



Establishing Governance to Achieve Statewide Communications Interoperability

A Guide for Statewide Communication Interoperability Plan (SCIP) Implementation



**Homeland
Security**

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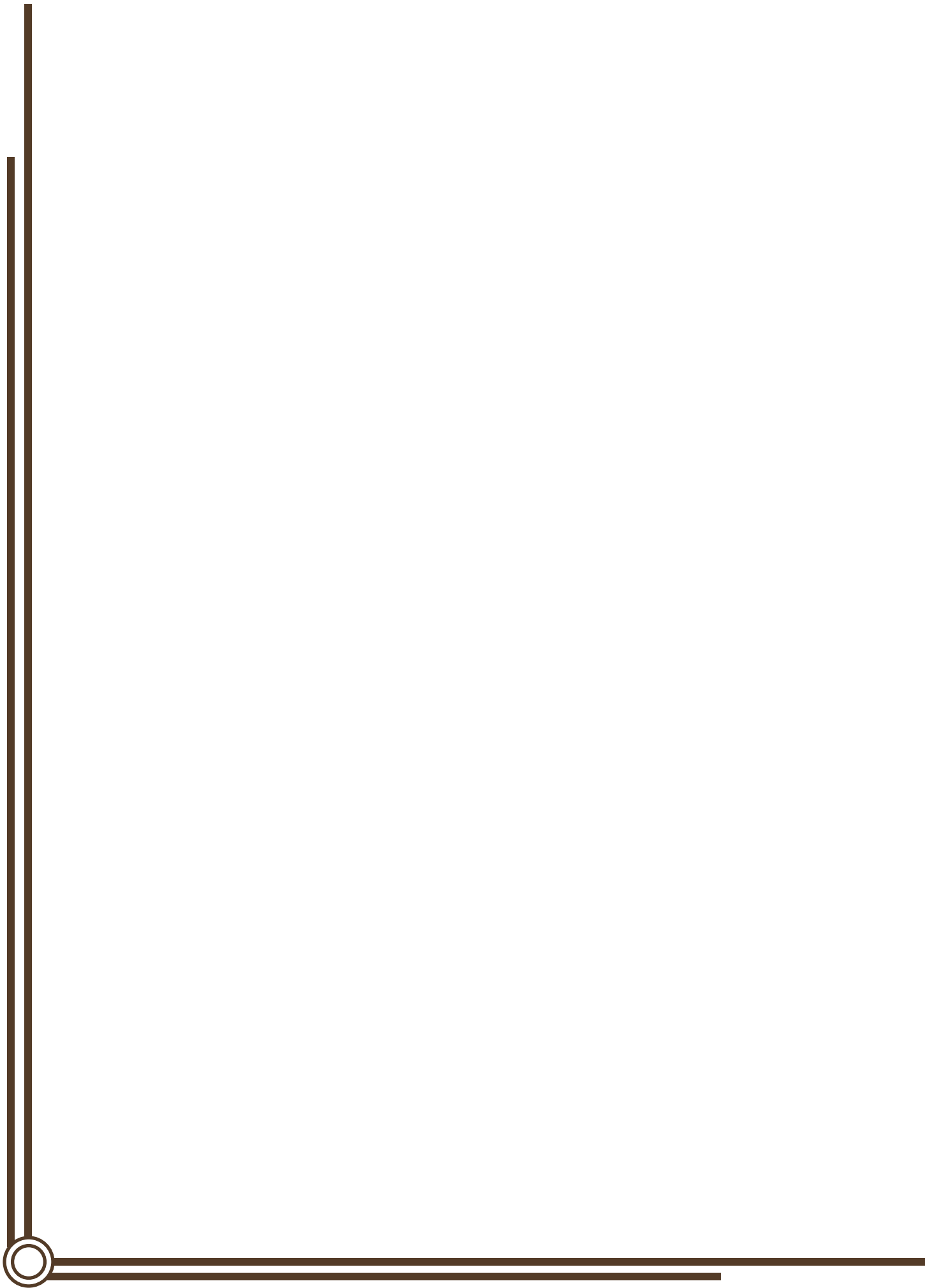
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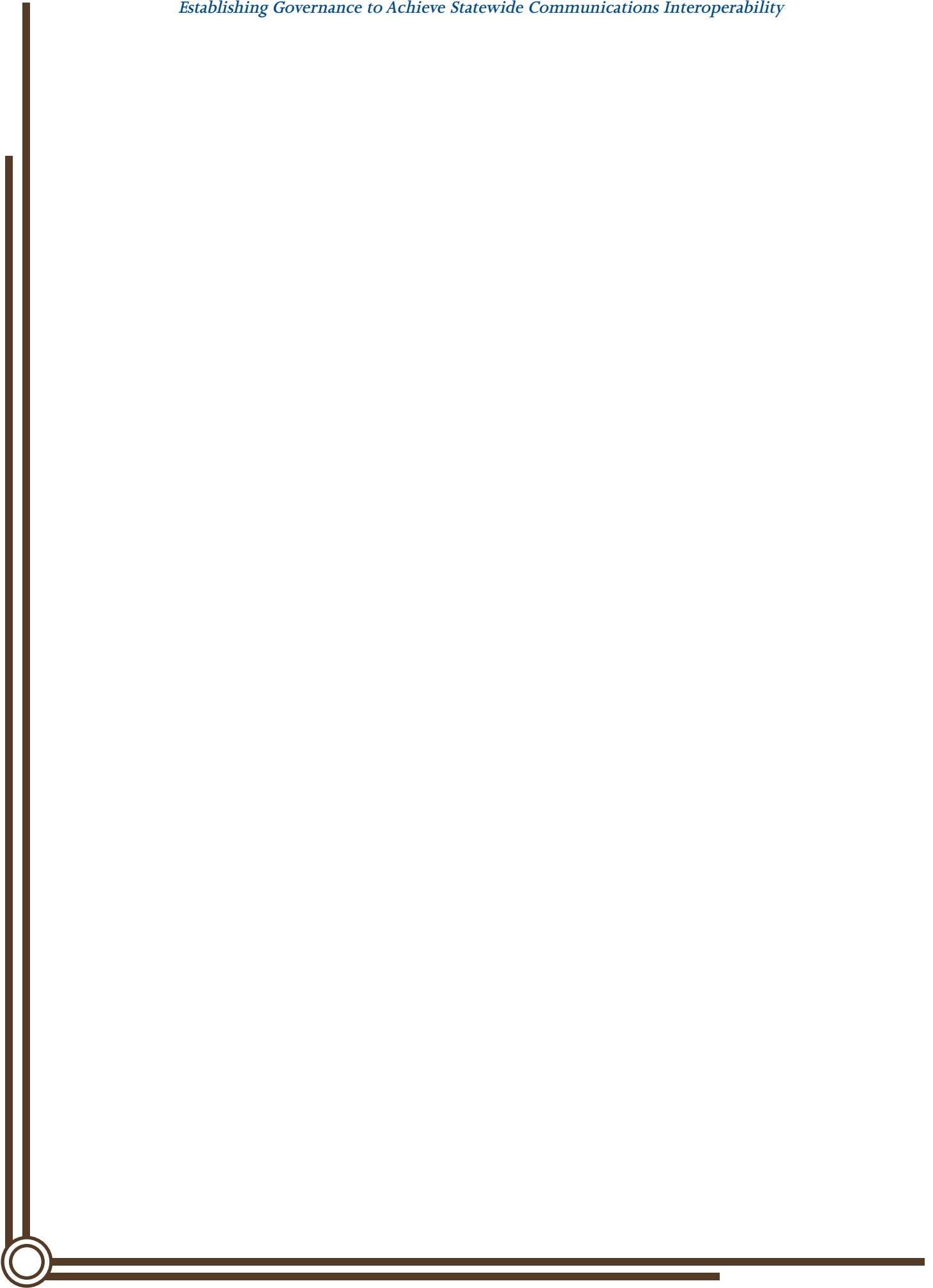




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1

Introduction

In 2007, through its Directorate for National Protection and Programs, the Department of Homeland Security (DHS) established the Office of Emergency Communications (OEC) to promote the ability of emergency responders and government officials to maintain communication in the event of natural disasters, act of terrorism, or other man-made disaster, and to ensure, accelerate, and attain interoperable and operable emergency communications nationwide. OEC, in conjunction with its Federal partners, provides guidance, tools, and templates on communications-related issues to Federal, State¹, local, and tribal emergency response agencies. Since its inception, OEC has operated under the principle that any successful effort to improve emergency response communications interoperability must take into account the views of emergency responders on the front lines in large, small, rural, and urban communities across the Nation. As outlined in the National Emergency Communications Plan (NECP), achieving the Nation's communications interoperability vision, goals, objectives, and priority initiatives is not a task the Federal Government can accomplish on its own—it is largely a practitioner-driven effort that requires coordination among all stakeholders.

The underlying challenge to achieving the vision, goals, objectives, and priority initiatives established by the Federal Government and outlined in the NECP is that many of the initiatives can only be implemented through the actions of other governments. Only entities that are legally independent of the Federal Government—such as State and local governments—can address these issues. This challenge is magnified by the fact that 90 percent of the emergency response communications infrastructure in America is owned, operated, and maintained at the State and local level².

OEC understands that to achieve much of the national vision outlined in the NECP, the Federal Government must depend upon the competence and motivation of State and local government officials with whom it can coordinate but cannot directly control. The same challenge faces State governments as they begin to implement their Statewide Communication Interoperability Plans (SCIP). This document is intended to help States streamline a process to ensure multi-discipline and multi-jurisdictional coordination at all levels of government. A coordinated practitioner-driven approach will ensure the comprehensive implementation of communications interoperability strategies outlined within the NECP; each State's SCIP; and other Urban Area Security Initiative (UASI), regional, and local planning documents.

This document was created from the 2008 SCIP peer review process. After reviewing all 56 State SCIPs, OEC learned that many States were still searching for guidance that could assist them in establishing robust, practitioner-driven, statewide³ governance systems⁴. Even with the nationwide criteria established within the *Statewide Interoperability Planning Guidebook*⁵, every State's statewide governance system varied significantly from others. As indicated in figure 1-1, (SAFECOM Interoperability Continuum Governance Lane) formalized, intrastate, regional committees that work with a statewide interoperability governing body are a critical SCIP criterion. These committees are essential to the programmatic success

1 State refers to State and territory.

2 U.S. Government Accountability Office. First Responders: Much Work Remains to Improve Communications Interoperability, April 2007, page 45. www.gao.gov/new.items/d07301.pdf

3 Statewide refers to statewide and territory-wide.

4 Statewide governance refers to statewide communications interoperability governance.

5 U.S. Department of Homeland Security, SAFECOM program. Statewide Interoperability Planning Guidebook, March 2007. www.safecomprogram.gov/NR/rdonlyres/18F02413-CC4D-41B2-9097-F5FF04E080C7/0/StatewidePlanningGuidebookFINAL.pdf



Figure 1-1: SAFECOM Interoperability Continuum Governance Lane

of any State's communications interoperability efforts. Practitioner-driven governance provides the foundation for the coordinated implementation of SCIP initiatives and statewide advancement. It is the vehicle for shared decision-making, shared resources, and shared protocols.

This document presents information about the role, system, and operations of statewide governing bodies that are charged with improving communications interoperability across a State. Without establishing a mandate, this national guide will assist States and localities in developing and/or refining their governance methodologies and systems. OEC recognizes that all States are unique and have diverse governance requirements. In establishing interoperability-related governance, individual State and local leaders should consider organizational systems that reflect their State and locality's specific requirements and needs. The information presented in this guide should be viewed as a set of recommendations for developing a statewide communications interoperability governance methodology and not as a list of requirements. As part of its technical assistance role, OEC strives to offer advice and work with the States and localities to improve their communications interoperability efforts.

This document is organized into four main chapters and two key appendices:

1. **Statewide Governance Perspective (Chapter 2):** This chapter provides readers with an understanding of how statewide governance is linked to SCIP implementation and compliance. This section explains why coordinated governance is a vital component of improving interoperable communications statewide.
2. **Statewide Governance Methodology—Key Elements & Fundamental Components (Chapter 3):** This chapter details the roles, characteristics, and importance of each component of a statewide governance structure. Readers can leverage this information to improve upon their current statewide governance model.
3. **Leveraging Governance for Programmatic SCIP Implementation (Chapter 4):** This chapter focuses on SCIP implementation. It explains the high-level process for leveraging the statewide governance system and the methodologies to implement a SCIP's strategic initiatives and measure progress.
4. **Maintaining Governance Success to Support SCIP Implementation—Key Elements (Chapter 5):** Collaboration and coordination are key to the success of a State's interoperability effort, but neither occur without resources and effort. This chapter provides guidance on sustaining a State's statewide governance system.
5. **Current Statewide Governance Structures—Sample SCIP Models (Appendix A):** This appendix provides an assessment of four of the most common governance models that were reported in the 2008 SCIPs. Readers may want to determine which model most closely aligns to their State's governance structure in order to identify potential challenges and possible areas of improvement.
6. **Sample Communications Interoperability Long-Term Performance Measurement Tool (Appendix D):** This appendix provides resources for assessing and measuring the success of SCIP initiatives and statewide planning efforts.

2

Statewide Governance Perspective

The Case for Sound Governance

For any State and its regions to improve communications interoperability, collaboration and participation from relevant emergency response stakeholders is essential. A formalized, statewide governance system provides a unified approach across multiple disciplines and jurisdictions; this approach aids the funding, effectiveness, and overall support for communications interoperability. Establishing a governing body and overarching system is critical to successfully addressing the key challenges associated with achieving interoperable communications. Statewide governance and coordination also provide the framework in which stakeholders can collaborate and make decisions that reflect shared objectives. This document outlines guidance and examples for effective statewide coordination. It is intended to provide a minimum recommendation for interoperable communications coordination and shall not preclude any coordination efforts that are currently in process within the States.

Interoperability hinges on diverse stakeholders cooperating across disciplines and jurisdictions. For our purposes, the term “governance” is used to describe a support system that helps decision makers within Federal, State, local, and tribal governments make informed decisions that meet stakeholder requirements. An official governance system announced to internal and external stakeholders establishes an organizational blueprint for statewide interoperability advancement. Official systems prove to be beneficial in that they are respectful of individual agencies’ roles and responsibilities, yet provide each agency with the communication networks necessary to cooperate with other agencies.

