Texas
Statewide Communications Interoperability Plan

June 2020

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Letter from the Statewide Interoperability Coordinator

Greetings,

As the Texas Statewide Interoperability Coordinator (SWIC), I am pleased to provide to you the 2020 Texas Statewide Communications Interoperability Plan (SCIP). This SCIP represents Texas' continuous commitment to improving emergency communications interoperability and supporting our public safety practitioners throughout the state. In addition, this meets the requirement of having an updated SCIP in the current U.S. Department of Homeland Security (DHS) grant guidelines.

Representatives from several Texas Council of Governments (COGs) participated in a SCIP Workshop on February 4, 2020 to review and update goals and initiatives in the 2019 Texas SCIP. These goals and initiatives align closely with the recent 2019 National Emergency Communications Plan (NECP) update, with a focus on Governance and Leadership; Planning and Procedures; Training, Exercises, and Evaluation; Communications Coordination; Technology, Infrastructure, and Funding; and Cybersecurity.

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 this SCIP and continue to be a nationwide model for statewide interoperability.

Sincerely,

Todd Early
Texas Statewide Interoperability Coordinator

Introduction

The Texas SCIP is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary strategic plan to enhance interoperable and emergency communications over the next one-to-three years. This document contains the following planning components:

- *Introduction* – Provides the context necessary to understand what the SCIP is and how it was developed.

- *Interoperable and Emergency Communications Overview* – Provides an overview of Texas' current and future emergency communications environment.

- *Vision and Mission* – Articulates Texas' one-to-three year vision and mission for improving emergency communications operability, interoperability, and continuity of communications at all levels of government.

- *Goals and Objectives* – Outlines the goals and objectives aligned with the vision and mission of the SCIP as they pertain to Governance, Technology, and Funding.

- *Implementation Plan* – Describes Texas' plan to implement, maintain, and update the SCIP and enable continued evolution of and progress toward Texas'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 newly released 2019 NECP[1].

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. More information is available in the Interoperability Continuum brochure.[2]

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[1] 2019 National Emergency Communications Plan
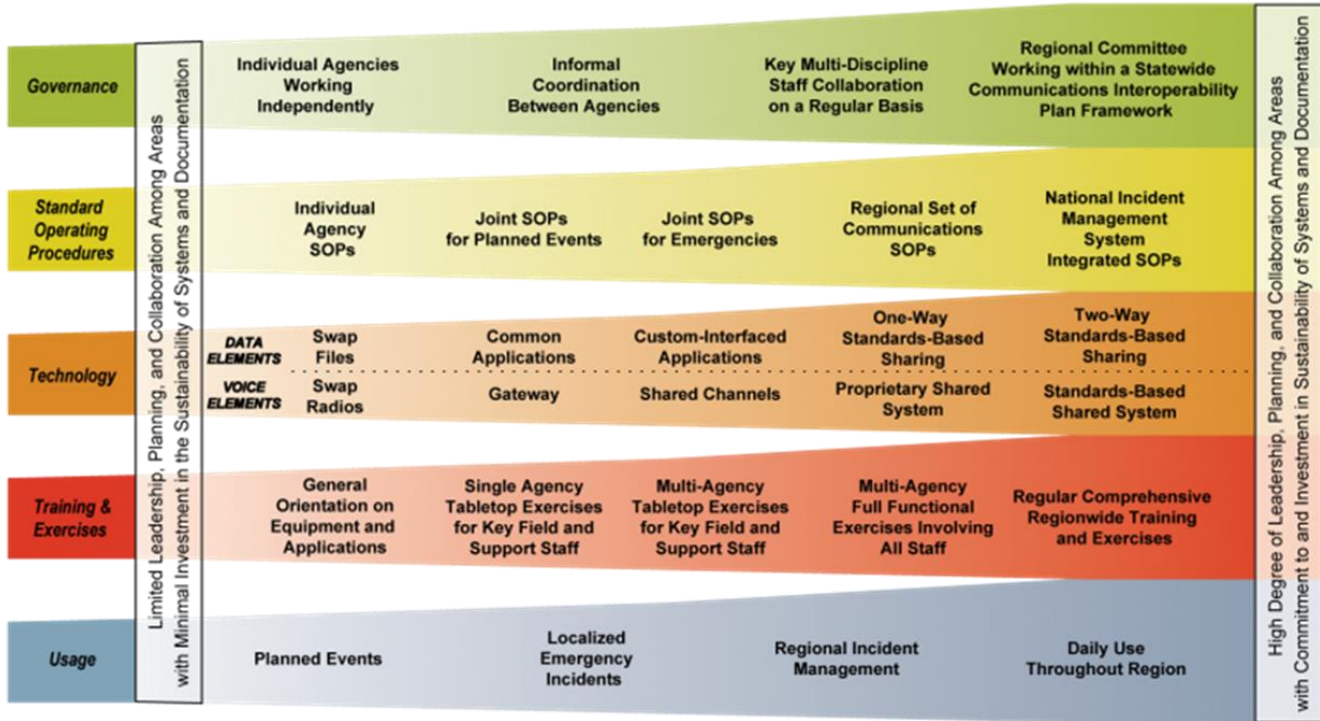[2] SAFECOM Interoperability Continuum brochure

