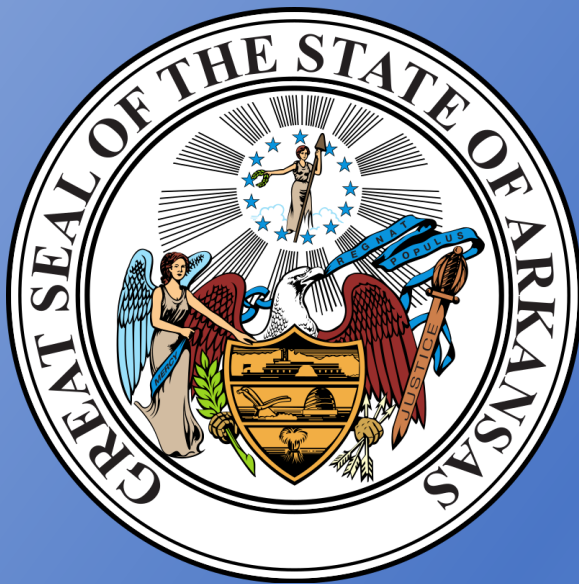


# ARKANSAS



## STATEWIDE COMMUNICATION INTEROPERABILITY PLAN

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# TABLE OF CONTENTS

**Letter from the Statewide Interoperability Coordinator ..... 2**

**Introduction ..... 3**

    Interoperability and Emergency Communications Overview..... 4

**Vision and Mission..... 5**

**Governance ..... 5**

**Technology and Cybersecurity..... 7**

    Land Mobile Radio ..... 7

    911 ..... 7

    Broadband ..... 7

    Alerts and Warnings..... 7

    Cybersecurity ..... 8

**Funding..... 9**

**Implementation Plan ..... 10**

**Appendix A: State Markers ..... 13**

**Appendix B: Acronyms ..... 17**



## LETTER FROM THE STATEWIDE INTEROPERABILITY COORDINATOR

Greetings,

As the Statewide Interoperability Coordinator (SWIC) for Arkansas, I am pleased to present to you the 2023 Arkansas Statewide Communication Interoperability Plan (SCIP). The SCIP represents our state's continued commitment to improving emergency communications interoperability and supporting public safety practitioners. In addition, this update meets the requirement of the current United States (US) Department of Homeland Security (DHS) grant guidelines.

Representatives from across Arkansas 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 Arkansas' 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,

A handwritten signature in blue ink, appearing to read "P. Rubow".

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Penny Rubow  
Arkansas Statewide Interoperability Coordinator  
Arkansas Department of Emergency Management



## 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 Arkansas’ 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 Arkansas 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 Arkansas along with methods and strategies for funding sustainment and enhancement to meet long-term goals.
- **Implementation Plan** – Describes Arkansas’ 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 and alerts and



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

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.<sup>2</sup> It is designed to assist public safety agencies and policy makers with planning and implementing interoperability solutions for communications across technologies.