State Coordination vs. Statewide Coordination

Insufficient coordination among State and local agencies and across disciplines hinders a State’s ability to work toward improving interoperable communications for its emergency responders; it also makes successful implementation of the SCIP very difficult. Our Nation’s federalist system affords States and their incorporated localities and cities a great deal of independence. As a result, the success of interoperable communications relies on the ability for a State to identify and provide opportunities for collaboration across all levels of government. Given this federalist structure and the current lack of technology standardization within the land mobile radio (LMR) industry, collaboration through government-led and practitioner-driven governance bodies (comprised of Federal, State, county, city, town, and tribal officials) is essential to the development of coordinated interoperable solutions. The proposed governance methodology (detailed in Chapter 3 [Statewide Governance Methodology—Key Elements & Fundamental Components]) describes the various stakeholder groups involved in interoperability planning within a State. This methodology demonstrates how each group is leveraged within a coordinated, statewide governance system in order to support the communications interoperability strategies outlined within the NECP; the SCIP; and UASI, regional, and local strategic planning documents.

To achieve collaborative coordination across the State, it is important to distinguish between State coordination and statewide coordination. State coordination is defined by strategic planning and implementation among State agencies. This type of planning is vital to ensure that all State agencies have and maintain interoperable communications across agencies. One example of State coordination is ensuring that the State's Police Agency can communicate with the State's Department of Transportation.

Statewide coordination is defined by strategic planning and implementation among all emergency responders and designated public-service organizations that serve the residents of the State. Achieving this level of coordination requires a robust, multi-faceted, coordinated governance system that leverages more than just State agencies. Responders and policymakers from Federal, UASI, regional, local, and tribal governments, as well as leaders from related emergency response associations, must also participate. This document provides a methodology for statewide coordination that States can leverage in order to successfully achieve the goals and objectives outlined in the NECP, their SCIP, and other regional and local interoperability strategic planning documents used in their State.

Aligning Statewide Governance & Implementation to the National Emergency Communications Plan

Recognizing the need for an overarching emergency communications strategy to address communications deficiencies that exist at the Federal, State, local, and tribal levels, Congress directed OEC to develop the NECP⁶ to guide national emergency communications planning and coordination efforts. The NECP is a strategic plan that:

- Establishes a national vision for the future state of emergency communications.
- Sets national goals and priorities for addressing deficiencies in the Nation's emergency communications structure.
- Provides recommendations and milestones for emergency response providers and relevant government officials to improve their communications capabilities.

The NECP seeks to align Federal, State, local, and tribal planning efforts through a common vision and set of goals, objectives, and priority initiatives that target emergency communications. For State, regional, local, and tribal governments, the NECP provides guidance for future strategic planning efforts as well as recommended initiatives for improving emergency responders' communications capabilities. Figure 2-1 (NECP Strategy), holistically demonstrates the NECP strategy.

Through the NECP, DHS defined a series of goals that establish a minimum level of interoperable communications and deadlines for Federal, State, local, and tribal agencies to meet those minimum levels. These goals provide an initial set of operational targets that will be further defined by the Office of Emergency Communications (OEC) through a process that engages Federal, State, and local governments; the private sector; and emergency responders. As outlined throughout this guide, a robust statewide governance system which supports SCIP Implementation activities is a key component to achieving the NECP goals outlined below.

6 U.S. Department of Homeland Security, Office of Emergency Communications. National Emergency Communications Plan, July 2008.
www.safecomprogram.gov/SAFECOM/natlemergencycommplan/1372_nationalemergency.htm

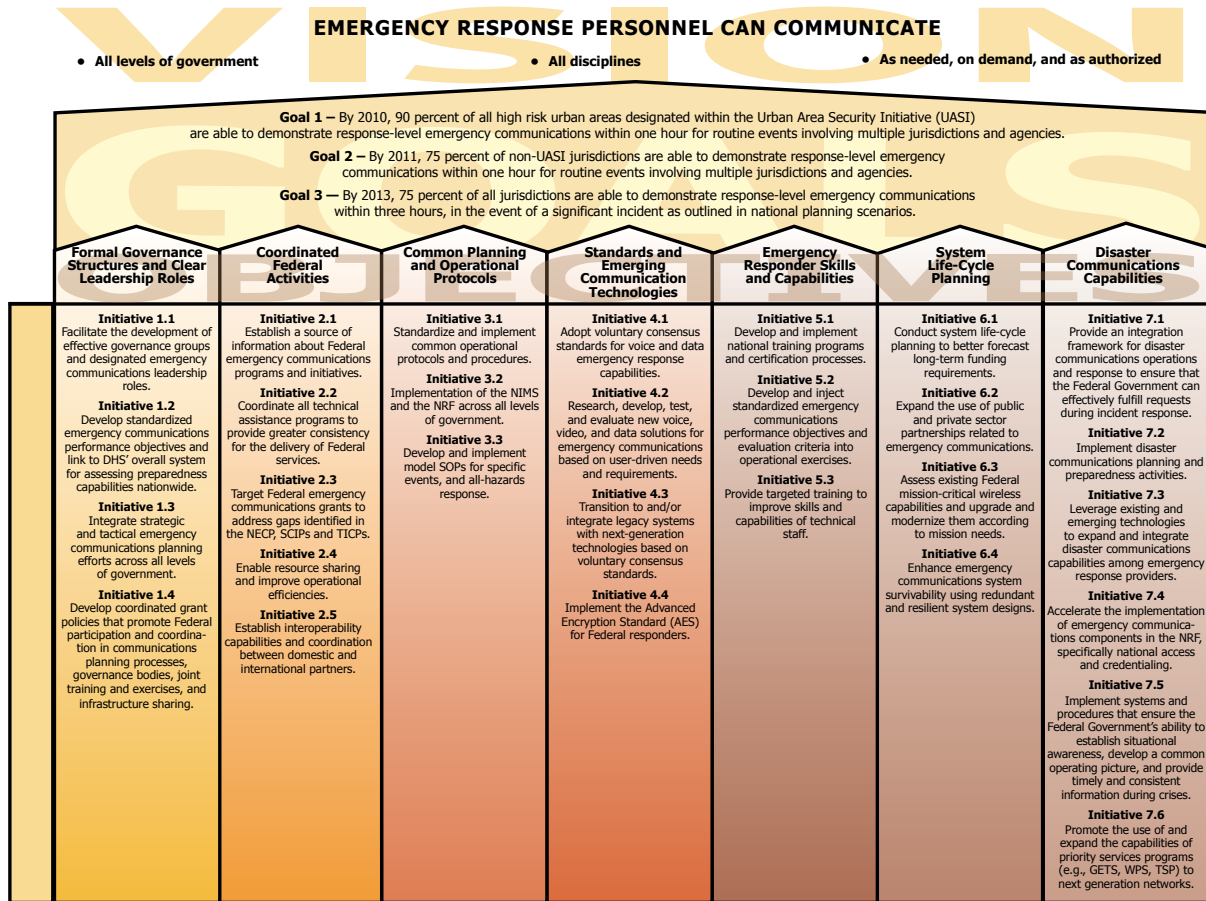


Figure 2-1: NECP Strategy

- **Goal 1:** By 2010, 90 percent of all high-risk Urban Areas designated within the Urban Area Security Initiative (UASI) are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.
- **Goal 2:** By 2011, 75 percent of non-UASI jurisdictions are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.
- **Goal 3:** By 2013, 75 percent of all jurisdictions are able to demonstrate response-level emergency communications within three hours of a significant event as outlined in national planning scenarios.

Aligning a State's priorities to the NECP is in the best interest of the Nation. While the NECP provides guidance, it does not dictate how homeland security funds should be spent or appropriated. This document specifically provides guidance to help States meet the first of the seven NECP objectives:

NECP Objective 1: Formal decision-making structures and clearly defined leadership roles coordinate emergency communications capabilities.

There are four priority initiatives that support NECP Objective 1:

- 1.1 Facilitate the development of effective governance groups and designated emergency communications leadership roles.
- 1.2 Develop standardized emergency communications performance objectives and link to DHS' overall system for assessing preparedness capabilities nationwide.
- 1.3 Integrate strategic and tactical emergency communications planning efforts across all levels of government.
- 1.4 Develop coordinated grant requirements that promote Federal participation and coordination in communications planning processes, governance bodies, joint training and exercises, and infrastructure sharing.

This document, specifically the collaborative governance methodology described in Chapter 3 (Statewide Governance Methodology—Key Elements & Fundamental Components), can help States align and comply with the NECP's first objective—specifically initiatives 1.1 and 1.3.

Governance in Context: The SAFECOM Interoperability Continuum

Solutions to communications interoperability often focus solely on equipment or technology, excluding the other factors that are also critical to success. The Nation is now pursuing a multi-faceted approach to emergency communications. SAFECOM, a DHS program focused on communications interoperability, identified five interrelated elements that are essential to a foundation for seamless interoperability:

- Governance
- Standard Operating Procedures (SOPs)
- Technology
- Training and Exercises
- Usage

To help visualize the evolving interrelationship of these components, SAFECOM developed the Interoperability Continuum⁷, shown in figure 2-2 (SAFECOM Interoperability Continuum). As this graphic suggests, proficiency in all five of these elements is needed to achieve the best possible interoperability and compatibility. Furthermore, the Continuum should not only be read horizontally, but vertically as well. The implementation of initiatives requires attention in each of the lanes. For example, procurement initiatives should not solely focus on the technology lane, but should encompass every lane. Governance is needed to decide on the equipment requirements, SOPs that explain the equipment's operational use need to be developed, training must occur on the new equipment, and usage must be ensured by all relative agencies on a daily basis. Achieving interoperability across the five lanes requires all agencies to participate in SCIP initiatives. Therefore, every SCIP initiative should leverage the stakeholders that are coordinated by the statewide governance system.

7 U.S. Department of Homeland Security, SAFECOM program. Interoperability Continuum, June 2008. www.safecomprogram.gov/SAFECOM/tools/continuum/default.htm

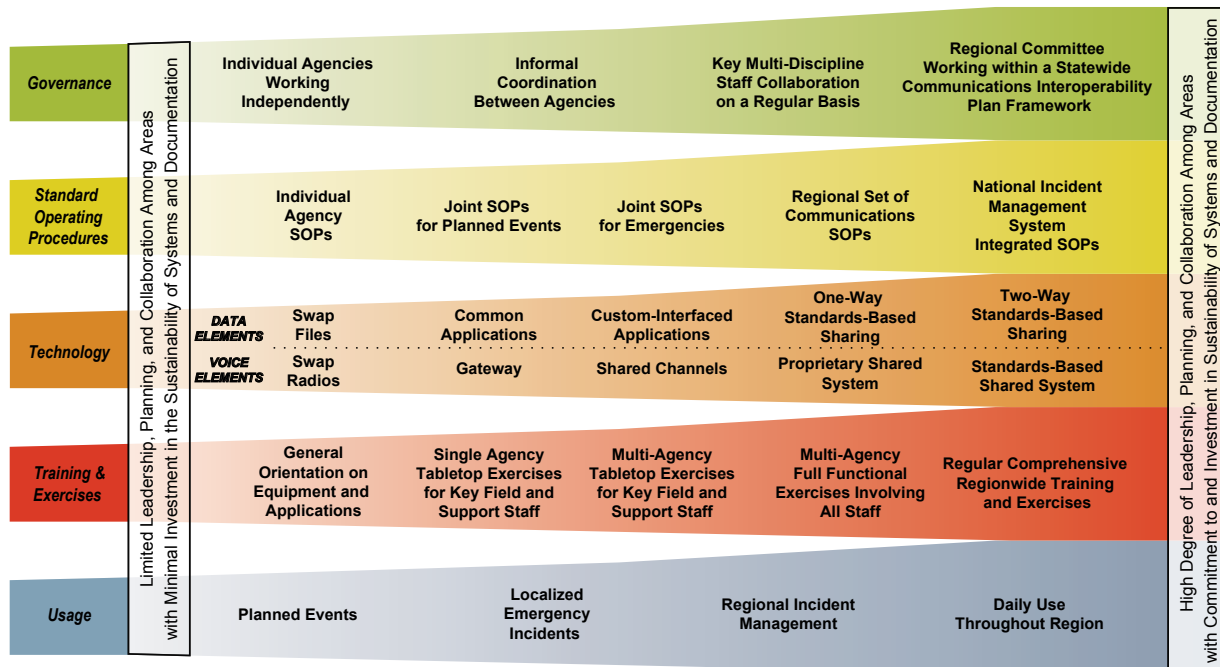


Figure 2-2 : SAFECOM Interoperability Continuum

Common Statewide Governance Challenges

Establishing a formal governance system that improves communications interoperability can be a challenge, particularly given the comfort of conducting “business as usual.” Some of the most common challenges to consider when designing a new governance system are:

- **Independence, Power, and the Resistance to Change**
 - Independent disciplines and jurisdictions have difficulty giving up authority in favor of a regional governing body. This is reinforced by the federalist nature of our Nation’s governmental structures.
 - The governing body’s membership is often not representative of all agencies, disciplines, and jurisdictions involved in a regional response. Current members are often afraid to bring others to the table because it might dilute their power or slow down the progress they think they have made.
 - Comfort with the current way of doing business supports independent decision-making rather than a shared decision-making process, and builds resistance to change.
- **Poor Planning & Limited Resources**
 - Failure to consider key design elements for the governance system can result in delays, inefficiencies, and ineffective decisions and solutions.
 - Policymakers do not fully understand or agree with the Federal, State, county, city, town, and tribal interoperability needs and requirements, and therefore, do not commit the required resources.
- **Lack of Models or Standards**
 - Few standard criterion or models have been established to help communities create a successful governance model. (This document was prepared with the goal of addressing this particular challenge.)

3

Statewide Governance Methodology Key Elements and Fundamental Components

The Practitioner-Driven Approach — Key Elements of Governance Models

OEC promotes a practitioner-driven approach that can help guide the establishment and effective operation of a governing system. Derived from research of currently utilized SCIP governance models (presented in Appendix A [Current Statewide Governance Structures — Sample SCIP Models]), the following key elements are recommended considerations in the overall methodology and design of a statewide governance system:

- **Work from the bottom up.** A successful program relies heavily on State and local emergency response practitioners for input and guidance as it works to define and implement interoperability solutions. This chapter details which types of practitioners are recommended for each aspect of the governance system.
- **Actively engage stakeholders.** The governance system should represent the full range of emergency response interests that are affected by the interoperability challenge. This helps ensure that solutions address community needs and incorporate diverse perspectives.
- **Leverage associations or people authorized to speak on behalf of a larger group of stakeholders.** Because associations can help amass broad practitioner input and build support for the decisions made by the governing body, it is important to ensure that they are well incorporated into the governance system.
- **Promote shared decision-making within each governance component.** It is important to maintain accountability while supporting shared decision-making. Strong leadership and clearly defined roles and responsibilities are essential to achieving an effective balance.
- **Promote transparency.** The membership, operations, and actions of the governing body must be clearly articulated and understood, not only within the entity itself, but also among the public.
- **Promote sustainability.** Achieving communications interoperability is a long-term effort. As such, the governance system should account for succession planning and membership rotation.
- **Establish and articulate a shared understanding of goals.** A shared vision is the foundation of any effective undertaking, while common goals provide momentum to move forward. Both are essential to any long-term group effort. In the case of interoperability-related governance, the diversity of the disciplines and jurisdictions involved makes agreeing on these common goals even more critical; as this issue encompasses so many stakeholders, it is essential to maintain commitment to the goals as time progresses.
- **Establish an oversight body.** A statewide interoperability oversight body should be established to coordinate efforts and provide reports and recommendations to the governor and State legislature. The governor should provide authority for this group under State legislation or through an executive order.
- **Seek legislative or gubernatorial authority.** Strong sponsorship at the highest possible levels helps ensure that the governance system has the necessary authority to govern. The State's

statewide interoperability oversight body should seek legislative or gubernatorial authority via an executive order to establish itself as a legitimate organization.