Figure 1: SAFECOM Interoperability Continuum

Interoperable 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 (IP) 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. New 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 First Responder Network Authority's (FirstNet) implementation of the Nationwide Public Safety Broadband Network (NPSBN). Similarly, the transition of public-safety answering points (PSAPs) to Next Generation 911 (NG911) technology 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 Texas' vision and mission for improving emergency communications operability, interoperability, and continuity of communications statewide:

<u>**Vision:**</u>

All public safety and incident response entities in Texas will have access to effective and sustainable wireless interoperable voice and data communications.

<u>**Mission:**</u>

Through the unified voice and collaborative efforts of the TxICC and the SWIC Office, achieve effective voice and data communications interoperability across Texas.

1. Governance and Leadership

Texas shall establish and support effective communications governance which includes emergency communications and other stakeholders

Texas SCIP Governance and Leadership Goal

Texas Interoperable Communications Commission (TxICC)

The current governance body in place for emergency communications for the State of Texas is housed in the Department of Public Safety (DPS) and supported by Strategic Advisory Groups (SAGs). The Texas Interoperable Communications Commission (TxICC) is comprised of public safety communications representatives from public safety and incident response entities across the state and maintains chartered responsibility of the SCIP. The SAGs are stood up on an as-needed basis to address specific communications topics, and they are disbanded once a recommendation or finding is put forward.

The TxICC established the SCIP Executive Council (SEC) consisting of one voting delegate from each of the 24 regions, from each of the three Tribal Nations, and one State Agency representative to serve as the official voting entity of the TxICC. The SEC reviews strategic goals, initiatives, and short- and long-range plans. SEC members will:
- Confirm, approve, and/or modify decisions (e.g. prioritized gaps) and reports developed by the TxICC.
- Actively participate in the TxICC.
- Have appropriate knowledge of communications equipment, systems, and procedures.
- Participate in routine meetings/webinars and training sessions.
- Act as the regional Public Safety Broadband champion.
- Meet annually at the SCIP Conference and additionally as needed.

The SWIC provides oversight and leadership to the TxICC. The SWIC:
- Oversees the implementation of all SCIP goals and initiatives.
- Chairs the TxICC and the SEC.
- Passes recommendations to the State Executive Leadership.
- Is the designated State-level point of contact for LMR and serves as the State Single Point of Contact (SPOC) to FirstNet.
- Has authority from the State and TxICC to convene SAGs on matters of interoperability as necessary.

SAGs are ad hoc committees advising the SWIC, which are established to address key issues such as public safety broadband, developing a system of systems, improving training and exercises, and updating the Texas Statewide Interoperability Channel Plan. Additional SAGs will be appointed, as

needed. If the TxICC membership-at-large does not have the skillset needed for the assignment, the SWIC may identify a specialist to work with the SAG.

