance documents and policies was identified as a need. Specifically mentioned was the Threat and Hazard Identification and Risk Assessment (THIRA) which will require the SIEC and ISPC to coordinate and collaborate. After Action Reports (AARs) were identified as beneficial sources to use to update governance documents and policies.

9-1-1/Next Generation 9-1-1

The Statewide 9-1-1 Director and the SWIC requested cybersecurity assessments of five of the state's Public Safety Answering Points (PSAPs). It is a priority for the state to utilize those results to improve the cybersecurity posture of PSAPs statewide. To accomplish this the SIEC and 9-1-1 governance bodies will need to coordinate. One definitive way to improve the cybersecurity posture of the state PSAPs is to increase the cybersecurity training for PSAP personnel. The other main priority is for coordination to occur between the SIEC and 9-1-1 governance bodies for continuity of operations planning.

Broadband

The main broadband priority identified during the SCIP workshop is information sharing. Strengthening and maintaining a relationship with broadband providers is necessary for the SIEC to be informed of broadband issues statewide. The broadband subcommittee could make a huge impact in ensuring the SIEC is informed on broadband related issues. It is also important for the SIEC to be aware of emerging issues related to broadband. The SIEC encourages the development of a statewide consistent broadband app to make communication more efficient throughout the emergency communications ecosystem.

Alerts and Warnings

The Emergency Alert System (EAS) is utilized during emergencies that threaten property or lives in Illinois. The system relies on IEMA, Illinois cable television operators, and Illinois radio and television broadcasters to get alert messages out to the public. IPAWS is a system that can send alerts to mobile phones. About 1/3 of the counties in Illinois have access to IPAWS. Identifying funding sources at the local level would allow for IPAWS access to be expanded. In addition, it would be beneficial for a best practice guide to be developed to aid in the use of IPAWS.

Cybersecurity

Cybersecurity is becoming an increasingly important topic of discussion nationwide. It is no different in Illinois. It is important for Illinois emergency communications leadership to be aware of their cybersecurity risks to ensure the state is protected as much as possible. Cybersecurity should be incorporated more into the SIEC. In addition, Illinois should request an Information Technology Service Unit Leader (ITSL) Technical Assistance (TA) to aid in the expansion of the information technology service unit leader program.

Technology and cybersecurity goals and objectives include the following:

Technology and Cybersecurity	
Goal	Objectives
5. Review and enhance governance documents and policies of the SIEC	5.1 Identify current governance documents and policies
	5.2 Develop timeline for regular review of governance documents and policies
	5.3 Review communications focused after action reports (AARs) to enhance governance documents and policies
	5.4 SIEC develops an approachable template posted on SIEC website for counties to utilize for TICP/CASM update
	5.5 Create policy on what is considered a cache radio
6. Increase coordination between SIEC and interagency strategic planning cell (ISPC) in updating the Threats and Hazards Identification and Risk Assessment (THIRA)	6.1 Review current THIRA and recommend adjustments
	6.2 Invite ISPC to SIEC meetings
7. Ensure the SIEC is educated on broadband emerging technology/services	7.1 Engage appropriate broadband providers to regularly brief SIEC
	7.2 Identify other resources for education on emerging broadband issues
8. Establish coordination between SIEC and 9-1-1 governance bodies in continuity of operations planning	8.1 Assist 9-1-1 governance bodies in development of COOP plan that covers entire PSAP operations
9. Establish coordination between SIEC and 9-1-1 governance bodies in PSAP cybersecurity initiatives	9.1 Assist 9-1-1 governance bodies in development of PSAP cybersecurity initiatives
10. Increase IPAWS participation	10.1 Develop a statewide and vendor neutral best practices guide for IPAWS
	10.2 Peer review of existing best practices guide draft

Goal	Objectives
	10.3 Identify state funding to provide IPAWS at county level
11. Expand information technology service unit leader (ITSL) program across Illinois in coordination with DoIT	11.1 Request CISA ITSL TA

FUNDING

Currently, Illinois has a lack of funding for the SIEC, replacement infrastructure, and interoperability upgrades and new technologies. The SIEC funds would be used to update the SIEC website. The SIEC website would include information about available grant funding, among other relevant information regarding interoperable emergency communications. The SIEC website would serve as the main place to find emergency communications information, so having the funding to maintain an up-to-date website is crucial.

Other major funding priorities are funding for STARCOM21 radios, IPAWS at the county level, and Statewide Interoperability template (SWIT) rollout programming. To fund these priorities, it is extremely important for Illinois to find a variety of federal and nongovernmental funding sources. In addition, it is necessary for Illinois to prioritize objectives in order to use the available funding in the most beneficial way.