- **Stay flexible.** Because of the complexity of the tasks, it is important to keep in mind that processes, roles, and responsibilities are likely to evolve over time.

The Fundamental Components of a Statewide Communications Interoperability Governance System

Rather than proposing a specific, one-size-fits-all governance structure, this document identifies the fundamental components of a successful statewide communications interoperability governance system for each State to consider. One look at the key elements listed above make it clear that successful governance systems are not hierarchal. Instead, States are better served with a flat, coordinated system where a Statewide Communications Interoperability Coordinator serves as the binding entity for the statewide effort. States must develop a statewide governance system that incorporates and respects the input of the Federal, State, county, city, town, and tribal practitioner community. For this to happen successfully, the structure cannot be top-down or exclusive, but instead must be collaborative and inclusive of all stakeholders.

States should consider the following seven components of statewide governance systems in order to maximize statewide buy-in and consensus for interoperability decisions. The names of the fundamental components listed below are generic terms; many States already have similarly-tasked entities and call those entities by another name. For example, some States will recognize the functions of the Statewide Interoperability Governing Body (fundamental component #3) as those performed by their Statewide Interoperability Executive Committee (SIEC).

1. Stakeholder Resource Pool
2. Statewide Interoperability Coordinator's Office (SWIC)
3. Statewide Interoperability Governing Body (SIGB)
4. Intrastate Regional Interoperability Committees (RICs)
5. State Agency Interoperability Committee
6. Initiative Working Groups (IWGs)
7. Bordering States & Federal Partnerships

OEC is not suggesting that existing State governance entities be replaced. Instead, OEC is recommending each State to ensure that each component of their governance system includes all the relevant stakeholders, takes on the recommended roles and responsibilities, and builds relationships in order to maximize impact. The "organizational chart" that each State creates is likely to be unique to that State with each component entity having a mix of roles, responsibilities, and nomenclature that meets the distinctive needs of that State.

Stakeholder Resource Pool

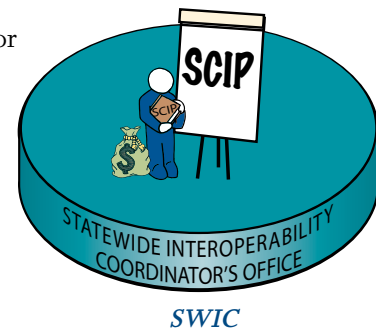
In the statewide governance system, the sphere represents the stakeholder resource pool. This pool includes the subject matter expert (SME) volunteers that contribute to the advancement of efforts across the State. Potential volunteer members may include:

- State Technology experts
- Regional organizations and coordinators
- Federal, State, and local emergency responders
- Association leadership
- Emergency support functions such as transportation and health care professionals
- Self-selected participants from across the State

Some volunteer members may serve permanently on one or more official committees while others may only serve for a limited time on an IWG. The statewide communications interoperability effort requires various SME skill sets ranging from technical and operational to grants management and procurement expertise. The Statewide Interoperability Coordinator's Office should maintain a list of dedicated and interested stakeholders willing to serve the practitioner-driven effort.

Statewide Interoperability Coordinator's Office (SWIC)

Second to the practitioners themselves, the Statewide Interoperability Coordinator and his/her staff members are key players in the statewide communications interoperability effort. The SWIC serves as the cornerstone of the State's interoperability effort. Ultimately, the Coordinator's role is one of program management. While expertise in communications technology is an advantage, it is not a requirement for the Coordinator.



Remembering that this is not a hierarchal system, the SWIC is not on top of anything. As part of a complex governance system composed of hundreds of stakeholders who answer to various Federal, State, county, city, town, and tribal officials, the SWIC simply does not have the full power of decision. Consequently, the SWIC is situated in the middle of the governance system serving as the coordinator.

Recommended Office Placement within the State Government

The SWIC should be agency-, discipline-, and jurisdiction-agnostic. Therefore, the Office should be placed in a position within the State government that is neutral and able to present an unbiased view of the overall interoperable communications issue within the State. As such, OEC encourages

States to establish the SWIC directly within the Governor's Office. This positioning provides the coordinator with the standing necessary to work across all State agencies and among the Federal Government, regions, localities, and tribal nations. Furthermore, this placement tends to closely position the Coordinator with the State's Office of Homeland Security (OHS), or equivalent, and to the State's Administrative Agent (SAA).

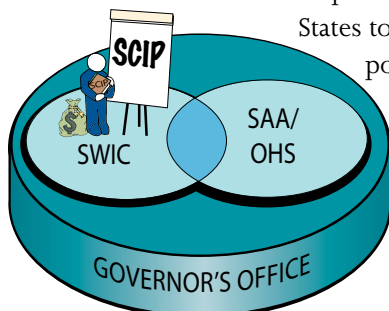


Figure 3-1: SWIC Placement

This is a powerful placement for the SWIC. From here, the office can

build a direct relationship with the SAA and influence, with guidance from the governance bodies, the creation of sub-grantee guidance for Federal and State interoperability grants offered statewide. Sub-grantee guidance is the carrot providing the motivation, guidance, and funding necessary for localities, disciplines, and regions to comply with NECP and SCIP doctrines. This authority to shape and manage the State's interoperability grants substantially impacts how easily the SWIC can coordinate and align statewide interoperability efforts. Figure 3-1 (SWIC Placement) demonstrates the placement of the SWIC within the State government, highlighting its close relationship with the State's OHS and SAA.

Recommended Statewide Interoperability Coordinator's Office Staff

Statewide communications interoperability and a State's SCIP implementation effort are primarily driven by the relationships among the volunteer stakeholders and practitioners who serve on the various committees within the statewide governance structure. While governance committees provide the needed guidance and input on statewide activities, there is a need for a point of accountability to manage the complex and time consuming process of maintaining and implementing the SCIP and aligning the SCIP to the NECP. The Statewide Interoperability Coordinator, serving within the Governor's Office, should primarily fulfill this role. One person, however, cannot be expected to coordinate the statewide governance structure; manage the implementation of the SCIP; support the allocation of the State's interoperable communications grant funds; advise the State's regions, localities, and tribal governments on communications interoperability technical and strategic issues; and complete all the other roles and responsibilities listed below.

In developing the Office of the Statewide Interoperability Coordinator, the State should consider creating the following additional positions by either hiring full-time employees or utilizing contractual support. Because each State is unique and pursuing its own set of interoperability objectives, each Coordinator should assess which positions, if any, are needed in order for the effort to be successful. If initial seed funding is needed, the SWIC can seek Federal grant funding to support the positions (see Chapter 5 [Maintaining Governance Success to Support SCIP Implementation—Key Elements]) for more details about maintaining governance success).

Potential staff positions for the statewide communications interoperability effort include the following:

- **Executive Assistant**
 - Duties may include: supporting the Coordinator's schedule; responding to practitioner, stakeholder, industry, and public inquiries; organizing logistics for SIGB stakeholder meetings; maintaining the statewide communications interoperability website; developing a statewide communications interoperability listserv or electronic mailing list; managing office expenses; and performing other duties as identified by the Coordinator.
- **Special Assistant(s)**
 - Duties may include:
 - **Supporting Outreach:** developing presentations and talking points for the Coordinator and the effort, writing press releases, developing a statewide communications interoperability newsletter, scheduling media interviews, and organizing a yearly communications interoperability conference.
 - **Supporting Public Policy:** responding to legislative inquiries; developing statewide sub-grantee grant guidance; administering and writing grant applications on behalf of the State; supporting SCIP revisions; writing and reviewing proposals; administering statewide performance measures; attending Federal, State, regional, local, and tribal meetings on behalf of the coordinator; and responding to DHS inquiries.

● **Technical Communications Coordinator**

- Duties may include: providing technical guidance to the Coordinator; meeting with vendors; responding to Federal Communications Commission (FCC) inquiries; supporting the management of the State's interoperability channels; and supporting State agencies and regional, local, and tribal governments with technical projects, procurements, and proposals.

● **Regional Coordinators**

- Duties may include: maintaining a close relationship with the SWIC and serving as the regional point of contact for the statewide effort.
- Due to the nature of Federal grant programs where 80 percent of the State's funds must be allocated to localities, this position may or may not officially be within the SWIC. Local and tribal governments should consider whether regional or local interoperability points of contact are needed to help connect regional and local initiatives with statewide initiatives and to support specific regional strategic initiatives or investments. If funds are available, the SWIC should seek to hire a Regional Coordinator or leverage contractual support for each communications interoperability region within the State.

Recommended Roles and Responsibilities

The SWIC will be responsible for the daily operations of the State's interoperability efforts. Primarily, the SWIC's implementation efforts will be guided by the initiatives outlined in the NECP and SCIP. As implementation proceeds, the SWIC will seek guidance, input, and recommendations from the joint effort of the SIGB, State agencies, and regional governance entities. The SWIC's duties involve developing and delivering reports and briefings, coordinating interoperability and communications projects, maintaining governance, and assembling IWGs to develop key recommendations and programmatic implementation.

Specifically, the SWIC should address the following areas:

● **Outreach**

- Maintain a database of SME stakeholder resources across the State.
- Liaise among the Federal Government, State agencies and officials, bordering States, regional and local emergency response community (including UASIs), and tribal nations.
- Serve as the point of contact for the Federal Government and industry in issues concerning statewide interoperable communications.
- Provide governance members with outreach materials that target the State's emergency responders.
- Communicate regularly with all stakeholders to ensure transparency and to share knowledge.
- Attend national interoperability conferences and workshops.

● **SCIP Program Management**

- Leveraging all other components of the statewide governance system, facilitate the development and update of the SCIP.
- Drive and coordinate the effort to implement the SCIP by setting timelines and developing project plans that progress against the initiatives.
- Facilitate the statewide governance system to ensure practitioner input.
- Guide the governance bodies in chartering and supporting IWGs to develop materials,

presentations, issue summaries, etc.

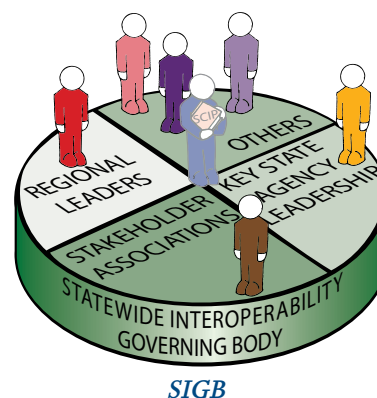
- Escalate policy and grant recommendations to the SAA or Director of the State OHS for consideration by the Governor's Office.
- Write endorsement letters for approved projects on behalf of the SIGB for grant applications.
- Coordinate the SIGB meeting schedules, agendas, and information, as needed, to maximize integration and collaboration with other key governance bodies.
- Maintain records for the effort including, but not limited to, charters, meeting minutes, correspondence, current membership enrollment, recommendations reports, and the interoperability website.
- Provide program management, including staffing, contracting, budgets, and other administrative tasks, to organize the office and its project load.
- **Grants Coordination and Policy Development**
 - Coordinate with the SAA to monitor the State's interoperable communications grant opportunities, review potential projects, and provide documentation to the SIGB for consideration for endorsement.
 - Coordinate the compilation of State investment justifications and grant applications for communications interoperability.
 - Seek additional grant funding opportunities for statewide interoperable communications efforts beyond those that are administered through the SAA structure.
 - Help align locally-awarded, non-State administered, interoperable communications grant funds (e.g., association grants for local disciplines or jurisdictions) to the SCIP.
- **Measurement**
 - Measure progress and results and revise the SCIP, as needed.
 - Develop and measure short- and long-term performance measures to show progress toward improved interoperability.
 - Conduct and maintain a statewide capabilities assessment.

The SWIC may also have secondary responsibilities depending on the size of the office and the complexity of the communications systems statewide. The SWIC may need to:

- Provide technical and standards information to stakeholders.
- Distribute grants to localities.
- Develop and implement statewide SOPs.
- Provide or develop training and exercises for technology and SOPs.
- Procure equipment.
- Perform other duties as determined by their State.

Statewide Interoperability Governing Body (SIGB)

A statewide interoperability governing body, sometimes known as the SIEC, serves as the primary steering group for the statewide interoperability effort. This body evaluates guidance and recommendations provided by the RICs, the State Agency Interoperability Committee, the various IWGs, the Federal Government, tribal nations, private industry, and other stakeholders. OEC recommends that this governing body meet on at least a quarterly basis, preferably in person, to review overall progress toward the State's interoperability vision and to identify priorities. Ideally, this governing body is formalized as a governor's committee through an executive order or through legislation. This will provide the group with the authority to make all interoperable communications funding recommendations regarding the State's general funds and Federal grant allocations for this issue.



Statewide Interoperability Governing Bodies vs. FCC/NPSTC Statewide Interoperability Executive Committees

Sample Mission Statement for an FCC-inspired SIEC:

To manage the public safety interoperability spectrum on behalf of all emergency responders (Federal, State, local, and tribal organizations) by improving emergency response through more effective and efficient interoperable communications.

Sample Mission Statement for an SIGB:

To improve emergency response communications across the State through enhanced data and voice communications interoperability.

The SCIP review demonstrated that many States have long-established SIGBs. Sometimes called SIECs, these SIGBs follow guidelines developed in 2001 by the FCC's Public Safety National Coordination Committee and the National Public Safety Telecommunications Council (NPSTC). The FCC recommended that States create SIECs that are responsible for the administration of interoperability channels. A full description of these SIECs can be found on the NPSTC website⁸.

The mission of a SIGB—as discussed in the following sections—is much broader than the mission of an FCC SIEC. As such, a State should not assume that an existing FCC SIEC fulfills all of the roles and responsibilities discussed here or is compliant with Objective 1 of the NECP and its initiatives. As described in the following pages, a SIGB is a practitioner-driven group committed to managing and implementing the overarching statewide

communications interoperability strategy. While spectrum management is one of the SIGB responsibilities referenced, a SIGB must also address all other facets associated with achieving statewide communications interoperability.

States with an SIEC that manages the State's interoperability channels should consider the following two recommendations to resolve potential confusion or conflict between the FCC SIEC and SIGB:

1. Consider amending the mission statement of the SIEC to be more inclusive of all facets associated with achieving statewide communications interoperability.
2. Consider creating a sub-committee or IWG within the overarching SIGB to address all tasks associated with the SIEC mission of managing the State's interoperability channels.