Through the unified voice of the TxICC and the SWIC, Texas works to achieve the highest level of voice and data communications interoperability. The TxICC is a voluntary organization of federal, state, local, tribal, and non-profit entities, including traditional emergency communications disciplines as well as public utilities, critical infrastructure/key resources providers, and transportation agencies. The TxICC owns and manages the SCIP as a strategic planning tool to help Texas public safety agencies prioritize resources, strengthen governance, identify future investments, and address interoperability gaps. The SWIC provides oversight and leadership to the TxICC SAGs, and they address key issues such as the Texas Public Safety Broadband Program, training and exercises, and funding. Figure 2 depicts the organizational structure of the TxICC.
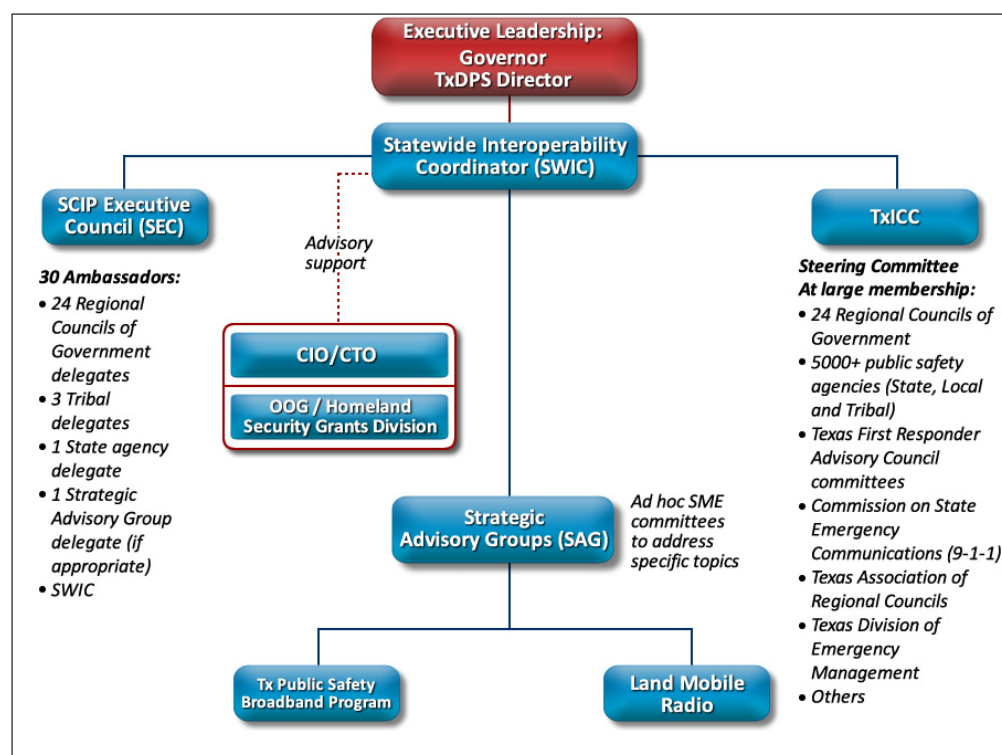

Figure 2: Texas's Emergency Communications Governance Structure

2. Planning and Procedures

Develop and update comprehensive emergency communications plans, procedures, and tools that address the evolution of risks, capabilities, and technologies

Texas SCIP Planning and Procedures Goal

Each of the 24 COGs and three tribes will prioritize updating common SOPs for multi-agency/multi-discipline/multi-hazard responses on a routine basis. Many of the current regional plans in place are outdated by eight years or more and need to be baselined with the new template. While most COGs and Tribes have SOPs in place, many acknowledge that the SOPs are not widely recognized or utilized. As a result, the following goal was developed to address Planning and Procedures.