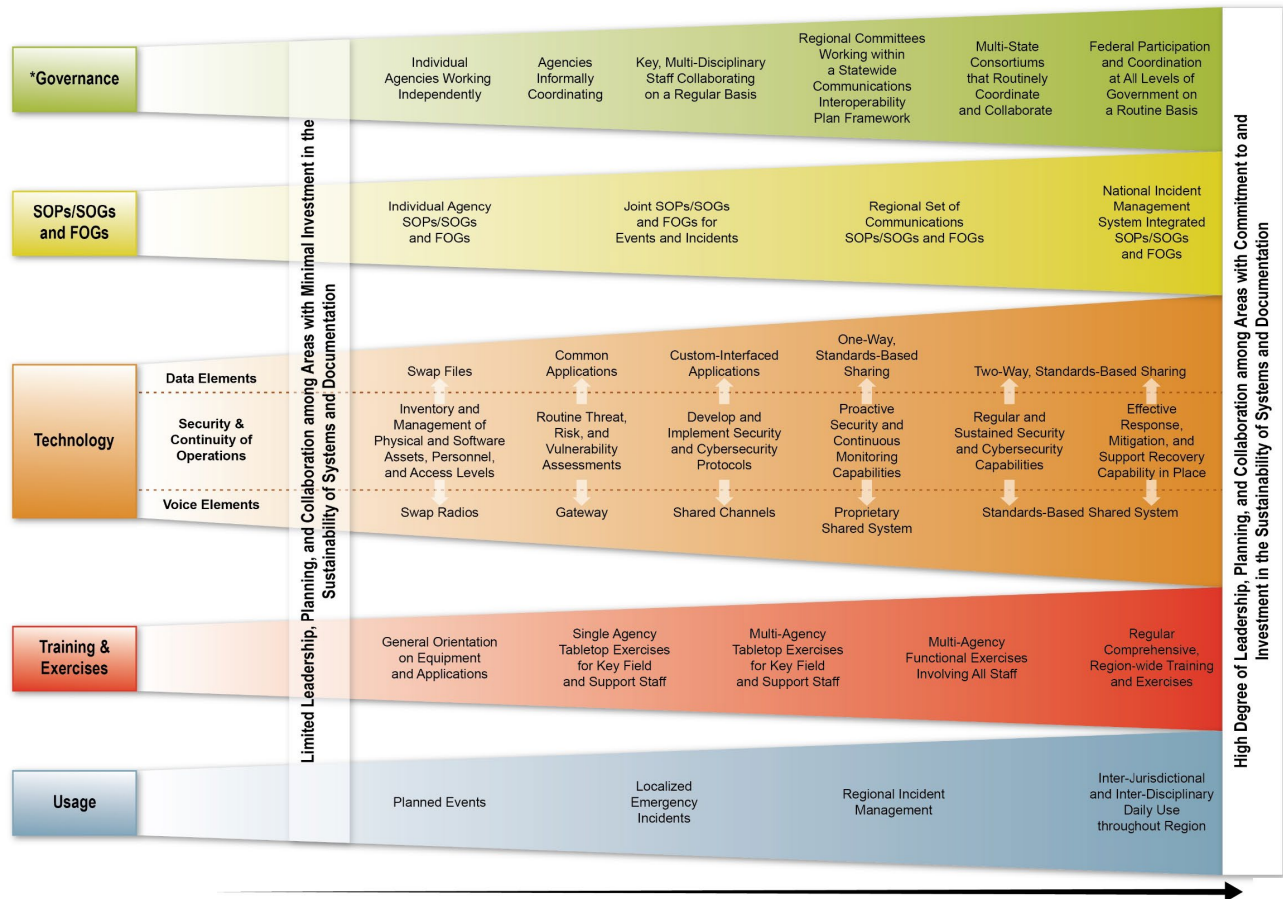


Figure 1: Interoperability Continuum

## Interoperability and Emergency Communications Overview

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 911 services have long been and continue to be critical tools for communications. However, the advancement of internet protocol-based technologies in public safety has increased the type and amount of information

<sup>1</sup> [2019 National Emergency Communications Plan](#)

<sup>2</sup> [Interoperability Continuum Brochure](#)



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 911 (NG911) 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 NG911 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 Arkansas’ vision and mission for improving emergency and public safety communications interoperability:

### **Vision:**

*In order to better protect lives and property, the State of Arkansas will lead the Nation in establishing the ability for public safety stakeholders, across all disciplines and jurisdictions, to exchange information seamlessly, securely, as authorized, on demand, and in real-time.*

### **Mission:**

*Public safety organizations will work collaboratively with all stakeholders to achieve the Arkansas interoperability vision efficiently and effectively.*

## GOVERNANCE

Arkansas’ homeland security and emergency preparedness agency is the Arkansas Department of Emergency Management (ADEM). The Arkansas Interoperable Communications Executive Committee (AICEC), as well as the Arkansas Interoperable Communications Committee (AICC), the SWIC, the State 911 Coordinator, and the Arkansas Wireless Information Network (AWIN) are all housed under ADEM.