8 National Public Safety Telecommunications Council. www.npstc.org/siec/siec.jsp

Recommended Membership

The SIGB should be of marginal size and should consist of no more than 20–30 member organizations representing Federal, State, regional, local, tribal, and relevant association/non-governmental interests. It is essential that each organization formally appoint a representative and an alternate-representative to serve, at minimum, a one-year term on the SIGB. Alternate representatives must have equal authority to formulate advice and make decisions on behalf of their constituents. Designated alternates are encouraged to attend all SIGB meetings and are included on SIGB correspondence to ensure familiarity with issues when asked to fulfill the responsibilities of membership. The appointment letter for both the primary and alternate members should be submitted to the SWIC from the executive director of the association, organization, or agency the member is representing. The member should feel empowered to speak for their constituency on behalf of their representative organization.

All members and alternates should be required to sign a non-disclosure form upon appointment to the SIGB to ensure confidentiality. Other organizations may be invited to participate in SIGB meetings to provide input beyond the members' existing capabilities or to provide subject matter expertise. These organizations, however, should not have voting powers.

The following list provides recommended associations, organizations, and agencies that should participate on the SIGB:

State Government Leadership:

- Statewide Interoperability Coordinator's Office (SWIC)
- State's Administrative Agent (SAA)
- State's Director of Homeland Security
- Key executive and legislative leaders

State Associations:

- Emergency medical services (EMS): State's Association of Governmental EMS Administrators
- Fire: State's Fire Chiefs Association & State's Fire Fighters Association
- Law Enforcement: State's Association of Chiefs of Police & State's Sheriff's Association
- Cities: State's Municipal League
- Counties: State's Association of Counties
- State's Association of Public-Safety Communications Officials (APCO)
- State's Emergency Managers Association
- State's National Emergency Number Association (NENA) chapter

State Agencies (Pulling from the State Agency Interoperability Committee):

- State's Information Technologies Agency
- State's National Guard
- State's Department of Transportation
- State's Department of Emergency Management
- State's Police Agency

- State's Fire Agency
- State's Office of EMS

Intrastate Regional Representation (Pulling from each RIC):

- Chairperson from each regional committee
- Representative from each UASI within a region, if applicable
- Representative of each operational area within a region, if applicable

Tribal Nation Representation, as applicable:

- Tribal law, fire, EMS, and/or government representatives

Others:

- Federal Government representatives (i.e., FCC Coordinators, United States Border Patrol, United States Coast Guard, United States Forest Service, the Federal Emergency Management Agency's [FEMA] Regional Emergency Communications Coordination Working Groups [RECCWG], etc.)
- Non-governmental organizations (NGOs) specializing in disaster relief
- Public works associations that manage critical infrastructure
- State associations that represent hospitals and public health organizations
- Bordering States' Statewide Interoperability Coordinators (non-voting)
- Private industry (non-voting)

Recommended Roles and Responsibilities

As a committee with members from various disciplines, localities, and organizations—each with their own way of operating—it is important to establish clear roles and responsibilities for its members. At a high-level, the SIGB is responsible for conducting outreach, overseeing SCIP programmatic implementation, reviewing grant applications, and measuring the overall performance of the statewide effort. While meeting in person is ideal for building relationships and focusing attention, conference calls, video conferencing, and e-voting are other ways to engage those who cannot attend a meeting. Chapter 5 (Maintaining Governance Success to Support SCIP Implementation—Key Elements) provides guidance for developing a charter and bylaws and includes suggestions about providing for e-voting and virtual meetings.

Specifically, the SIGB should address the following areas:

- **Outreach**
 - Educate and regularly update representatives from the Governor's Office, appropriate legislative committees, and the public regarding the State's interoperability work.
 - Report SIGB information back to the organizations of SIGB members for wider distribution.
 - Advocate for interoperable communications at senior levels of government and among member constituencies.
 - Build relationships at the Federal, State, and local levels.

● **SCIP Programmatic Implementation**

- Adopt executive committee bylaws and a charter.
- Work alongside the SWIC to develop and update a SCIP.
- Provide advice, feedback, and support to the SWIC.
- Develop formal recommendations for the SWIC by seeking guidance and considering recommendations on statewide issues from State and regional agency interoperability committees as well as the IWGs.
- Develop a timeline for each IWG and work alongside IWG members to complete key deliverables.
- Participate in SIGB and regional meetings.
- Determine if an IWG is necessary for the accomplishment of an initiative and identify key SME stakeholders to contribute expertise.
- In coordination with regional committees and the FCC SIEC, manage the public safety interoperability spectrum on behalf of all emergency responders.

● **Grants Coordination & Policy Development**

- Resolve issues requiring policy, procedural, or other business decisions, as needed.
- Review interoperable communications proposals for grant funding by organizations, regions, and/or localities throughout the State to ensure alignment with the SCIP; provide endorsement if appropriate.
- Develop statewide investment justifications for grant funding opportunities.
- Develop recommendations to the governor for distribution of State and grant funds to regions and localities within the State for communications interoperability investments.

● **Measurement**

- Recommend an approach for the statewide interoperability efforts and measure progress toward the final vision.
- Provide a method to capture lessons learned for future operations.
- Review and adjust the governance model, as needed, based on measures.

Recommended Grants Coordination Responsibility

A primary responsibility of the SIGB is to assist the Governor's Office and the SAA in managing the State's interoperability grant opportunities. Although the SIGB is not a grant-making body, it should provide guidance to the SWIC and SAA to obtain compliance with the NECP and SCIP. This practitioner-driven guidance will maximize effectiveness and efficiency with which emergency response communications related grant dollars are allocated and spent. The grant guidance should outline recommended grant funding eligibility—including applicants and activities, application criteria, guidelines, and resources—to assist the emergency response community in strengthening interoperability. SIGBs are encouraged to reference the SAFECOM Grant Guidance⁹ document.

One of the best ways to ensure statewide alignment and compliance to the SCIP is to empower the SIGB with the ability to guide grant funding decisions regarding interoperable communications. When a State receives Federal interoperable communications grant guidance, the SIGB should be held responsible for

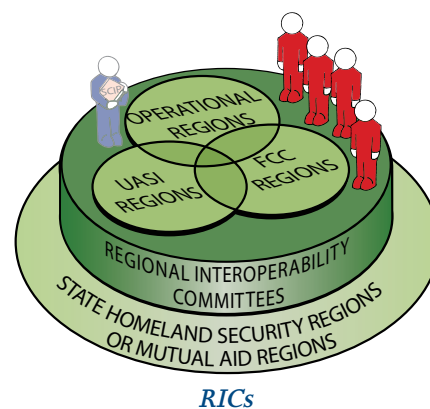
9 U.S. Department of Homeland Security, SAFECOM program. Recommended Federal Interoperable Communications Grant Guidance Fiscal Year (FY) 2008. www.safecomprogram.gov/NR/rdonlyres/9DD1739B-544E-49C7-9E0F-92ED58917CD0/0/FY2008SAFECOMGrantGuidance.pdf

recommending sub-grantee guidance to the SAA for distribution throughout the State's regions, UASIs, and localities. Furthermore, the SIGB should review all investment justifications from across the State to ensure compliance with the SCIP and the statewide vision. Upon review, the SIGB should provide the SAA and/or governor with a recommendation on each State, region, UASI, and/or local investment justifications.

SIGB representatives, with support from the SWIC, should also ensure that their regional, local, and tribal counterparts are developing investment justifications that align with the SCIP for all independently awarded grants. For example, if a local fire department is awarded funds from the International Fire Chiefs Association to support a communications interoperability project, that project should support the SCIP's mission, vision, goals, and objectives. The SIGB and the SWIC should be informed of the project and support the awardees as necessary to ensure alignment with the SCIP.

Intrastate Regional Interoperability Committees (RICs)

Developing and sustaining RICs is crucial to the statewide effort. These committees will truly allow the effort to be practitioner-driven from the bottom up. While the SIGB provides the State with high-level strategy, the intrastate regional bodies provide insight into that strategy from an operational perspective. The RICs play a pivotal role in developing appropriate SOPs, training opportunities, and tactical interoperability plans for the distinct requirements of their regions' disciplines and jurisdictions. Due to the operational nature of RICs, OEC recommends that they meet monthly.



Recommended Membership

While each regional area should be encouraged to develop a governance system that best fits its area's needs, the SWIC, working alongside each regional chairperson, should ensure that the RICs have adequate representation among law enforcement, fire, EMS, emergency management, and other relevant government agencies from each local entity (UASIs, counties, cities, tribal Nations, etc.) within the planning area. This framework allows the SIGB to ensure that statewide communications interoperability strategic planning, coordination, collaboration, and build-out occur on a statewide strategic level; at the same time, this framework encourages operational and response planning and implementation at the regional level.

While the SIGB membership focuses on members tied to statewide associations, RIC membership should come from operational, on-the-ground practitioners with expertise or passion to resolve the interoperable communications dilemma. To ensure alignment, the chairperson of each RIC should serve on the SIGB as well as on the committees associated with the State's Homeland Security Region or Mutual Aid Region.

The statewide interoperability effort will benefit from regional bodies that include at least one local, discipline-specific member from each county within the region. Additionally, county chief information officers, local Public Safety Answering Point (PSAP) managers, county budget officers, and local radio technicians may be useful additions to the committee. State agencies, UASIs, special operational committees, NGOs, critical infrastructure organizations (such as power plants), and major transportation

organizations (such as port authorities) that have a presence within the region should also serve on the regional committee. It is important, however, to balance the committee's membership to assure that no one county, jurisdiction, or discipline consistently has a majority presence. Bylaws should be written by each region to ensure balance and equity; one approach is to ensure that no one county, jurisdiction, UASI, or organization represented has more than one vote.

Recommended Roles & Responsibilities

The RICs should address the following areas:

- **Outreach**
 - Provide the SIGB with input for all local communications interoperability issues.
 - Develop a Tactical Interoperable Communications Plan (TICP) for the region.
 - Obtain consensus among all localities, disciplines, and organizations within the region regarding communications interoperability projects.
 - Provide opportunities for collaboration between all UASIs and other sub-regions within the RIC.
 - Educate local policymakers.
- **SCIP Programmatic Implementation**
 - Align the SCIP to a regional strategic communications interoperability plan.
 - Provide the SIGB with input and data for the development and revision of the SCIP.
 - Develop a standing memorandum of understanding (MOU) among all counties and localities within the region; this MOU should address sharing resources for regional communications interoperability planning and implementation.
 - Develop a process to allow associated equipment to be purchased collectively ensuring compatibility and favored pricing throughout the region.
- **Grants Coordination & Policy Development**
 - Develop grant investment justifications for all entities within the region and provide recommendations to the SIGB for consideration.
 - Administer awarded grant funds for regional projects.

Creating a Communications Interoperability Region

Most States have a plethora of regions, each with their own concerns and issues. OEC neither encourages nor recommends the creation of new regional boundaries for the sole purpose of interoperability planning. Rather, OEC recommends the statewide communications interoperability effort leverage the political boundaries of the State's Homeland Security Regions or the operational boundaries of the State's Mutual Aid Regions. Aligning with one of these pre-existing regional bodies offers key advantages.

- **State's Homeland Security Regions:** Ensures the RICs are aligned with the regional disbursement of statewide grant funds. This will support and simplify the committee's responsibility of developing regional investment justifications for Federal communications interoperability grants.
- **State's Mutual Aid Regions:** Ensures the RICs are aligned with the region's emergency management operational requirements, procedures, and National Incident Management System (NIMS) protocol.

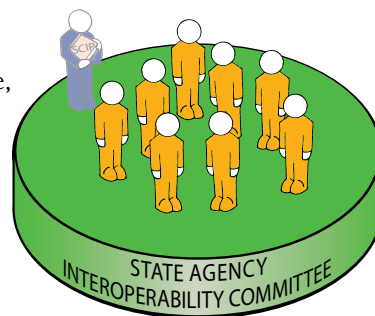
Regions within the Region

The pre-existence of specific operational sub-regions within the political boundaries of the desired RIC often make regional planning along the aforementioned boundaries challenging. For example, a desired interoperability region may include a Federally-recognized UASI within its borders or a grouping of small to medium urban areas that have joined through an MOU or Joint Powers Agreement to share a communications system. It is likely that both the UASI and the urban area's shared systems also have standing communications interoperability governance systems.

These sub-regional governance bodies should not be dissolved; rather they should be incorporated into the overarching regional body. This can occur by allowing each sub-region to have one official voting position on the RIC. For instance, the chairperson of the committee responsible for UASI communications interoperability planning should also serve on the larger statewide-focused RIC. While appearing bureaucratic, this process allows for all entities across the State to remain aligned and compliant with the NECP and the SCIP. Furthermore, this alignment allows for all interoperability bodies to remain informed of the statewide vision and provides fluid access to the grant funding opportunities.

State Agency Interoperability Committee

OEC recommends that each State have a State Agency Interoperability Committee, in addition to a SIGB, to focus on State agencies interoperable communications needs. The State Agency Interoperability Committee is similar to the RIC, except that its membership is made up of representatives from State agencies that respond to incidents across the State. In many States, this body has existed for many years and simply needs to be incorporated into the coordinated statewide governance system.



*State Agency
Interoperability Committee*

Recommended Membership

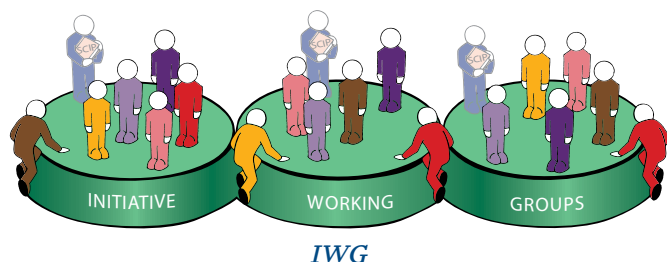
Membership in this committee should include the SWIC (in a non-voting, coordinating role) and all State agencies and key departments. Committee members should be officially appointed by State agency directors or cabinet secretaries. The SWIC should keep a file of all appointment letters. State Agency Interoperability Committee members should be empowered to speak on behalf of their perspective agency or department. To maintain alignment, key State agency members, such as State Police, should also serve on the SIGB. OEC recommends that the State Agency Interoperability Committee meet regularly.

Recommended Roles & Responsibilities

The State Agency Interoperability Committee should address the following areas:

- **Outreach**
 - Work collaboratively with the SIGB to assure that all State agencies are aligned with the NECP and the SCIP.
- **SCIP Programmatic Implementation**
 - Ensure that all State agencies are interoperable among themselves.

- Support and comply with the SCIP, which may include developing a strategic plan specifically for State agencies.
- **Grants Coordination & Policy Development**
 - Develop and provide investment recommendations to the SIGB relating to the State portion of Federal communications interoperability grant funds.