3. Training, Exercises and Evaluation

Develop and deliver training curriculum, exercise templates, and evaluation methods that target gaps in all emergency communications technologies

Texas SCIP Training, Exercises and Evaluation Goal

At all levels of government, the Texas stakeholders have identified a need for training and exercises. Due to a lack of funding and standardization, many responders are not properly trained on how to use their communications equipment effectively. Stakeholders emphasized that updated standardized training curriculum and regular exercises will improve the use of statewide interoperability channels and mutual aid resources. Within the past couple of years, most COGs/Tribes have conducted some level of training, including Communications Unit courses, or tested radio interoperability capabilities during an exercise. With more COGs/Tribes integrating training developed by TxICC members into their training curriculum, there has been a noticeable increase in training sessions and participants. Notwithstanding the lack of funding and standardization, there is a clear need and want for training and exercises improvements across Texas.

4. Communications Coordination

Provide public safety and incident response agencies with best practices to address interoperability opportunities and challenges posed by technology advancements related to incident response

Texas SCIP Communications Coordination Goal

Texas has a strong coalition of individuals in the public safety and emergency response realm who support and promote emergency communications initiatives. As such, both outreach and information sharing has been encouraged and highlighted as vital to Texas' statewide interoperability operations. Moving forward, the State aspires to maintain a repository that will retain any and all data that pertains to public safety, emergency communications, and the SCIP.

5. Technology, Infrastructure and Funding

Identify funding sources available to local, regional, Tribal, and State agencies for communications equipment, training and maintenance of systems

Texas SCIP Technology, Infrastructure and Funding Goal

Land Mobile Radio

Texas supports adoption of P25 Land Mobile Radio (LMR) systems and where feasible sharing infrastructure and resources by joining a Regional Public Safety Radio System.

Mobile Broadband

Texas continues to support the buildout and adoption at the agency level for the implementation of FirstNet, the National Public Safety Broadband Network (NPSBN) as well as the adoption of mobile broadband applications that enable interoperable data and information sharing between agencies.

Next Generation 911

Through the Texas Commission on State Emergency Communications (CSEC), the State of Texas has had a 911 strategic plan in place for many years and continues contract negotiations with their carrier to have operations for Emergency Services Internet Protocol (IP) Networks (ESInet).

Alerts and Warnings

The State is supported by the Texas Division of Emergency Management (TDEM) Alerts and Warnings program including IPAWS.

Funding

Achieving sustainable funding across all levels of government for public safety communications remains a challenge. Federal grants continue to decrease, and state and local entities continue to identify a need for funding to support training efforts, equipment upgrades and maintenance, and the preservation and operation of existing systems. For this reason, the State of Texas promotes alternative approaches to funding such as encouraging state and local infrastructure sharing agreements. While this is not the sole approach to solving funding challenges, it is an opportunity for Texas to encourage interagency collaboration and engagement.

6. Cybersecurity

Offer outreach support to provide updates, best practices, and monitoring of industry developments, and direction to current resources

Texas SCIP Cybersecurity Goal

Texas has identified the need to strengthen stakeholder education on cybersecurity efforts within the state. With cyberspace and its underlying infrastructure vulnerable to a wide range of risk, public safety entities need to ensure they have the tools necessary to respond and defend against cyber-attacks that pose a threat to the delivery of essential services like public safety and emergency communications.

Implementation Plan

These SCIP goals and objectives are intended to support the dissemination of best practices across Texas and can be amended as relevant stakeholders see fit. Each objective has a timeline with a targeted initial 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. The CISA Emergency Communications Division (ECD) has a catalog of technical assistance service offerings available to assist in implementation of the SCIP.[3] Requests for assistance are to be coordinated through the SWIC.