The AICEC provides oversight for interoperable communications in the state, including executive support, fiscal oversight, legislative and administrative communications, strategy, and overall accountability. Meanwhile, the AICC provides general advice and guidance on interoperable communications, provides advice and guidance on strategic planning, funding, program policies and procedures. While both of these committees are very active, ADEM looks to continue to strength the AICEC and affiliated working groups specifically to ensure that all aspects of the emergency communications ecosystem in Arkansas are represented.



During the SCIP Workshop, participants frequently discussed the benefits of increasing primary, alternate, contingency and emergency (PACE) planning across the state. ADEM will look to request a Cybersecurity and Infrastructure Security Agency (CISA) Technical Assistance (TA) offering to jump start PACE planning efforts.

Other topics discussed pertaining to governance include increasing education for stakeholders and elected officials on operable and interoperable communications.

Arkansas’ emergency communications governance map is depicted in Figure 2.

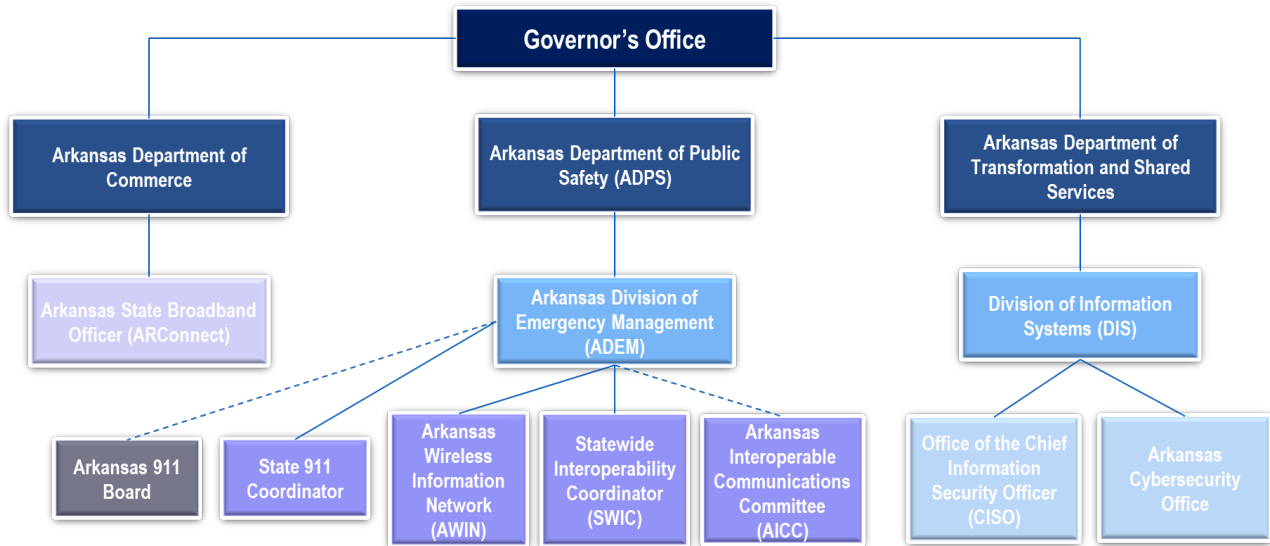


Figure 2: Arkansas Emergency Communications Governance Map

Governance goals and objectives include the following:

Governance	
Goals	Objectives
1. Strengthen/develop the Arkansas Interoperable Communications Executive Committee (AICEC) and affiliated working groups	1.1 Ensure that public safety broadband, training, technology, cybersecurity, policy/administration and Communications Unit (COMU) can be addressed
	1.2 Review charters and bylaws for each working group to address governance of working groups to include membership and meeting cadence
2. Utilize WebEOC to interface with other states	2.1 Establish Memorandums of Understandings (MOUs) with other states
	2.2 Create a plan to consolidate communications information into WebEOC
	2.3 Promote utilization of WebEOC
	2.4 Conduct training and exercises for WebEOC usage
3. Assist public safety organizations with primary, alternate, contingency and emergency (PACE) planning	3.1 Request Cybersecurity and Infrastructure Security Agency (CISA) Technical Assistance (TA) to develop PACE plans
	3.2 Provide PACE plan training
	3.3 Seek funding to address equipment gaps at ADEM as identified during PACE planning efforts
	3.4 Develop triggers for PACE utilization





Goals	Objectives
	3.5 Corrective action and PACE planning
4. Support the Arkansas Safe Schools Initiative Act	4.1 Provide education and outreach to school superintendents and local law enforcement regarding Arkansas Wireless Information Network (AWIN) onboarding process and use of the AWIN System.
	4.2 Seek funding to address equipment gaps

## TECHNOLOGY AND CYBERSECURITY

### Land Mobile Radio

Arkansas’ statewide LMR network is AWIN, a multiple site, digital 700/800-megahertz (MHz) trunked communications system using the Association of Public Safety Communications Officials (APCO) Project 25 (P25) standard Phase II. The biggest challenge facing LMR in the state is the transition from Frequency Division Multiple Access (FDMA) radios with Time Division Multiple Access (TDMA) radios to complete the transition to P25 Phase II. Completing this transition is the primary goal for LMR in the state, along with increasing training and exercises with communications injects.

### 911

911 in Arkansas is governed by the Arkansas 911 Board, consisting of 12 members representing public safety stakeholders across the state. The Arkansas General Assembly tasked the 911 Board with developing a plan to provide funding for no more than 82 PSAPs to operate in the state. As of the SCIP Workshop, Arkansas has 97 total PSAPs, 71 of those connected to the Emergency Services Internet Protocol (ESInet), 39 of those live with i3, 30 with Request for Assistance Interface (RFAI), and 2 with Centralized Automatic Message Accounting (CAMA) status. Seventy percent of Arkansas’ primary PSAPs cover 2,483,825 Arkansas citizens, or 83.5 percent of the state’s population.

In the future, Arkansas looks to continue the consolidation of PSAPs and increase the cybersecurity resiliency of PSAPs across the state.

### Broadband

Like many other states, Arkansas identified multiple public safety broadband applications from different carriers utilized across the state as an interoperability challenge. Broadband coverage in general is also a challenge. Governance of broadband in Arkansas comes from the Arkansas State Broadband Office and the Arkansas State Broadband Manager.

### Alerts and Warnings

ADEM uses the Federal Emergency Management Agency (FEMA) Integrated Public Alert and Warning System (IPAWS) through the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), the National Oceanic and Atmospheric Administration (NOAA) Weather Radio, and other public alerting systems are sent from a single interface. Local jurisdictions may request ADEM to send WEA or NOAA alerts to their citizens. To get a IPAWS system for a jurisdiction, stakeholders must contact the ADEM IPAWS reviewing officer.



At the local level, different localities use different alerting systems, which can pose a challenge to interoperability. To address alerts and warnings challenges including IPAWS adoption rate, education and outreach, and funding, ADEM looks to create an alerts and warnings working group.

## Cybersecurity

ADEM works with the Arkansas Cybersecurity Office, U.S. DHS, and the Federal Bureau of Investigation (FBI) to provide reporting, alerts, and notifications to local and state agencies of pending or occurring cybersecurity events. The Arkansas Cybersecurity Office also coordinates the Arkansas Continuity of Operations Program (ACOOOP), which oversees and manages the development of disaster recovery plans and continuity of operations plans for state agencies.

ADEM looks to conduct a cybersecurity assessment and monitoring of the AWIN system, as well as increase cybersecurity resiliency for public safety communications, specifically for PSAPs. ADEM is interested in requesting a CISA TA for a cybersecurity awareness webinar.