Initiative Working Groups (IWG)

Temporary, narrowly-charted IWGs should be formed to provide recommendations on initiative implementation to the SIGB, as well as to other components that wish to develop them (e.g., RICs, State Agency Interoperability Committee, etc). IWGs are the engine of the statewide interoperability effort. They complete the tasks

associated with initiatives identified within the SCIP and provide a recommendations report on the initiative to the SIGB for consideration and potential adoption. Additionally, IWG members participate in the SCIP update process by identifying potential initiatives that the SIGB and SWIC should consider adding to the State's interoperability effort. Chapter 4 (Leveraging Governance for Programmatic SCIP Implementation) provides specific details on how the IWGs drive SCIP implementation. The SWIC should help organize, steer, and maintain the IWGs.

In some instances, standing committees may be appropriate to ensure the continuity of operations over the life of the SCIP implementation effort. For example, a State or region may determine that it needs a standing technical committee to support a long-term, large procurement effort. Appendix B (Enhancing Governance Through the Use of Standing Committees—One State's Approach) details one State's approach to developing these standing committees.

Recommended Membership

The IWGs are informal groups of practitioners assembled for a limited timeframe to work toward the accomplishment of a specific initiative. IWGs are made up of regional and local emergency response practitioners and other stakeholders, as necessary, who accomplish the initiatives. Members are generally SMEs on the issue the SCIP initiative addresses. OEC recommends that IWG members are resourced from the entire stakeholder community regardless of whether they serve on a standing committee or not. IWG members may include:

- State and local technology and communications interoperability experts
- Regional organization members and coordinators
- Local emergency responders
- Stakeholder association representatives
- Professionals who represent emergency support functions such as transportation and health care
- Self-selected participants from across the State

Recommended Roles and Responsibilities

The IWGs should:

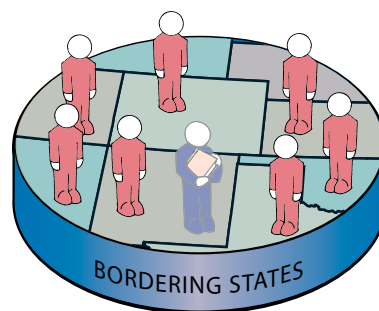
- Vet the timeline and determine the project plan for initiative accomplishment.
- Develop recommendation reports for consideration by the SIGB.
- Establish an IWG lead to coordinate activities, arrange meetings, and report back to the SIGB.
- Pursue additional resources, as needed, to complete tasks.

Bordering States

Since incidents and communications requirements do not stop at a State's border, it is important that the statewide effort and its governance system coordinate with bordering States. Many RICs may have sub-regions that cross State or even international borders. These groups should continue to meet and be incorporated into the larger RICs.

Three basic approaches to ensure statewide coordination with bordering States include the following:

1. Invite all neighboring States' Statewide Interoperability Coordinators to attend as non-voting members on the SIGB.
2. Create a multi-State interoperable communications consortium. The membership of the consortium should consist of each State's coordinator, each State's SIGB chairperson, and the chairperson of any bordering statewide RICs. Consortium members should meet regularly to discuss each State's interoperability progress and vision. The consortium should seek out Federal grant funds for coordinated multi-State efforts. Appendix B (Enhancing Governance Through the Use of Standing Committees—One State's Approach) details one State's approach to implementing interstate governance by utilizing this kind of consortium.
3. Coordinate with the FEMA Regional Administrators regarding the activities of FEMA's RECCWGs. FEMA's ten regions are responsible for working in partnership with emergency management agencies from each State within the respective region to prepare for, respond to, and recover from disasters. The RECCWGs can serve as a primary link between all levels of government within the FEMA region to share information, identify common problems, and coordinate multi-State and multi-jurisdictional emergency response initiatives.

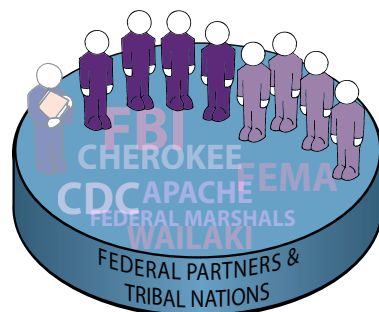


Bordering States

Federal Partners & Tribal Nations

To prepare for large-scale national events and emergencies, it is essential to coordinate with Federal partners and tribal nations. To do so, the State should:

- Include, when possible and appropriate, key Federal partners and tribal nations as members of the SIGB and statewide RICs.
- Strongly encourage the SWIC and chairpersons of the SIGB, State Agency Interoperability Committee, and RICs to attend national conferences and workshops that focus on communications interoperability.
- Coordinate with the FEMA Regional Administrators regarding the activities of FEMA's RECCWGs (see Bordering States section above).



Federal Partners & Tribal Nations

Getting Things Done Within a Diffuse Power Structure: A Case Study from *Good To Great* and the Social Sectors by Jim Collins

“When Francis Hesselbein became CEO of the Girl Scouts of the USA, a *New York Times* columnist asked what it felt like to be on top of such a large organization. With patience, like a teacher pausing to impart an important lesson, Hesselbein proceeded to rearrange the lunch table, creating a set of concentric circles radiating outward – plates, cups, saucers – connected by knives, forks and spoons. Hesselbein pointed to a glass in the middle of the table. “I’m here,” she said. Hesselbein may have had the title of Chief Executive Officer, but her message was clear: *I’m not on top of anything.*”

This example allowed her to explain how she could have tremendous influence in a governance structure that was composed of hundreds of local Girl Scout councils (each with its own governing board) and over 650,000 volunteers without having formal power over any of them. Jim Collins, the author of *Good to Great*, asked her how she got so much accomplished without concentrated executive power. Hesselbein replied, “Oh, you always have power, if you just know where to find it. There is the power of inclusion, and the power of language, and the power of shared interests, and the power of coalition. Power is all around you to draw upon, but it is rarely raw, rarely visible.” Figure 3-2 (Coordinated Communications Interoperability Governance) is an example of how States can create a governance system that allows them to maximize their influence and still respect those whom they are influencing.

Section adopted from: Helgesen, Sally, “The Pyramid and the Web,” *New York Times*, May 27, 1990 F13
Collins, Jim. *Good to Great and the Social Sectors: A Monograph to Accompany Good to Great*. 2005.

Coordinated Statewide Governance System

For a coordinated statewide governance system to succeed, each of the seven aforementioned components must exist, collaborate, and respect each other. Statewide interoperability cannot occur within a vacuum of any one component, nor can a component claim success without other components. Figure 3-2 (Coordinated Communications Interoperability Governance) demonstrates the OEC-recommended methodology for statewide governance.

Again, it is important to note that this is a coordinated governance effort and not a hierarchal one. The SWIC provides support and coordination out to each entity and in return those bodies provide the SWIC with guidance and recommendations on policies, procedures, grant investments, and future strategy. Each of the components share resources, with some members serving on more than one component. Composed of a cross-section of stakeholders representing all of these components, the IWGs are the short- and long-term committees whose members collaborate and move statewide initiatives forward. The SWIC, with assistance from the SIGB, assesses the best and brightest from each governance entity, as well as from the stakeholder resource pool, and develops limited-term, matrix-based teams to implement a particular initiative on behalf of the statewide communications interoperability effort.

Appendix A (Current Statewide Governance Structures—Sample SCIP Models) provides an assessment of four of the most common governance models that were reported in the SCIPs submitted to OEC in December 2007. While each model has elements of the OEC-recommended methodology, none fully captures the breadth of relationships that is likely needed for maximum success. Readers may want to determine which of the four common models most closely aligns to their State’s governance structure in order to identify potential challenges and possible areas of improvement. Once again, OEC is not suggesting that existing State governance entities be replaced, but rather that the State ensures that each component of their governance system include all the relevant stakeholders, take on the recommended roles and responsibilities, and build relationships in order to maximize impact.

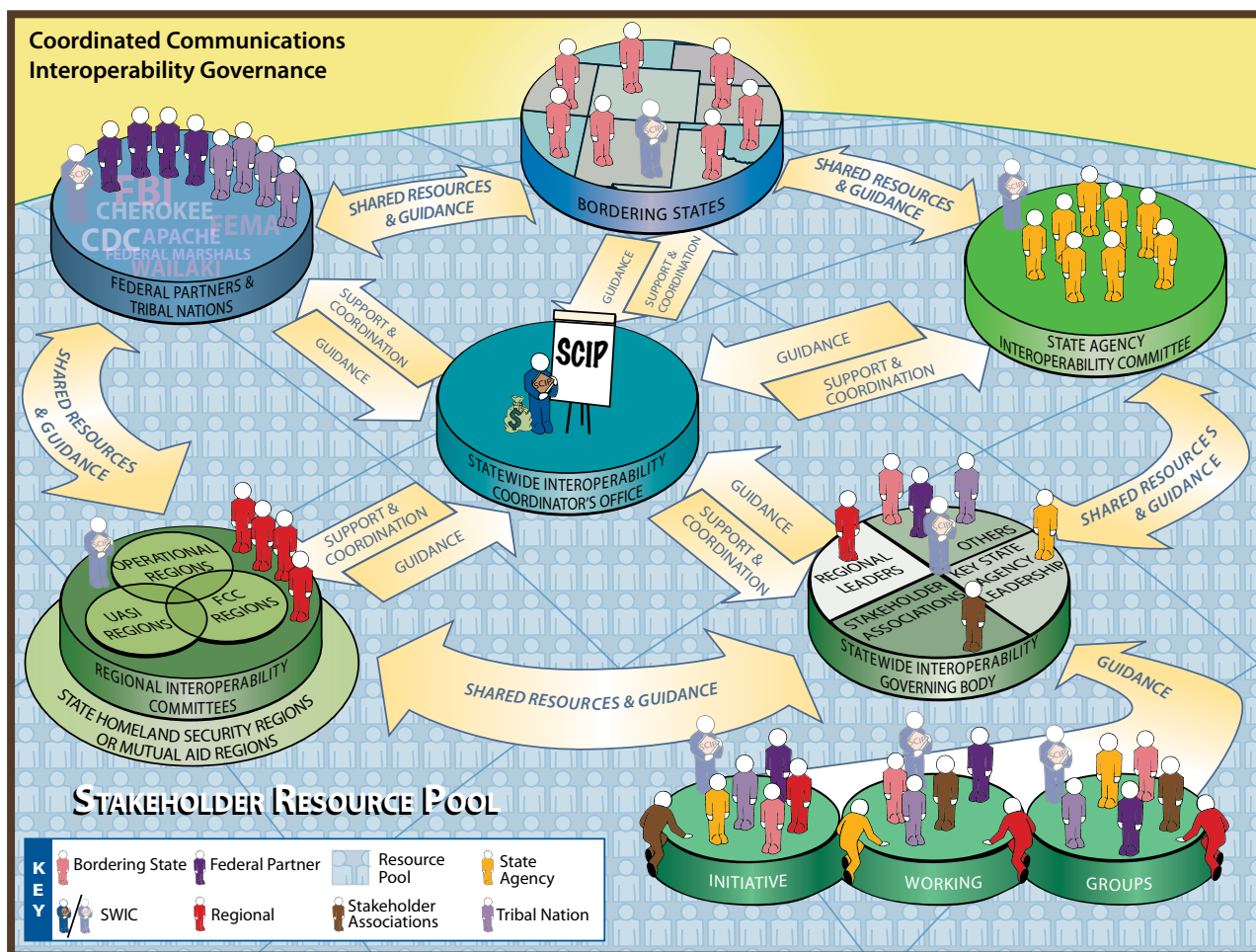


Figure 3-2 Coordinated Communications Interoperability Governance

Interoperability Phases

As presented above, a coordinated statewide governance system is a balance of independent Federal, State, county, city, town, and tribal officials and stakeholders working collaboratively to achieve a common vision. Each component of the statewide governance system is working on one or more of the following interoperability phases:

- Phase 1: Provide interoperability governance and outreach statewide.
- Phase 2: Achieve communications operability for State agencies and localities as necessary to support interoperability.
- Phase 3: Achieve data and voice interoperable communications within each locality to enhance multi-discipline response capabilities for local response.
- Phase 4: Achieve multi-discipline and multi-jurisdiction data and voice interoperable communications to enhance regional response capabilities.
- Phase 5: Enhance State agencies' data and voice interoperable communications to provide comprehensive support during emergencies.
- Phase 6: Provide tools necessary for region-to-region and State-to-region data and voice interoperable communications to enhance mutual aid response capabilities.

- **Phase 7:** Enhance communications back-up and redundancy for interoperable systems to ensure communications are maintained following catastrophic events.
- **Phase 8:** Support interoperable communications with Federal entities, other States, and countries to respond to national, multi-State, and international emergencies.
- **Phase 9:** Achieve the integration of private entities identified as part of critical infrastructure/key resources and the participants in the State Emergency Operation Plan into interoperability efforts to ensure communications are maintained during emergencies and recovery efforts.

Observed from a macro level, the holistic, coordinated statewide governance system will be consistently addressing each phase at the same moment in time. For example, a rural region within the State may be working to achieve operability (Phase 2) while a robust UASI region may be working to enhance its communications interoperability back-up and redundancy systems (Phase 8). The phases cut across any State's strategic initiatives and focus on the breadth of interoperable communications and the steps required to achieve them. Each phase builds upon the last and is listed in priority order. Table 3-1 maps each phase to the seven components of the recommended statewide governance system.

| | Fundamental Structural Components of Interoperability Governance | | | | | | | |
|-------------------------|--|---------------------------|--|--|--|---|---------------------------------|--|
| Interoperability Phases | | Stakeholder Resource Pool | Statewide Interoperability Coordinator's Office (SWIC) | Statewide Interoperability Governing Body (SIGB) | Regional Interoperability Committees (RIC) | State Agency Interoperability Committee | Initiative Working Groups (IWG) | Bordering States, Federal Partners, and Tribal Nations |
| | Phase 1 | ● | ● | ● | ● | | ● | |
| | Phase 2 | ● | ● | | ● | ● | ● | |
| | Phase 3 | ● | ● | | ● | | ● | |
| | Phase 4 | ● | ● | | ● | | ● | |
| | Phase 5 | ● | ● | | | ● | ● | |
| | Phase 6 | ● | ● | ● | ● | ● | ● | |
| | Phase 7 | ● | ● | ● | ● | ● | ● | |
| | Phase 8 | ● | ● | ● | ● | ● | ● | ● |
| | Phase 9 | ● | ● | ● | ● | ● | ● | |

Table 3-1: Components of Interoperability Governance Mapped to Interoperability Phases

Coordinated Statewide Governance System in Action

Once institutionalized, figure 3-3 (Statewide Governance in Action), below, demonstrates how the statewide governance system acts when recommending and implementing policies needed to achieve each of the interoperability phases. The model uses a communications interoperability grant announcement to demonstrate how strategic recommendations from the SIGB guide the SAA to policy decisions that become implementable actions by the State Agency Interoperability Committee and RICs.