1. Governance and Leadership						
SCIP Goal: Texas shall establish and support effective communications governance which includes emergency communications and other stakeholders						
#	**Initiatives**	**Owner**	**Date**	**Tactical/ Strategic**	**Metric**	**NECP**
1.1	Maintain the SWIC Office and the formal governance body, the TxICC, through inclusive stakeholder engagements, and by reviewing governance documents to include emerging technologies	SWIC	Bi-annually, Odd numbered years	T	TxICC charter evaluated bi-annually	1.1
1.2	Maintain Regional Interoperable Communications Committees (RICCs) in all 24 COGs including the three Tribes and conduct meetings annually at a minimum	COGs, Tribes	Ongoing	S	Verified through Focus Group (FG) Report	1.2
1.3	On an annual basis review and revise local and Tribal points of contact lists including emergency communications stakeholders, SEC delegates, radio programmers, ID plan contacts, and COMU contacts and any new subject matter experts identified in the annual FG Report	COGs, Tribes, SWIC	October, annually	T	Updated contact lists submitted with annual FG report	1.2
1.4	Educate state, local, tribal, and regional decision makers and elected officials on the importance of all aspects of interoperable communications and the need to fund and sustain systems	COGs, Tribes, Texas Association of Regional Councils	Ongoing	S	Verified through FG reports	1.2
1.5	Hold at least one information exchange/demonstration session with stakeholders (possibly in conjunction with an existing regional public event) to share agency mission, initiatives, deployable assets, and any other available resources that could be used for regional or statewide response	COGs, Tribes	October, annually	T	Verified through FG report	1.3

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[3] FY20 TA/SCIP Guide

1.6	RICCs complete annual Focus Group reports to the TxICC regarding regular review and updates to regional projects, funding prioritization, Regional Interoperable Communications Plans (RICPs), SOPs, and other strategic needs	COGs, Tribes, SWIC	October, annually	T	Verified through FG Report	1.3
1.7	Provide report of statewide progress towards interoperability and SCIP initiatives based on RICC Focus Group Reports	SWIC	June of even years	T	Completed report	1.3
1.8	Maintain the Texas Statewide Interoperability Channel Plan (TSICP), eTXFOG and affiliated Memoranda of Understanding (MOUs) and post to a shared location	TSICP SAG SWIC	Ongoing	T	Updated TSICP, as required; • eTXFOG available on app stores • list of MOU signees posted on DPS website	1.3

2. Planning and Procedures

SCIP Goal: Develop and update comprehensive emergency communications plans, procedures, and tools that address the evolution of risks, capabilities, and technologies

#	Initiatives	Owner	Date	Tactical/ Strategic	Metric	NECP
2.1	Engage RICC to complete annual Focus Group Report, using surveys, webinars or meetings to identify and prioritize needs and plans for interoperability for each of the COGs and Tribes, and determine if tools/best practices need to be developed	COGs, Tribes, SWIC	October, annually	S	Completed FG report by reviewing tools and best practice needs identified in surveys, webinars, and/or meetings	2.1
2.2	Review, update, and maintain resources in common shared secure locations	SWIC	Ongoing maintenance	S	Annual review of information and files on shared sites to ensure information is up to date. (CASM, HSIN, DPS website)	2.1
2.3	COGs update the capabilities and migration sections of RICPs (also any other RICP sections or information requiring updates)	COGs, Tribes	Ongoing	S	Updated RICP reports Verified through FG report	2.2
2.4	Maintain a guidance document to include funding sources outside the typical grant offerings	SWIC	Every odd year	T	2019: Completed and uploaded to the SWIC website and HSIN	2.2
2.5	Agencies develop a cybersecurity incident response plan	COGs, Local, Tribal	Ongoing	S	Verified through FG report	2.3

3. Training, Exercises and Evaluation

SCIP Goal: Develop and deliver training curriculum, exercise templates, and evaluation methods that target gaps in all emergency communications technologies