Technology and cybersecurity goals and objectives include the following:

Technology and Cybersecurity	
Goals	Objectives
<b>5. Support land mobile radio (LMR) training and exercises at the city, county and state levels</b>	5.1 Establish regular AWIN training sessions
	5.2 Outreach and education to users concerning interoperability
	5.3 Develop interoperable communication injects for exercises
	5.4 Provide CISA Auxiliary Communications (AUXCOMM) and Shared Resources (SHARES) training on-demand
<b>6. Complete transition to Project 25 (P25) Phase II</b>	6.1 Identify funding streams to replace Frequency Division Multiple Access (FDMA) radios with Time Division Multiple Access (TDMA) radios
	6.2 Increase outreach and education for users and decision makers on the benefits of replacing FDMA radios with TDMA radios
<b>7. Identify opportunities to increase Public Safety Answering Points (PSAPs) successful consolidation</b>	7.1 Develop free online trainings
	7.2 Regionalize training
	7.3 Clean up legislation
	7.4 Identify and address issues with use of disparate radio systems
	7.5 Increase training staff
<b>8. Enhance gateway connectivity</b>	8.1 Engage CISA resources for an Inter Radio Frequency Subsystem Interface (ISSI) assessment to assist with technology evaluation
	8.2 Establish testing procedures for any type of gateway connection
	8.3 Conduct training and exercises to include the collections of after-action reports
	8.4 Create and execute gateway agreements to include other jurisdictions (ex. other states)
<b>9. Enhance alerts and warnings coordination and capabilities across the state</b>	9.1 Establish an alerts and warnings working group
	10.1 Conduct AWIN cybersecurity assessment



Goals	Objectives
10. Increase cybersecurity resiliency of the AWIN system	10.2 Explore cybersecurity monitoring capabilities for AWIN
	10.3 Develop cybersecurity incident response plan for AWIN
11. Enhance cybersecurity for PSAPs across the state	11.1 Request a CISA Cybersecurity Awareness Webinar TA offering
	11.2 Explore capabilities to assist smaller agencies in cybersecurity preparedness

## FUNDING

In Arkansas, different parts of the emergency communications ecosystem are funded in different ways. AWIN is funded by \$7 million from the state annually, as well as \$8 million from the Public Safety Communications Act. The 911 system is funded by a \$1.30 fee assessed on wireless phones, distributed to the PSAPs.

During the SCIP Workshop, participants identified P25 Phase II equipment, AWIN cybersecurity, planning, training, and exercising all PACE assets, and support of Emergency Support Function 2 (ESF-2) assets as top funding priorities.



## 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 CISA Interoperable Communications Technical Assistance Program (ICTAP) has a catalog of TA available to assist with the implementation of the SCIP.<sup>3</sup> TA requests are to be coordinated through the SWIC.

Arkansas’ implementation plan is shown in the table below.

Goals	Objectives	Owners	Completion Dates
<b>1. Strengthen/develop the Arkansas Interoperable Communications Executive Committee (AICEC) and affiliated working groups</b>	1.1 Ensure that public safety broadband, training, technology, cybersecurity, policy/administration and Communications Unit (COMU) can be addressed	AICEC working groups	September 2024
	1.2 Review charters and bylaws for each working group to address governance of working groups to include membership and meeting cadence		
<b>2. Utilize WebEOC to interface with other states</b>	2.1 Establish Memorandums of Understandings (MOUs) with other states	Arkansas Department of Emergency Management (ADEM)	June 2025
	2.2 Create a plan to consolidate communications information into WebEOC		
	2.3 Promote utilization of WebEOC		
	2.4 Conduct training and exercises for WebEOC usage		
<b>3. Assist public safety organizations with primary, alternate, contingency and emergency (PACE) planning</b>	3.1 Request Cybersecurity and Infrastructure Security Agency (CISA) Technical Assistance (TA) to develop PACE plans	Emergency Support Function 2 (ESF-2) and SWIC	March 2024
	3.2 Provide PACE plan training		March 2024
	3.3 Seek funding to address equipment gaps at ADEM as identified during PACE planning efforts		June 2025
	3.4 Develop triggers for PACE utilization		June 2025
	3.5 Corrective action and PACE planning		Ongoing
<b>4. Support the Arkansas Safe Schools Initiative Act</b>	4.1 Provide education and outreach to school superintendents and local law enforcement regarding Arkansas Wireless Information Network (AWIN) onboarding process and use of the AWIN System.	ADEM and Statewide Interoperability	June 2025