Funding goals and objectives include the following:

Funding	
Goal	Objectives
12. Identify and secure sustainable funding sources to support current and emerging interoperable communications efforts	12.1 Establish emergency communications funding needs
	12.2 Identify legislative champion to lobby for sustainable emergency communications funding
	12.3 Identify federal and nongovernmental funding sources
	12.4 Identify sustainable funding for 2 STARCOM21 radios per county (1 is for major PSAP and the other is for county EMA), current operating expenses STARCOM21, and SWIT rollout programming
13. Expand understanding of emergency communications grant opportunities	13.1 Request CISA grant funding for emergency communications webinar TA
	13.2 Include grant opportunities on SIEC website

IMPLEMENTATION PLAN

Each goal and its associated objectives have a timeline with a target completion date, and one or multiple owners that will be responsible for overseeing and coordinating its completion. Accomplishing goals and objectives will require the support and cooperation from numerous individuals, groups, or agencies, and will be added as formal agenda items for review during regular governance body meetings. The Cybersecurity and Infrastructure Security Agency's (CISA) Interoperable Communications Technical Assistance Program (ICTAP) has a catalog² of technical assistance (TA) available to assist with the implementation of the SCIP. TA requests are to be coordinated through the SWIC.

Based on the discussions during the SCIP Workshop, CISA recommends the following TAs to support Illinois' SCIP goals:

- Grant funding webinar
- Information Technology Service Unit Leader (ITSL)
- Governance Documentation Review, Assessment, and Development (GOV-DOC)
- Tactical Interoperable Communication Plan (TICP) Development/Implementation Workshop

Illinois' implementation plan is shown in the table below.

Goals	Objectives	Owners	Completion Date
1. Expand representation of the SIEC to include the emergency communications ecosystem	1.1 Identify current membership and the gaps	SIEC governance subcommittee	January 2023
	1.2 Add representation of DoIT into SIEC		June 2023
	1.3 Identify if and how 9-1-1, alerts and warnings, LMR, broadband, and STARCOM21 oversight can be incorporated into SIEC		June 2023
2. Identify and establish legislative champions for public safety communications efforts	2.1 Create concise outreach message to engage identified legislative champions	SWIC and SIEC Chair	September 2023
	2.2 Conduct outreach to legislative, local government entities, and stakeholder associations		Ongoing
3. Align governance of emergency communications to include 911,	3.1 Review state statutes pertaining to public safety emergency communications for potential alignment		
	3.2 Develop recommendations for statute revisions		

² [Emergency Communications Technical Assistance Planning Guide](#)

Goals	Objectives	Owners	Completion Date
cybersecurity, STARCOM21 oversight, LMR, & A&W	3.3 Find opportunities for cross membership and coordination between different emergency communications/public safety entities	SWIC and SIEC Governance Subcommittee	September 2023
	3.4 Identify recommendations for increased authority for SIEC		
4. Increase education and outreach of the SIEC to stakeholders	4.1 Develop an outreach and education plan for the SIEC (as funding allows)	SWIC, COMMEC Coordinator, and SIEC	September 2024
	4.2 Establish SIEC website as information clearing house for emergency communications, to include standards and best practices		
	4.3 Include information on SIEC website about broadband emerging technology and services		
5. Review and enhance governance documents and policies of the SIEC	5.1 Identify current governance documents and policies	SIEC governance subcommittee and SWIC	March 2023
	5.2 Develop timeline for regular review of governance documents and policies		March 2023
	5.3 Review communications focused after action reports (AARs) to enhance governance documents and policies		Ongoing
	5.4 SIEC develops an approachable template posted on SIEC website for counties to utilize for TICP/CASM update		March 2023
	5.5 Create policy on what is considered a cache radio		March 2023
6. Increase coordination between SIEC and interagency strategic planning cell (ISPC) in updating the Threats and Hazards Identification and Risk Assessment (THIRA)	6.1 Review current THIRA and recommend adjustments	SWIC office	May 2023
	6.2 Invite ISPC to SIEC meetings		
7. Ensure the SIEC is educated on broadband emerging technology/services	7.1 Engage appropriate broadband providers to regularly brief SIEC	SIEC Broadband liaison and SWIC	Ongoing
	7.2 Identify other resources for education on emerging broadband issues		
8. Establish coordination between SIEC and 9-1-1 governance bodies in continuity of operations planning	8.1 Assist 9-1-1 governance bodies in development of COOP plan that covers entire PSAP operations	SIEC Governance Subcommittee	March 2024
9. Establish coordination between SIEC and 9-1-1 governance bodies in PSAP cybersecurity initiatives	9.1 Assist 9-1-1 governance bodies in development of PSAP cybersecurity initiatives	DoIT and SWIC	Ongoing