#	Initiatives	Owner	Date	Tactical/ Strategic	Metric	NECP
3.1	Develop a basic interoperable radio training curriculum available online promoting the use of interoperability channels and TalkGroups	SWIC	October 2020	S	Completed training curriculum with verification from online training team	3.1
3.2	Develop basic interoperable radio training course metrics to measure levels of participation, including the number of disciplines, agencies, people, and total training sessions	SWIC	Ongoing	T	Completed training metrics	3.1
3.3	Engage accrediting organizations as appropriate to adopt interoperable radio communications curriculum as part of continuing education programs	SWIC	October 2021	T	Compile and contact list of accrediting organizations and POCs	3.1
3.4	Agencies conduct regular drills to practice use of interoperability channels / TalkGroups; examples include: • Regular rollcalls on interoperability channels / TalkGroups • Parking lot drill included in Basic Radio Training course • Regular communications drill integrated with annual required training	SWIC, COGs, Local	October, annually	T	• Completed radio communications drill templates Verified through FG Report	3.1
3.5	Conduct/participate and promote multi-agency exercises annually and develop communications-focused after-action reports (AARs) to identify the effectiveness and use of interagency communications RSOPs, and compliance with the National Incident Management (NIMS)/Incident Command System (ICS)	COGs, Tribes	October, Annually	T	• Completed multi-agency exercise and AAR Verified through FG report	3.1
3.6	Identify a COMU single point of contact for each COG and Tribe. POCs will maintain the list of COMU personnel in CASM for their area.	COGs, Tribes	October, annual maintenance	T	• Data uploaded and maintained in the Communications Assets Survey and Mapping Tool (CASM) database Verified through FG Report	3.3

4. Communications Coordination

SCIP Goal: Provide public safety and incident response agencies with best practices to address interoperability opportunities and challenges posed by technology advancements related to incident response

#	Initiatives	Owner	Date	Tactical/ Strategic	Metric	NECP
4.1	Monitor and share industry and government advancements and best practices in communications during the annual TxICC Conference	SWIC COGs, Tribes, State	Annually 2Q, usually April	T	At least one SWIC presentation or message to TxICC annually RICCs share with local stakeholders.	4.2
4.2	Regularly review and update local, tribal, and regional asset inventories in the CASM database	COGs, Tribes	Ongoing	T	Verified through FG reports	4.2
4.3	Coordinate with emergency alerts and warnings and NG911 organizations and provide updates and best practices to stakeholders	SWIC, State 911 Districts, TDEM	Ongoing	T	NG911 and A&W updates provided annually at minimum, generally at TxICC annual conference	4.2
4.4	Update Regional SOPs (RSOPs) as needed; distribute to all local, tribal, and mutual aid responder agencies in the region	COGs, Tribes	Bi-annually/ January	T	• Updated RSOPs uploaded to HSIN Verified through FG report	4.2
4.5	Share resources and best practices among federal, state, tribal, regional, and local entities that highlight interoperability improvements and cost savings	COGs, Tribes, SWIC	Ongoing	S	• Conduct annual System Managers Meeting	4.2

5. Technology and Infrastructure

SCIP Goal: Identify funding sources available to local, regional, Tribal, and State agencies for communications equipment, training and maintenance of systems

#	Initiatives	Owner	Date	Tactical/ Strategic	Metric	NECP
5.1	Transition public safety radio systems to comply with P25 standards for statewide interoperability	COGs, Tribes, SWIC	Ongoing	T	Verified through technology interoperability levels identified annually by COGs and Tribes through the level of interoperability survey	5.2
5.2	Program all public safety and incident response entity radios with TSICP-designated interoperability channels and applicable interoperability TalkGroups into subscriber devices	COGs, Tribes, System, State	Ongoing	S	Verified through FG reports	5.2

5.3	Develop a framework to measure data / information interoperability levels, working with national organizations	SWIC, SAG, TDEM	May 2021	S	Identified / developed framework	5.2

6. Cybersecurity						
SCIP Goal: Offer outreach support to provide updates, best practices, and monitoring of industry developments, and direction to current resources						
#	Initiatives	Owner	Date	Tactical/ Strategic	Metric	NECP
6.1	Actively share best practices standards and frameworks for cybersecurity from National Institute of Standards and Technology (NIST) and the Cybersecurity and Infrastructure Security Agency (CISA) on HSIN	SWIC	Monthly uploads, Ongoing	S	• Best practices and standards uploaded to HSIN Share information included in Texas Department of Public Safety (DPS) newsletter	6.2

Appendix A: State Interoperability Markers

In 2019 DHS CISA began supporting states and territories in baselining progress against 25 interoperability markers. This tool was developed by looking at best practices along the SAFECOM continuum to highlight emergency communications strengths and gaps, support measurement of 2019 NECP implementation, and provide a framework for developing SCIP goals. Below is Texas' initial assessment of their progress against the interoperability markers.