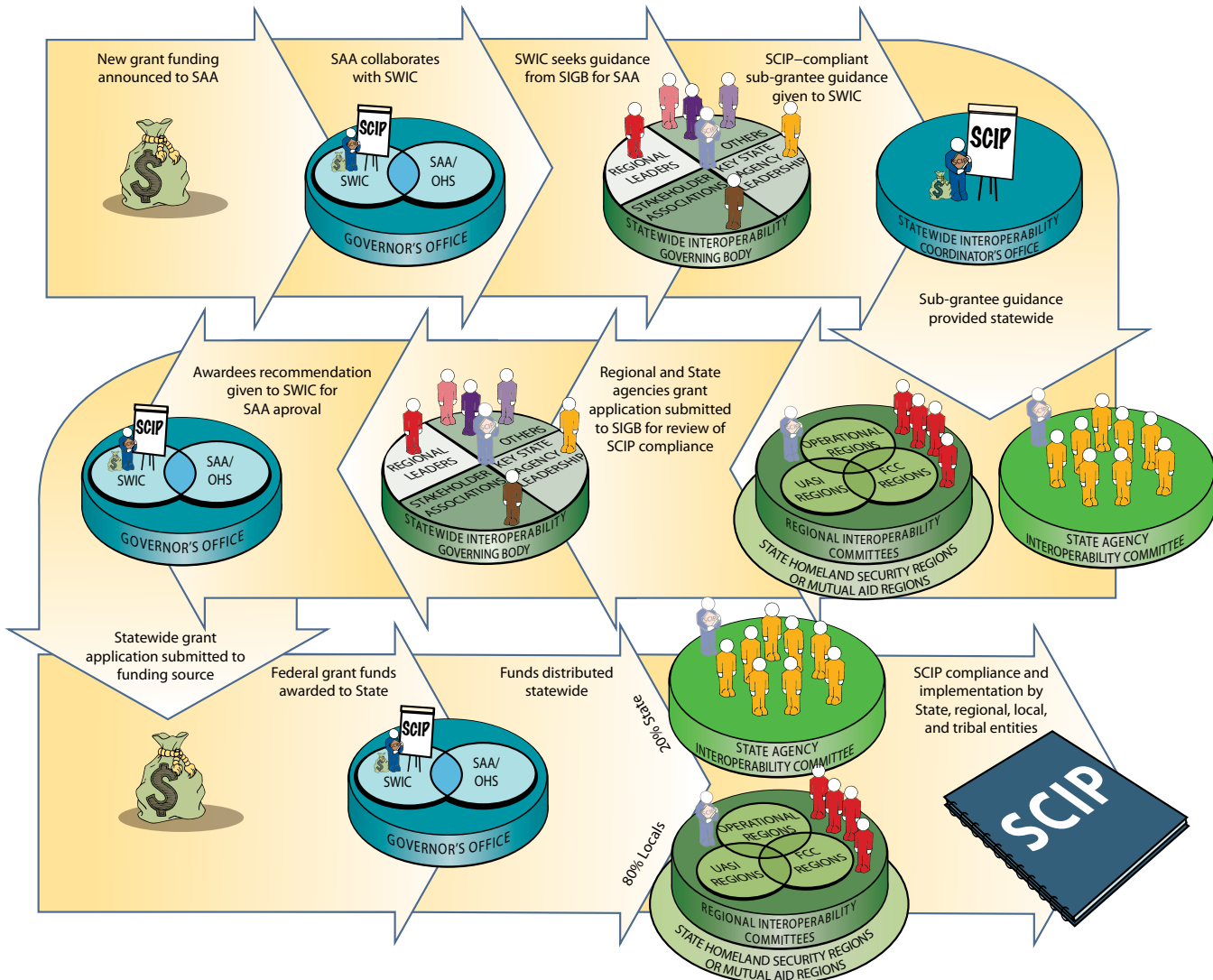


Figure 3-3: Statewide Governance in Action

4

Leveraging Governance for Programmatic SCIP Implementation

Statewide interoperability is a long-term objective that can only be achieved through a multi-phased approach of planning, implementation, and assessment. It is an iterative process that repeats as the State's stakeholders leverage their governance system to develop a SCIP, plan for and implement its initiatives, and measure and review the progress to date. Figure 4-1 (SCIP Planning & Implementation Lifecycle) illustrates this multi-phased approach. OEC developed this lifecycle model after reviewing all 56 State SCIPs and gathering practitioner input from across the Nation.

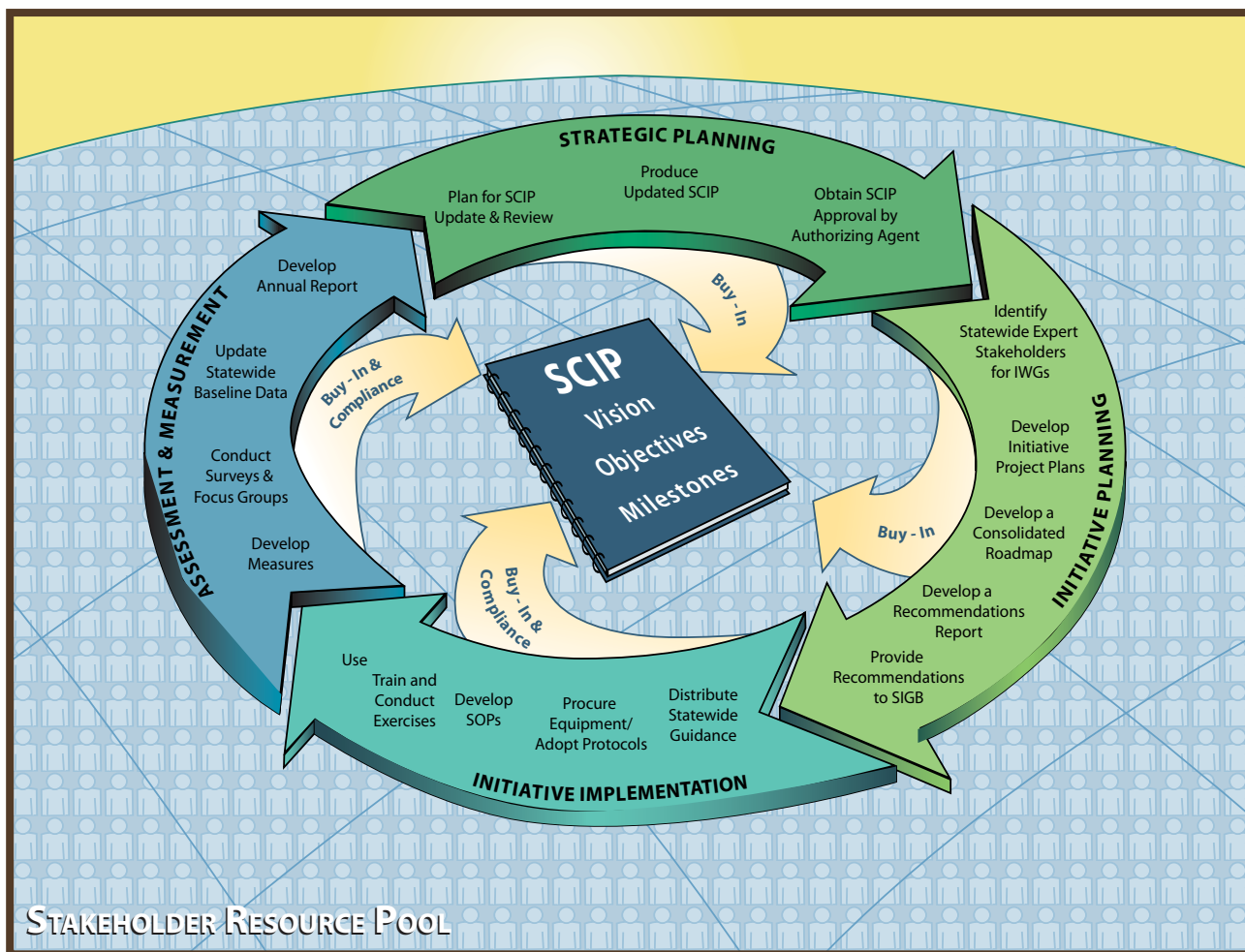


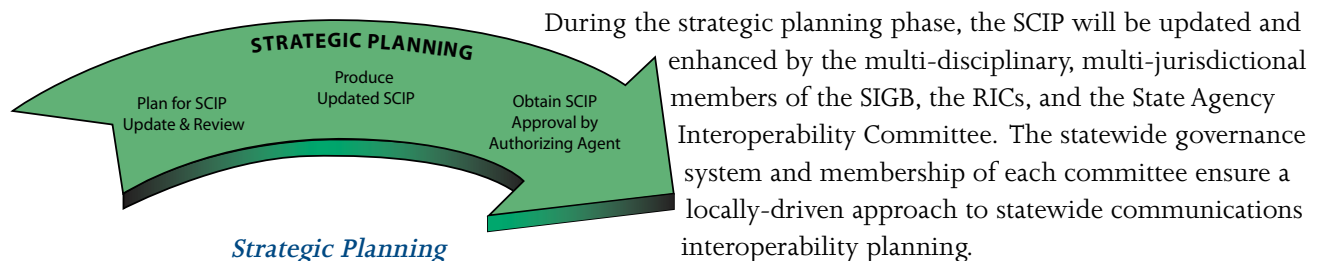
Figure 4-1: SCIP Planning & Implementation Lifecycle

The lifecycle model depicts the phases that the SWIC must go through on a regular basis, usually in overlapping timeframes. The first phase is strategic planning and includes all aspects of creating and updating the SCIP. The second phase is initiative planning where the IWGs clarify and develop the initiatives. Once approved, the third phase, initiative implementation, begins. The fourth phase is focused on the assessment and measurement of both the SCIP and each of the implemented initiatives. The final phase is the ongoing buy-in and compliance of the SCIP's initiatives. It is important to recognize

that since all States have received OEC approval for their SCIPs, they are likely to be active in all five phases concurrently. This planning and implementation lifecycle is ongoing, and OEC recommends that States update, implement, institutionalize, and measure the success of their statewide communications interoperability effort at least every three years.

A well-defined statewide governance system can be powerfully leveraged by the SWIC to implement a State's initiatives, assess its impact, obtain buy-in, assure compliance, and make improvements to the plans. As such, the SWIC should use the State's governance system and engage practitioners in every stage of the lifecycle. The SWIC, with support from all the organizations built into the statewide governance system, is responsible for shepherding this lifecycle and coordinating the multitude of stakeholders in driving it clockwise. Much like the governance system referenced in Chapter 3 (Statewide Governance Methodology—Key Elements & Fundamental Components), the base for the SCIP implementation process is derived from the State's stakeholder resource pool.

Strategic Planning



Plan for SCIP Update & Review:

While the vision, mission, goals, objectives, and milestones identified in a State's initial SCIP represent the State's long-term strategy, the initiatives and tasks identified in the plan should be revised regularly. These changes should be codified in updated versions of the SCIP. It is these strategic updates that will continue to propel a State toward its vision of greater statewide interoperability. OEC recommends that each State update its SCIP every one to three years.

Once the SWIC and SIGB determine the update cycle appropriate for the State, the SWIC can properly plan for the SCIP update process. The SWIC should utilize the expertise within the statewide governance system when preparing for and updating the State's SCIP. This process should include gathering input from across the State through regional planning sessions, baseline assessments, and executive input. The *SAFECOM Statewide Communications Interoperability Planning Methodology v2.0*¹⁰ provides further detailed information on how to execute a practitioner-driven, bottom-up strategic planning process.

Produce Updated SCIP:

To update the SCIP, the SWIC should consider recommendations identified from previous cycle reviews, any assessment information that may be on hand, and the current political and technological environment to:

10 U.S. Department of Homeland Security, SAFECOM program. SAFECOM Statewide Communications Interoperability (SCIP) Planning Methodology v2.0: A Collaborative Approach to Statewide Communications Interoperability Planning. www.safecomprogram.gov/NR/rdonlyres/DD91CD2C-FD2E-4BBC-AFEA-E620B4BBB891/0/SCIPMethodologyv20FINAL.pdf

- Add new initiatives to be accomplished in the coming cycle.
- Identify, update, and carry over pertinent incremental initiatives and tasks from the previous SCIP.
- Move ongoing initiatives to the appropriate State or regional section within the SCIP.
- Add new content to provide practitioners with the most current information about the status of interoperability within the State.

Obtain SCIP Approval by Authorizing Agent:

Once developed by the SWIC, the final draft of the updated SCIP should be vetted and approved by the SIGB. Upon gaining this internal governance approval, the updated SCIP should be forwarded with a recommendation to the Governor's Office, Homeland Security Director, or SAA for consideration and approval. Once executive sign-off on the updated SCIP occurs, planning and implementation of the plan's new initiatives can begin. A signed endorsement letter by the governor provides the updated SCIP with the utmost gravitas needed to encourage stakeholders to comply with the plan.

Initiative Planning

The initiative planning phase is where the SCIP initiatives become more than just promising ideas; it is where they take shape and win supporters. Thorough, inclusive planning efforts will greatly increase the success of the implementation efforts to follow. At the core, initiative planning efforts include substantial stakeholder engagement and strong project management, all of which builds support for customer and stakeholder acceptance and compliance.

Identify Statewide Expert Stakeholders for IWGs:

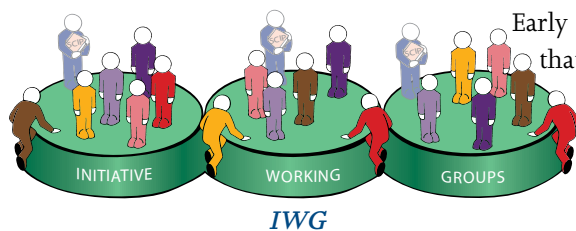
The first step in the initiative planning phase is to identify a pool of statewide expert stakeholders who can be utilized throughout the State's interoperability efforts. For the SCIP initiatives to gain any support (both statewide and at the local level), the State must engage practitioners who have the expertise and experience to assist State leaders in the implementation of the initiatives.



Successful interoperability initiatives repeatedly engage stakeholders at all levels.

A State with a comprehensive statewide governance system, similar to the one outlined in Chapter 3 (Statewide Governance Methodology—Key Elements & Fundamental Components), will find it easier to utilize a practitioner-driven approach to implement its SCIP initiatives. As a first step,

the SWIC and other statewide governance bodies should identify SME practitioners from the State's stakeholder resource pool to form the IWGs referenced within the governance model. These SMEs can be identified through various sources including the SWIC and SIGB, regional governance bodies, the State's interoperability websites, relevant electronic mailing lists and listservs, and previously-engaged stakeholders' interpersonal networks. The SWIC is responsible for maintaining a detailed list of the people and organizations that can be brought into the effort.