<sup>3</sup> [ICTAP TA Service Offerings Guide, April 2023](#)



Goals	Objectives	Owners	Completion Dates
	4.2 Seek funding to address equipment gaps	Coordinator (SWIC)	
5. Support land mobile radio (LMR) training and exercises at the city, county and state levels	5.1 Establish regular AWIN training sessions	State training officer and SWIC	Ongoing
	5.2 Outreach and education to users concerning interoperability		
	5.3 Develop interoperable communication injects for exercises		
	5.4 Provide CISA Auxiliary Communications (AUXCOMM) and Shared Resources (SHARES) training on-demand		
6. Complete transition to Project 25 (P25) Phase II	6.1 Identify funding streams to replace Frequency Division Multiple Access (FDMA) radios with Time Division Multiple Access (TDMA) radios	AICEC and associations	Ongoing
	6.2 Increase outreach and education for users and decision makers on the benefits of replacing FDMA radios with TDMA radios		Annually
7. Identify opportunities to increase Public Safety Answering Points (PSAPs) successful consolidation	7.1 Develop free online trainings	Arkansas 911 Board and Commission on Law Enforcement Standards and Training	June 2024
	7.2 Regionalize training		June 2024
	7.3 Clean up legislation		April 2025
	7.4 Identify and address issues with use of disparate radio systems		June 2025
	7.5 Increase training staff		Ongoing
8. Enhance gateway connectivity	8.1 Engage CISA resources for an Inter Radio Frequency Subsystem Interface (ISSI) assessment to assist with technology evaluation	System owners and AWIN	September 2024
	8.2 Establish testing procedures for any type of gateway connection		September 2024
	8.3 Conduct training and exercises to include the collection of after-action reports		June 2026
	8.4 Create and execute gateway agreements to include other jurisdictions (ex. other states)		Ongoing
9. Enhance alerts and warnings coordination and capabilities across the state	9.1 Establish an alerts and warnings working group	ADEM and SWIC	June 2024
10. Increase cybersecurity resiliency of the AWIN system	10.1 Conduct AWIN cybersecurity assessment	AWIN Operations and SWIC	September 2024
	10.2 Explore cybersecurity monitoring capabilities for AWIN		June 2025
	10.3 Develop cybersecurity incident response plan for AWIN		June 2025



Goals	Objectives	Owners	Completion Dates
<b>11. Enhance cybersecurity for PSAPs across the state</b>	11.1 Request a CISA Cybersecurity Awareness Webinar TA offering	State 911 Director and SWIC	March 2024
	11.2 Explore capabilities to assist smaller agencies in cybersecurity preparedness		Ongoing



## 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 Arkansas' assessment of their progress against the markers as of October 5, 2023.

Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
1	<b>State-level governing body established (e.g., SIEC, SIGB).</b> 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	<b>SIGB/SIEC participation.</b> 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"/> 911 <input type="checkbox"/> Alerts, Warnings and Notifications	Defined (3-4) Governance body participation includes: <input type="checkbox"/> Communications Champion/SWIC <input type="checkbox"/> LMR <input type="checkbox"/> Broadband/LTE <input type="checkbox"/> 911 <input type="checkbox"/> Alerts, Warnings and Notifications	Optimized (5) Governance body participation includes: <input checked="" type="checkbox"/> Communications Champion/SWIC <input checked="" type="checkbox"/> LMR <input checked="" type="checkbox"/> Broadband/LTE <input checked="" type="checkbox"/> 911 <input checked="" type="checkbox"/> Alerts, Warnings and Notifications
3	<b>SWIC established.</b> 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	<b>SWIC Duty Percentage.</b> 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	<b>SCIP refresh.</b> 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	<b>SCIP strategic goal percentage.</b> SCIP goals are primarily strategic to improve long term emergency 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)	<50% are strategic goals in SCIP	>50%<90% are strategic goals in SCIP	>90% are strategic goals in SCIP
7	<b>Integrated emergency communication grant coordination.</b> 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



Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
8	<p><b>Communications Unit process.</b> 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:</p> <p><input type="checkbox"/> COML  <input checked="" type="checkbox"/> COMT  <input type="checkbox"/> ITSL  <input type="checkbox"/> RADO  <input type="checkbox"/> INCM  <input type="checkbox"/> INTD  <input checked="" type="checkbox"/> AUXCOM  <input type="checkbox"/> TERT</p>	No Communications Unit process at present	Communications Unit process planned or designed (but not implemented)	Communications Unit process implemented and active
9	<p><b>Interagency communication.</b> Established and applied interagency communications policies, procedures and guidelines.</p>	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	<p><b>TICP (or equivalent) developed.</b> Tactical Interoperable Communications Plans (TICPs) established and periodically updated to include all public safety communications systems available</p>	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	<p><b>Field Operations Guides (FOGs) developed.</b> FOGs established for a state or territory and periodically updated to include all public safety communications systems available</p>	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	<p><b>Alerts &amp; Warnings.</b> State or Territory has Implemented an effective A&amp;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</p>	<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	<p><b>Radio programming.</b> Radios programmed for National/Federal, SLTT interoperability channels and</p>	<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





Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
	channel nomenclature consistency across a state / territory.			
14	<b>Cybersecurity Assessment Awareness.</b> 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) <input checked="" type="checkbox"/> LMR <input checked="" type="checkbox"/> LTE <input checked="" type="checkbox"/> 911/CAD <input checked="" type="checkbox"/> A&W	Initial plus, conducted assessment, conducted risk assessment. (Check yes or no for each option) <input type="checkbox"/> LMR <input type="checkbox"/> LTE <input type="checkbox"/> 911/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"/> 911/CAD <input type="checkbox"/> A&W
15	<b>NG911 implementation.</b> NG911 implementation underway to serve state / territory population.	Working to establish NG911 governance through state/territorial plan. <ul style="list-style-type: none"> <li>Developing GIS to be able to support NG911 call routing.</li> <li>Planning or implementing ESInet and Next Generation Core Services (NGCS).</li> <li>Planning to or have updated PSAP equipment to handle basic NG911 service offerings.</li> </ul>	More than 75% of PSAPs and Population Served have: <ul style="list-style-type: none"> <li>NG911 governance established through state/territorial plan.</li> <li>GIS developed and able to support NG911 call routing.</li> <li>Planning or implementing ESInet and Next Generation Core Services (NGCS).</li> <li>PSAP equipment updated to handle basic NG911 service offerings.</li> </ul>	More than 90% of PSAPs and Population Served have: <ul style="list-style-type: none"> <li>NG911 governance established through state/territorial plan.</li> <li>GIS developed and supporting NG911 call routing.</li> <li>Operational Emergency Services IP Network (ESInet)/Next Generation Core Services (NGCS).</li> <li>PSAP equipment updated and handling basic NG911 service offerings.</li> </ul>
16	<b>Data operability / interoperability.</b> 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.
17	<b>Future Technology/Organizational Learning.</b> SIEC/SIGB is tracking, evaluating, implementing future technology (checklist)	<input type="checkbox"/> 5G <input type="checkbox"/> Acoustic Signaling <input type="checkbox"/> Autonomous Vehicles <input type="checkbox"/> Body Cameras <input type="checkbox"/> ESInets <input type="checkbox"/> GIS <input type="checkbox"/> Geolocation	<input type="checkbox"/> HetNets/Mesh Networks <input type="checkbox"/> LMR to LTE Integration <input type="checkbox"/> MCPTT Apps <input type="checkbox"/> Machine Learning/AI <input type="checkbox"/> Public Alerting Software <input type="checkbox"/> Sensors <input type="checkbox"/> Situational Awareness Apps	<input type="checkbox"/> Smart Cities <input type="checkbox"/> The Next Narrowbanding <input type="checkbox"/> UAS (Drones) <input type="checkbox"/> UAV (Smart Vehicle) <input type="checkbox"/> Wearables <input type="checkbox"/> IoT (Cameras)
18	<b>Communications Exercise objectives.</b> 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	<b>Trained Communications Unit responders.</b> Communications Unit personnel are listed in a	<49% of public safety agencies within a state / territory have access to Communications Unit personnel	>50%<74% of public safety agencies within a state / territory have access to Communications Unit personnel	>75%<100% of public safety agencies within a state / territory have access to Communications Unit