Interoperability Continuum	#	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	SWIC has other duties as well.
	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	Between SWIC and Deputy SWIC it is 100%
	5	**SCIP refresh.** SCIP is a living document that continues to be executed in a timely manner. Updated	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	Major revision this year

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
		SCIPs are reviewed and approved by SIGB/SIEC.				
	6	**SCIP strategic goal percentage.** 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	Goals all strategic with tactical initiatives to achieve.
	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	Work with SAA. Rank applications to ensure alignment with SCIP goals.

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
	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 ☐AUXCOM ☐TERT	No Communications Unit process at present	Communications Unit process planned or designed (but not implemented)	Communications Unit process implemented and active	TERT goes through emergency comms.
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.	Did SOPs with IECGP funds. Have templates created for key SOPs.
	10	**TICP (or equivalent) developed.** Tactical Interoperable Communications Plans (TICPs) established and periodically updated to	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	Everyone has one but have only updated 4. Doing 5 this summer.

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
		include all public safety communications systems available				Have 24 total to work through.
	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: (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	Handled by division of emergency mgmt
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	Have to check this box when applying for grant funding.

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
	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	No checkbox data entered.
	15	**NG911 implementation.** NG911 implementation underway to serve state / territory population.	Working to establish NG911 governance through state/territorial plan. • Developing GIS to be 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.	More than 75% of PSAPs and Population Served have: • NG911 governance established through 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.	More than 90% of PSAPs and Population Served have: • NG911 governance established through 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	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.	WebEOC. Haven't thought about others.

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
		systems would be: - CAD to CAD - Chat - GIS - Critical Incident Management Tool (- Web EOC)				
	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 ☐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	Initial and Defined plus mechanism in place to incorporate and measure communications objectives into state/county/regional level exercises	Any exercise we know about we are incorporated, but we don't know about all

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
				community). Including providing tools, templates, etc.		exercises that take place
	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	Don't know who has access to CASM at county level.
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 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	Moving towards optimized. Getting TX SWIC HSIN Page to do doc repository
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	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	

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
			stakeholders on regular basis			
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	
	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	

Interoperability Continuum	#	Best Practices/Performance Markers	Initial	Defined	Optimized	Comment
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/establis hed across some lanes of the Continuum: ☐Governance ☐SOPs/MOUs ☐Technology ☐Training/Exercises ☐Usage	Optimized: Documented/establis hed across all lanes of the Continuum: ☐Governance ☐SOPs/MOUs ☐Technology ☐Training/Exercises ☐Usage	No checkbox data entered.

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
COG	Council of Governments
COMU	Communications Unit Program
CSEC	Commission on State Emergency Communications
ECD	Emergency Communications Division
ESInet	Emergency Services IP Network
FirstNet	First Responder Network Authority
FG	Focus Group
FOG	Field Operations Guide
GIS	Geospatial Information System
HSIN	Homeland Security Information Network
ICS	Incident Command System
IP	Internet Protocol
LMR	Land Mobile Radio
MOU	Memorandum of Understanding
NECP	National Emergency Communications Plan
NG911	Next Generation 911
NIMS	National Incident Management System
NIST	National Institute of Standards and Technology
NPSBN	National Public Safety Broadband Network
PSAP	Public Safety Answering Point
RICC	Regional Interoperable Communications Committee
RICP	Regional Interoperable Communications Plan
RSOP	Regional Standard Operating Procedure
SAG	Strategic Advisory Groups
SCIP	Statewide Communication Interoperability Plan
SEC	Statewide Communication Interoperability Plan Executive Council
SME	Subject Matter Expert
SOP	Standard Operating Procedure
SPOC	FirstNet State Single Point of Contact

Acronym	Definition
SWIC	Statewide Interoperability Coordinator
TICP	Tactical Interoperable Communications Plan
TDEM	Texas Division of Emergency Management
TxICC	Texas Interoperable Communications Commission