Early efforts to identify the right SMEs for each IWG will help ensure that unexpected resistance does not occur later in the process. It is important to select individuals who bring a diversity of viewpoints to the effort and who can help explain how to engage others like them. While there should be some well-respected, high-profile individuals championing the effort, there should also be a few dissenters at the table. This balance

will keep the group optimistic and energized without ignoring the very real problems that must be addressed in order to gain ultimate buy-in to the initiatives.

There will be different kinds of IWGs depending on each initiative's scope. For initiatives to have the most impact at the statewide governance level, it is important to identify stakeholders who can make recommendations with respect to all lanes of the SAFECOM Interoperability Continuum. Often, this will include stakeholder representatives from associations. Examples of policy-based initiatives include developing a statewide plain language protocol or determining the guidance for the procurement of a statewide tactical radio reserve. For initiatives that directly impact the operations of State, regional, or local agency levels, convene the necessary decision makers and practitioners, including representatives from statewide governance bodies, who can move key initiatives forward. This group of stakeholders should have more grassroots, tactical experience. Examples of operations-based initiatives include acquiring funds and managing grants, purchasing equipment, developing SOPs for these new purchases, coordinating system build-outs, and developing training and usage plans.

Develop Initiative Project Plans:

The second step in the initiative planning phase is for each IWG to develop a detailed project plan for their initiative. Each project plan needs a clearly defined scope, explicitly stated objectives, and a work plan that includes ambitious but realistic timelines. For each initiative, the corresponding IWG—assisted by the SWIC—should:

- Draft a scope statement that defines the initiative's reach—what is and is not included in the project. Spending the time to scope each initiative, particularly when done with the input of key stakeholders, will greatly increase the chances that recommendations are accepted. A clearly defined scope will also help identify whether the suggested changes made mid-implementation are merited or are inconsistent with the core purpose of the initiative.
- Develop and define the initiative's objectives in measurable and achievable terms. Objectives that are clearly articulated explain what stakeholders should expect from the project and build additional buy-in and support for compliance. They also create a baseline expectation from which performance can be measured.
- Develop a work plan that includes a timeline for implementing the initiative and its associated tasks. That work plan should prioritize the tasks associated with the initiative and provide ambitious but achievable deadlines for completing tasks and project milestones.

In order to develop initiative project plans that are comprehensive and realistic, IWG members will need to conduct research before developing their recommendations. The SWIC can assist the IWGs with this research by facilitating focus group meetings, organizing surveys, and gathering existing reports on similar initiative efforts from other States. Additionally, IWG members can interview other experts in the field and search out best practices, among other research techniques. This wide-spread effort will back the recommendations with credible research that can assist in obtaining stakeholder buy-in and compliance once the recommendations are finalized and approved.

The Department of Justice's Office of Community Oriented Policing Services (COPS) created a guide with strategies, best practices, and recommendations for interagency communications projects. The *Law Enforcement Tech Guide for Communications Interoperability*¹¹ (specifically Chapters 5-8) is an excellent resource for additional guidance when developing initiative project plans.

Develop a Consolidated Roadmap:

Once the IWGs have developed each initiative project plan, the SWIC should produce a consolidated roadmap that charts the key tasks for all of the SCIP initiatives and the targeted dates for achieving these milestones. Figure 4-2 (Consolidated Statewide SCIP Roadmap) is a sample consolidated statewide roadmap that can help illustrate the priority of tasks among the many SCIP initiatives. This key project management component helps ensure that the SCIP's initiatives do not operate in a vacuum, but that they work together toward the identified vision.

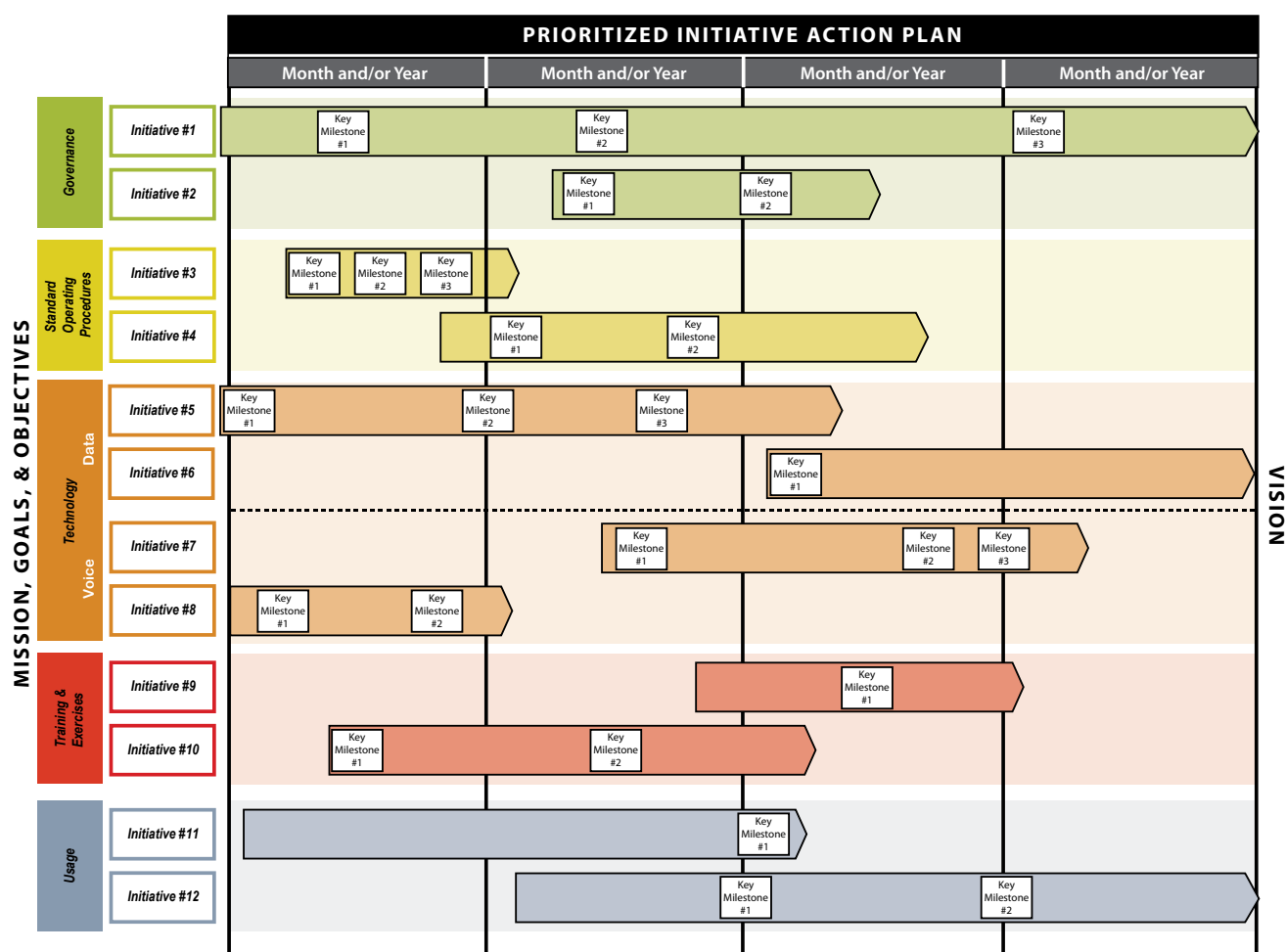


Figure 4-2: Consolidated Statewide SCIP Roadmap

11 U.S. Department of Justice, Office of Community Oriented Policing Services. Law Enforcement Tech Guide for Communications Interoperability, December 2006. www.cops.usdoj.gov/ric/ResourceDetail.aspx?RID=238

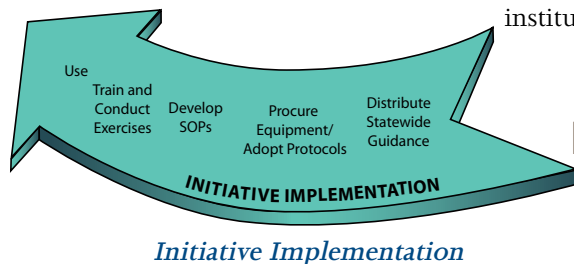
Develop a Recommendations Report:

A formal recommendations report is the best format to use when submitting IWG recommendations through the statewide governance system and into the State's policy approval process. In addition to the final recommendations, the report should present a list of the practitioner stakeholders who served on the IWGs, an overview of the research that supports the report's conclusions, the methodology and process used to derive the conclusions, the consolidated roadmap, and any next steps or initiatives that the IWG members believe should be included in an updated version of the SCIP. The SIGB and the SWIC should set realistic but aggressive deadlines for when the IWGs should produce their recommendations to the SWIC so that the SWIC can assemble the overall recommendation report and provide it to the SIGB in a relatively quick timeframe.

Provide Recommendations to SIGB:

Upon completion of the recommendations report, the SWIC should provide the report to the SIGB on behalf of the IWGs. IWG members should then present their findings and recommendations at a scheduled SIGB meeting. The purpose of the presentation is to not only inform SIGB members of the recommendations, but to obtain their buy-in. SIGB members will then be expected to champion the IWGs' recommendations to their respective associations and constituencies as well as to the legislative and executive leaders within the State.

As recommendations are made in the initiative planning phase and accepted by individuals and organizations throughout the statewide governance system, they build buy-in for and compliance with the SCIP initiatives. If recommendations are not approved or require additional work for acceptance, they will remain within the outer ring of the lifecycle to be measured and planned for in the following cycle. Complex initiatives may take multiple years to achieve buy-in and compliance while others may be institutionalized more quickly.



Initiative Implementation

The initiative implementation phase is when the planning pays off and the SCIP comes alive. Often, the majority of the work initiated during the implementation phase is carried out not by the SWIC and the other statewide governance bodies, but by the regional and local stakeholders who are part of the statewide effort. As seen in figure 3-3 (Statewide Governance in Action), the final funding is not awarded to the SIGB but rather to the State and Regional Agency Interoperability Committees. These committees, consisting of a greater operational role, are the primary implementers of the statewide strategy. In this phase, the SWIC and SIGB must be very supportive of these stakeholders who will likely carry the heaviest load and need the support of statewide leaders.

The *Law Enforcement Tech Guide for Communications Interoperability*¹² (specifically Chapters 9-14) is an excellent resource for additional guidance on implementing a technology initiative, particularly with regard to procuring equipment.

12 U.S. Department of Justice, Office of Community Oriented Policing Services. *Law Enforcement Tech Guide for Communications Interoperability*, December 2006. www.cops.usdoj.gov/ric/ResourceDetail.aspx?RID=238

Distribute Statewide Guidance:

Once the SIGB has approved the IWGs' recommendations about a particular initiative, the SWIC, working alongside the SAA, should prepare and distribute statewide guidance to the stakeholders to help them implement the initiatives. Guidance can be in the form of grant guidance or suggested protocols for a statewide initiative. As previously discussed, grant guidance is an effective tool to encourage SCIP compliance and initiative implementation as most emergency responder communications systems within a State are owned and operated by local entities not directly controlled by State officials. State agency heads and regional and local leaders can then decide if they want to pursue the grant funding and implement the policies described by its guidance.

Procure Equipment/Adopt Protocols:

Many of the statewide initiatives require a procurement process to be initiated. Others require the various governance bodies and stakeholder groups to adopt protocols (e.g., a statewide plain language initiative). In either case, much of the actual work is being carried out at the stakeholder level rather than by the SWIC or SIGB. The SWIC can be of help, however, by coordinating and communicating repeatedly with all stakeholder groups within the statewide governance system. As demonstrated by figure 3-2 (Coordinated Communications Interoperability Governance), the SWIC is situated in the middle of the system aiding all governance components in sharing resources and providing support and coordination across the State.

Develop Standard Operating Procedures (SOPs):

SOPs are formal written guidelines or instructions for incident response. SOPs typically have both operational and technical components. SOPs must be determined once equipment is procured or a protocol is adopted by a State agency, region, locality, or discipline. For example, if a Sheriff decides to implement a plain language initiative, specific SOPs need to be developed and adopted to implement the protocol. Similarly, if a region decides to adopt a shared channel protocol, specific SOPs need to be developed and adopted for their regions' requirements.

Train & Conduct Exercises:

Proper training and regular exercises are critical to the implementation and maintenance of a successful interoperability initiative. Once SOPs are developed for the newly procured equipment or adopted policy, it is vital that training occur for all practitioners affected by the change.

Use:

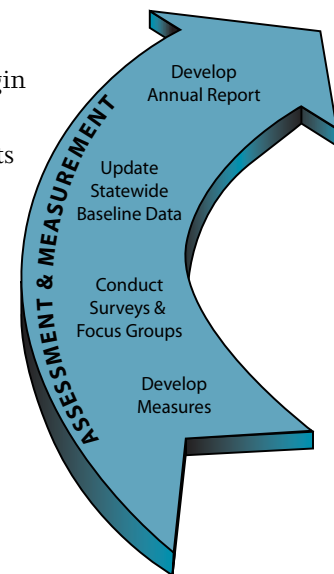
Usage refers to how often interoperable communications technologies are used. If usage of the newly procured technology or protocol does not occur frequently, practitioners will not be inclined to utilize the technology or protocol when it is needed most. For example, if a radio cache is purchased but is not used regularly during training exercises or for planned events, responders may not be able to distribute and activate the cache efficiently during an incident.

Assessment & Measurement

Once the initiative implementation phase has started, the SWIC needs to begin assessing and measuring the impact of the implementation. The SWIC also needs to begin collecting data that will help stakeholders manage their efforts and that will influence the SCIP update process.

This phase of the lifecycle requires a State to:

- Develop short-term, initiative-specific measures and long-term, goal-specific measures to evaluate progress.
- Reach out to stakeholders to receive input on the year's implementation.
- Develop and/or update a statewide capabilities assessment baseline.
- Draft a brief report to demonstrate progress, setbacks, and areas for continued improvement in the year(s) to come.



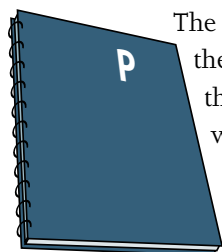
Assessment & Measurement

Develop Measures:

The first step is to ensure that all stakeholders understand how impact and success will be measured; progress in these areas is usually documented through a set of well-defined performance measures. Clearly stated expectations and measures for success provide governing bodies with important tools for collaboration across stakeholder groups. The adoption of performance measures by a governing body results in the establishment of goals to encourage strategic thinking, the promotion of a results- or outcome-driven approach, and the cultivation of productive working relationships across diverse groups.