Marker	Best Practices / Performance Markers	Initial	Defined	Optimized
	tracking database (e.g., NQS One Responder, CASM, etc.) and available for assignment/response.	who are listed in a tracking database and available for assignment/response	who are listed in a tracking database and available for assignment/response	personnel who are listed in a tracking database and available for assignment/response
20	<b>Communications Usage Best Practices/Lessons Learned.</b> 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	<b>Wireless Priority Service (WPS) subscription.</b> 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	<b>Outreach.</b> 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	<b>Sustainment assessment.</b> 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
24	<b>Risk identification.</b> 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	<b>Cross Border / Interstate (State to State) Emergency Communications.</b> 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 checked="" type="checkbox"/> Training/Exercises <input checked="" 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
ADEM	Arkansas Department of Emergency Management
AICC	Arkansas Interoperable Communications Committee
AICEC	Arkansas Interoperable Communications Executive Committee
APCO	Association of Public Safety Communications Officials
AUXCOMM/AUXC	Auxiliary Emergency Communications
AWIN	Arkansas Wireless Information Network
A&W	Alerts and Warnings
CAMA	Centralized Automatic Message Accounting
CASM	Communication Assets Survey and Mapping
CISA	Cybersecurity and Infrastructure Security Agency
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit Program
ACOOOP	Arkansas Continuity of Operations Plan
DHS	Department of Homeland Security
EAS	Emergency Alert System
ESInet	Emergency Services Internal Protocol Network
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FDMA	Frequency Division Multiple Access
FOG	Field Operations Guide
HF	High Frequency
ICTAP	Interoperable Communications Technical Assistance Program
INCM	Incident Communications Center Manager
INTD	Incident Tactical Dispatcher
IPAWS	Integrated Public Alert and Warning System
ISSI	Inter Radio Frequency Subsystem Interface
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
NG911	Next Generation 911
NGOs	Non-Governmental Organizations



Acronym	Definition
NOAA	National Oceanic and Atmospheric Administration
P25	Project 25
PACE	Primary, Alternate, Contingency and Emergency
PSAP	Public Safety Answering Point
RADO	Radio Operator
RFAI	Request for Assistance Interface
SCIP	Statewide Communication Interoperability Plan
SOP	Standard Operating Procedure
SWIC	Statewide Interoperability Coordinator
TA	Technical Assistance
TDMA	Time Division Multiple Access
TERT	Telecommunications Emergency Response Team
TIC	Tactical Interoperable Communications
TICP	Tactical Interoperable Communications Plan
VHF	Very High Frequency
WEA	Wireless Emergency Alerts
WPS	Wireless Priority Service