Goals	Objectives	Owners	Completion Date
10. Increase IPAWS participation	10.1 Develop a statewide and vendor neutral best practices guide for IPAWS	SWIC office	September 2023
	10.2 Peer review of existing best practices guide draft		
	10.3 Identify state funding to provide IPAWS at county level		
11. Expand information technology service unit leader (ITSL) program across Illinois in coordination with DoIT	11.1 Request CISA ITSL TA	SWIC	March 2023
12. Identify and secure sustainable funding sources to support current and emerging interoperable communications efforts	12.1 Establish emergency communications funding needs	SIEC Chair, SWIC, and SIEC Governance Subcommittee	Ongoing
	12.2 Identify legislative champion to lobby for sustainable emergency communications funding		
	12.3 Identify federal and nongovernmental funding sources		
	12.4 Identify sustainable funding for 2 STARCOM21 radios per county (1 is for major PSAP and the other is for county EMA), current operating expenses STARCOM21, and SWIT rollout programing		
13. Expand understanding of emergency communications grant opportunities	13.1 Request CISA grant funding for emergency communications webinar TA	SWIC	March 2023
	13.2 Include grant opportunities on SIEC website		

APPENDIX A: STATE MARKERS

In 2019, CISA supported States and Territories in establishing an initial picture of interoperability nationwide by measuring progress against 25 markers. These markers describe a State or Territory's level of interoperability maturity. Below is Illinois' assessment of their progress against the markers.

Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
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: <input type="checkbox"/> Communications Champion/SWIC <input type="checkbox"/> LMR <input type="checkbox"/> Broadband/LTE <input type="checkbox"/> 9-1-1 <input type="checkbox"/> Alerts, Warnings and Notifications	Defined (3-4) Governance body participation includes: <input checked="" type="checkbox"/> Communications Champion/SWIC <input checked="" type="checkbox"/> LMR <input checked="" type="checkbox"/> Broadband/LTE <input type="checkbox"/> 9-1-1 <input checked="" type="checkbox"/> Alerts, Warnings and Notifications	Optimized (5) Governance body participation includes: <input type="checkbox"/> Communications Champion/SWIC <input type="checkbox"/> LMR <input type="checkbox"/> Broadband/LTE <input type="checkbox"/> 9-1-1 <input type="checkbox"/> 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 communications ecosystem (LMR, LTE, 9-1-1, 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)	<50% are strategic goals in SCIP	>50%<90% are strategic goals in SCIP	>90% are strategic goals in SCIP

Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
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: <input checked="" type="checkbox"/> COML <input checked="" type="checkbox"/> COMT <input checked="" type="checkbox"/> ITSL <input checked="" type="checkbox"/> RADO <input type="checkbox"/> INCM <input type="checkbox"/> INTD <input checked="" type="checkbox"/> AUXCOM <input checked="" type="checkbox"/> TERT	No Communications Unit process at present	Communications Unit process planned or designed (but not implemented)	Communications Unit process implemented and active
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
11	Field Operations Guides (FOGs) developed. FOGs established for a state or territory and	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

Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
	periodically updated to include all public safety communications systems available			
12	Alerts & Warnings. State or Territory has Implemented an effective A&W program to include Policy, Procedures and Protocol measured through the following characteristics: (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	<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
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
14	Cybersecurity Assessment Awareness. Cybersecurity assessment awareness. (Public safety communications networks are defined as covering: LMR, LTE, 9-1-1, and A&W)	Public safety communications network owners are aware of cybersecurity assessment availability and value (check yes or no for each option) <input type="checkbox"/> LMR <input type="checkbox"/> LTE <input type="checkbox"/> 9-1-1/CAD <input type="checkbox"/> A&W	Initial plus, conducted assessment, conducted risk assessment. (Check yes or no for each option) <input checked="" type="checkbox"/> LMR <input checked="" type="checkbox"/> LTE <input checked="" type="checkbox"/> 9-1-1/CAD <input type="checkbox"/> A&W	Defined plus, Availability of Cyber Incident Response Plan (check yes or no for each option) <input type="checkbox"/> LMR <input type="checkbox"/> LTE <input type="checkbox"/> 9-1-1/CAD <input type="checkbox"/> A&W
15	NG9-1-1 implementation. NG9-1-1 implementation underway to serve state / territory population.	Working to establish NG9-1-1 governance through state/territorial plan. <ul style="list-style-type: none">• Developing GIS to be able to support NG9-1-1 call routing.• Planning or implementing ESInet and Next Generation Core Services (NGCS).• Planning to or have updated PSAP equipment to handle	More than 75% of PSAPs and Population Served have: <ul style="list-style-type: none">• NG9-1-1 governance established through state/territorial plan.• GIS developed and able to support NG9-1-1 call routing.• Planning or implementing ESInet and Next Generation Core Services (NGCS).	More than 90% of PSAPs and Population Served have: <ul style="list-style-type: none">• NG9-1-1 governance established through state/territorial plan.• GIS developed and supporting NG9-1-1 call routing.• Operational Emergency Services IP Network

Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
		basic NG9-1-1 service offerings.	<ul style="list-style-type: none"> PSAP equipment updated to handle basic NG9-1-1 service offerings. 	(ESInet)/Next Generation Core Services (NGCS). <ul style="list-style-type: none"> PSAP equipment updated and handling basic NG9-1-1 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: <ul style="list-style-type: none"> - 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.
17	Future Technology/Organizational Learning. SIEC/SIGB is tracking, evaluating, implementing future technology (checklist)	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> LMR to LTE Integration <input checked="" type="checkbox"/> 5G <input checked="" type="checkbox"/> IoT (cameras) <input type="checkbox"/> UAV (Smart Vehicles) <input checked="" type="checkbox"/> UAS (Drones) <input type="checkbox"/> Body Cameras <input checked="" type="checkbox"/> Public Alerting Software <input type="checkbox"/> Sensors <input type="checkbox"/> Autonomous Vehicles <input checked="" type="checkbox"/> MCPTT Apps <input type="checkbox"/> Wearables <input type="checkbox"/> Machine Learning/Artificial Intelligence/Analytics <input checked="" type="checkbox"/> Geolocation <input checked="" type="checkbox"/> GIS <input checked="" type="checkbox"/> Situational Awareness App-common operating picture applications (i.e., Force Tracking) <input type="checkbox"/> HetNets/Mesh Networks/Software Defined Networks <input checked="" type="checkbox"/> Acoustic Signaling (Shot Spotter) 		

Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
		<input checked="" type="checkbox"/> ESInets <input type="checkbox"/> 'The Next Narrowbanding' <input type="checkbox"/> Smart Cities		
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
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 related to all components of the emergency communications ecosystem	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
21	Wireless Priority Service (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
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	< 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

Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
	necessary to enable communications, whether owned or leased - state systems only)			
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
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: <input type="checkbox"/> Governance <input type="checkbox"/> SOPs/MOUs <input type="checkbox"/> Technology <input type="checkbox"/> Training/Exercises <input type="checkbox"/> Usage	Defined: Documented/established across some lanes of the Continuum: <input checked="" type="checkbox"/> Governance <input checked="" type="checkbox"/> SOPs/MOUs <input checked="" type="checkbox"/> Technology <input type="checkbox"/> Training/Exercises <input type="checkbox"/> Usage	Optimized: Documented/established across all lanes of the Continuum: <input type="checkbox"/> Governance <input type="checkbox"/> SOPs/MOUs <input type="checkbox"/> Technology <input type="checkbox"/> Training/Exercises <input type="checkbox"/> Usage

APPENDIX B: ACRONYMS

Acronym	Definition
AAR	After-Action Report
A&W	Alerts and Warnings
CASM	Communication Assets Survey and Mapping
CISA	Cybersecurity and Infrastructure Security Agency
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit Program
COOP	Continuity of Operations Plan
DHS	Department of Homeland Security
DoIT	Department of Innovation and Technology
EAS	Emergency Alert System
ESInet	Emergency Services Internal Protocol Network
FOG	Field Operations Guide
GIS	Geospatial Information System
ICTAP	Interoperable Communications Technical Assistance Program
IEMA	Illinois Emergency Management Agency
INCM	Incident Communications Center Manager
INTD	Incident Tactical Dispatcher
IP	Internet Protocol
IPAWS	Integrated Public Alert and Warnings System
ISPC	Interagency Strategic Planning Cell
ITSL	Information Technology Service Unit Leader
LMR	Land Mobile Radio
MHz	Megahertz
MOU	Memorandum of Understanding
NCSWIC	National Council of SWICs
NECP	National Emergency Communications Plan
NG9-1-1	Next Generation 9-1-1
PSAP	Public Safety Answering Point
RADO	Radio Operator
SCIP	Statewide Communication Interoperability Plan
SOP	Standard Operating Procedure
STARCOM21	State Radio Communications for the 21 st Century
SWIC	Statewide Interoperability Coordinator
SWIT	Statewide Interoperability Template
TA	Technical Assistance

Acronym	Definition
TERT	Telecommunications Emergency Response Team
THIRA	Threats and Hazards Identification and Risk Assessment
TICP	Tactical Interoperable Communications Plan
WPS	Wireless Priority Service