Once performance measures are developed and agreed upon, it is necessary to construct a formal process to monitor and evaluate performance, suggest revisions, and make necessary, regular adaptations to the strategy at all levels. Improvement of the governance approach, process, and system cannot occur without regular review, evaluation, and reflection. The establishment of performance measures and a system of accountability will help support any governing body in its efforts.

Creating performance measures for such a large and long-term initiative can seem like a daunting task—especially for something as difficult to measure as interoperability. For most people, it is a confusing and scary endeavor to undertake. Acknowledge that up front. But also help all stakeholders understand how important it is to develop these measures.



SCIP

The following process allows the program to develop meaningful measures which describe the level of achievement as it relates to the interoperability effort's goals. Draw on the long-term vision, mission, goals, and objectives outlined within the State's SCIP when developing or executing performance measures. Link measurable indicators of the effort's success to these goals, whether direct measures (e.g., number of emergency responders trained on new protocols) or proxies (e.g., percentage of government entities that have an active representative on a regional communications interoperability committee). This makes it easier to develop short- and long-term measures which are relevant to the program.

Guiding Principles to Developing Performance Measures:

Identify gaps between the goals of the program (long-term) and specific initiatives (short-term) to judge the program's progress toward achieving these goals. Start with the outcomes that the statewide interoperability effort was designed to achieve and determine if those outcomes can be measured. Often they cannot be directly measured and other measurable indicators of progress must be considered. For example, a library system may not have access to data on the reading abilities of the children in its service area or how many hours per week children are reading. Still, it can track how many books its young members are checking out, how often they visit and check out books, and the level of reading as related to the members' ages. Similarly, the SIGB may not be able to track how many lives have been saved due to interoperable communications, but it can track the percentage of agencies that believe they are fully interoperable.

Specific tips and techniques for developing performance measures include:

- Use a number of performance measures appropriate to the size and complexity of the initiatives being examined. More complicated initiatives may require several different measures in order to effectively evaluate performance.
- Be SMART about performance measurement. There are five basic rules of thumb developed to guide stakeholders in developing effective performance measures, which aptly form the acronym "SMART":
 - **Specific** – An effective measure should gauge performance using an understandable unit of measure, such as the number of grants approved, the percentage of member attendance at governance meetings, or a region's position on the five lanes of the SAFECOM Interoperability Continuum.
 - **Measurable** – Sometimes, an indicator of progress cannot be effectively measured, such as the number of lives saved by the linking of two previously disparate systems. While the desired outcome may not be directly measurable, proxies can act as effective indicators. For example, the number of responders who feel that their portable LMR meets their interoperable communications requirements and who feel secure in its abilities can be tracked. From this measure, an agency can infer that lives will be saved due to an increase in confidence among practitioners and a belief in their level of interoperability.
 - **Action-Oriented** – In order for a measure to effectively tell a story, it must be directly related to actions taken by the effort. For example, tracking the number of initiatives successfully implemented within the SCIP's identified timeline provides the effort with a measure based on the results of its own actions.
 - **Realistic** – While performance goals should be ambitious, especially those based on the long-term, they must still be realistic. For example, the overall goals of other government programs may be to completely eliminate child hunger, homelessness, or the extinction of a species of aquatic wildlife, but some goals are not totally controllable by government programs or even an entire society.
 - **Time- or Resource-Constrained** – To support the creation of realistic goals, adding time or resource constraints on performance measures helps provide a measurement of how well a program is progressing toward its goal. For example, while a 20 percent annual increase in the number of counties that have adopted plain language in the State may indicate laudable progress, it is insufficient if the goal is to have 100 percent adoption within 3 years.

- Make sure each measure conveys a complete message about the entire interoperability effort's performance. Although no one performance measure is expected to describe a program's entire performance, comprehensiveness contributes to an understanding of whether the program is achieving its goals. Each measure should tell a piece of the story without requiring too much explanation, and it should be understandable by an outsider.
- Use external review as an effective way to gauge progress.
- Ensure that the cost of collecting the data for the measure does not exceed its value to the overall effort. If so, consider establishing a simpler proxy for the performance measurement.

Sample Communications Interoperability Performance Measurement Tool:

The SAFECOM Interoperability Continuum Measurement Tool¹³ (available in Appendix D [Sample Communications Interoperability Long-Term Performance Measurement Tool]) is a resource that the SWIC can use to develop measures and assess progress. As the Continuum is used across the Nation as a macro-level guide to communications interoperability progress, rightward mobility along the lanes of the Continuum can be used as a measure. Pulled from the 2006 National Interoperability Baseline Survey, the measurement tool expands the SAFECOM Interoperability Continuum lanes into detailed sub-elements. The sub-elements and their measurement descriptions of early, moderate, full, and advanced development should be included as part of a State's capabilities assessment baseline. Since SCIP implementation occurs at the State, regional, and local agency level, the assessment must collect data from each level of government and roll it up to obtain a measured statewide assessment.

Conduct Surveys & Focus Groups:

The SWIC should reach out to stakeholders through regular surveys and focus groups to assess the impact the adopted performance measures and SCIP goals have on the statewide implementation effort. The SWIC can review and assess statewide performance by regularly assessing each State, region, and UASI agency against the SAFECOM Interoperability Continuum Measurement Tool¹⁴ (available in Appendix D [Sample Communications Interoperability Long-Term Performance Measurement Tool]).

Update Statewide Capabilities Assessment Baseline Data:

Once measurement data is collected across the State, it is vital to incorporate the data into the Statewide Capabilities Assessment Baseline. At a minimum this should include where each county, city, town, and tribal jurisdiction resides on the SAFECOM Interoperability Continuum, and the types of radio systems, data and incident management systems, manufacturers, and frequency assignments of each major emergency responder organization within the State. States may consider using the Communication Assets Survey and Mapping (CASM) tool to conduct this assessment. *The Law Enforcement Tech Guide for Communications Interoperability*¹⁵ (specifically Chapter 15 and Appendix D) is an excellent resource for additional guidance on measuring interoperability.

13 Based on the 2006 National Interoperability Baseline Survey (www.safecomprogram.gov/SAFECOM/library/background/1295_2006national.htm) and new elements and sub-elements added for the Capability Assessment Framework.

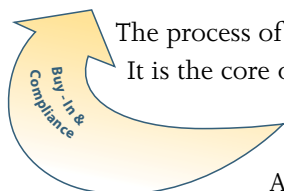
14 Based on the 2006 National Interoperability Baseline Survey (www.safecomprogram.gov/SAFECOM/library/background/1295_2006national.htm) and new elements and sub-elements added for the Capability Assessment Framework.

15 U.S. Department of Justice, Office of Community Oriented Policing Services. *Law Enforcement Tech Guide for Communications Interoperability*, December 2006. www.cops.usdoj.gov/ric/ResourceDetail.aspx?RID=238

Develop Annual Report:

The SWIC should develop a report each year that demonstrates the progress made, setbacks encountered, and areas for continued improvement. This report is an important communiqué to all stakeholders about how everyone is doing in moving the statewide effort forward toward greater communications interoperability. It is also an important document for reassessing and updating the SCIP.

Statewide Buy-In and Compliance



The process of achieving buy-in and compliance will be continuous throughout the process. It is the core of the interoperability planning and advancement process. Long-term SCIP milestones may not receive full statewide buy-in, compliance, and build-out until the effort's final future vision is achieved. Figure 4-3 (Rogers' Innovation Adoption Curve¹⁶) shows how difficult it is to encourage people to buy into a new concept. While there is usually a core group of visionaries and early adopters, the majority need convincing to become supporters. Those early supporters can be key allies in winning over the naysayers and others who are resistant to change.

Once recommendations have been approved on a State, regional, or local level, and a course of action is determined, the process of achieving buy-in from all relevant stakeholders begins. For this stage, relevant stakeholders not only include governance body members but also emergency responders such as local sheriffs and fire chiefs. Political leaders, such as mayors, county officials, and city councils, as well as industry leaders, should also be involved.

As federalism provides local governments with autonomy from many statewide plans and strategies, obtaining local buy-in, compliance, and build-out for the SCIP's

approved vision, strategies, and initiatives can be a lengthy process. However, when local practitioners and government officials participate in all phases of the SCIP's planning process and in the supportive governance bodies, policy acceptance and compliance within local entities is much more likely to occur. States can pursue buy-in and compliance through the following approaches:

- Collaborative information sharing, outreach, and education
- Identification of best practice examples supporting the policy from across the State, from other States, or from the Federal Government
- Development of executive orders mandating compliance within State agencies
- Encouragement of local compliance through grant management
- Passage of legislation

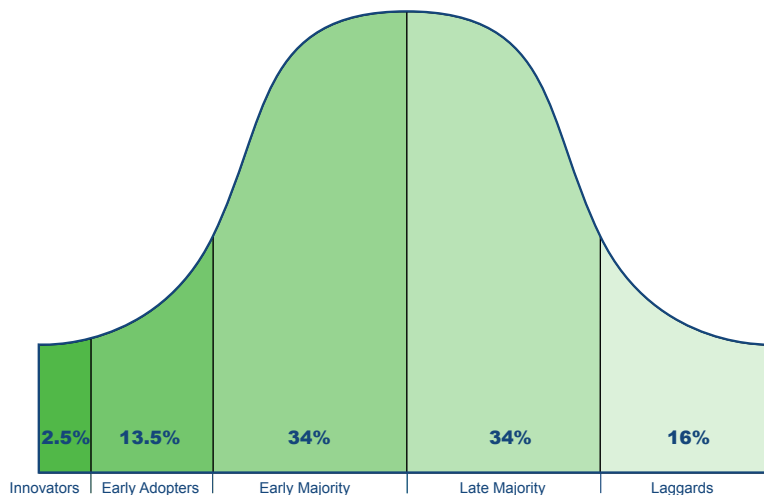


Figure 4-3: Rogers' Innovation Adoption Curve

16 Rogers, Everett M. Diffusion of Innovations. New York, The Free Press, 1962.

5

Maintaining Governance Success to Support SCIP Implementation — Key Elements

Sustaining the Governance Effort: Funding & Support

Distinguishing between the cost of enhancing interoperability through the procurement of new technologies and the cost of improving interoperability through a coordinated, collaborative governance system is important. While coordination, strategic planning, SOP development, and other collaborative governance processes are a fraction of the cost associated with the procurement of LMR equipment, such investments are usually ignored. This is of particular interest as grant programs are available which permit funding for governance sustainment as well as other strategic planning initiatives.

Labor, the largest cost associated with any effort, is primarily non-existent in the operation of the stakeholder-driven governance system. This occurs because statewide communications interoperability governance systems rely greatly on volunteer members who are driven by the vision and desire to improve safety for their colleagues and for citizens. As such, sustaining statewide governance systems only costs the State pennies on the dollar compared to the costs that would accrue if all committee members were directly reimbursed for their time. As discussed in Chapter 3 (Statewide Governance Methodology—Key Elements & Fundamental Components), the SWIC, including its permanent or contractual project management staff, and potential regional interoperability coordinators are the only full-time, salaried resources dedicated to the statewide communications interoperability governance effort.

Sustaining this effort is, in part, achieved through recognition that the primary labor force implementing strategic initiatives or “getting the work done” are volunteers. As with any volunteer-driven organization, keeping the contributing members happy and appreciated ensures success and sustainability. A SWIC with appropriate support staff is essential to achieving this goal. As described in detail above, the SWIC has a lot of responsibilities, including maintaining the coordinated statewide governance system, guiding the development and implementation of the SCIP, supporting IWGs, and ensuring the overall success of the statewide effort. Most importantly, the SWIC supports the governance system’s volunteer members by making sure that their work and time is appreciated, strategic, and efficient. Additionally, as it is a best practice for meetings to occur in person, it is important for the statewide effort to reimburse its members for travel and lodging costs associated with committee meetings; additionally, it is important to account for other provisions such as lunch during day-long working meetings.

Not surprisingly, secure and consistent funding is essential to sustain the effort. It is vital that when leaders identify and secure short- and long-term funding streams they remember the marginal costs associated with sustaining the statewide governance effort. OEC recommends that the SIGB help identify and obtain a steady stream of funding for statewide, regional, and local interoperability efforts. This stream of funding may include grants, taxes, bonds, and budget line-items. Having a permanent, predictable, and stable statewide source of funding for emergency response communications enhances sustainability.

- **Federal Grant Funds:** Rather than immediately allocating grant funds to procure new LMR technologies, States should consider allocating a portion of the fund to statewide governance sustainment in order to leverage the statewide governance bodies for strategic planning and implementation, as applicable. Grant programs sponsored by OEC generally allow for investment

justifications that support statewide governance. With seed money to stand up the effort, States can utilize multiple Federal grants to fund the SWIC and the costs associated with maintaining a volunteer-driven statewide governance body. Such costs may include, but are not limited to, travel, lodging, and meeting supplies. Several funding streams, including DHS, may allow the funding of contractual positions to support interoperable communications projects. The SWIC should check for allowable costs with each agency offering grants. After the initial grant period has ended, however, the State is often required to identify an alternative permanent funding source for the statewide governance effort.

- **State General Funds:** Some States have made the full commitment to the SWIC by establishing at-will or appointed positions within their budgets for the Statewide Interoperability Coordinator and staff members. The benefit of this strategy is that it is longer-term than utilizing grant funds. To make the case to appropriators, States may opt to use grant funds in the short-term while developing a strategy to move toward long-term State support. Appendix E (Finding Funding—New Uses for Old Fees) details one State’s approach to securing sustainable funding.

Develop a Sound Charter for Statewide Governance

One of the most important elements of a successful multi-agency, statewide governance system is a charter set of guidelines and principles. These rules of conduct are intended to guide stakeholders as they work together to tackle challenges outside the realm of their agency, discipline, or jurisdiction. Certain norms and principles must be in place to transform a new committee into a highly effective team with common goals. There must be clarity of purpose, leadership in place, established roles and responsibilities, and a strong foundation for making decisions.

A charter document describes the reason the group exists and establishes the ground rules of operation. It provides clarity and aligns a diverse group with a common purpose. When creating a charter, the group must agree upon key issues that determine how the group can best achieve its desired outcomes. Issues include:

- Purpose
- Authority
- Outcomes or deliverables
- Scope of project
- Operating principles or a decision-making process
- Membership
- Management
- Logistics

The guide, *Creating a Charter for a Multi-Agency Communications Interoperability Committee: Template and Questions to Consider*, is available on the SAFECOM website¹⁷. This tool provides a detailed methodology and process for developing an appropriate charter for a statewide interoperable communications governance body.

17 U.S. Department of Homeland Security, SAFECOM program. *Creating a Charter for a Multi-Agency Communications Interoperability Committee: Templates and Questions to Consider*. www.safecomprogram.gov/NR/rdonlyres/49A7EC9B-7227-45D5-930A-83D9145EE1F1/0/Governance_t1.pdf

Develop Sound Bylaws for Statewide Governance

Each component of the statewide interoperability governance system should begin by developing, agreeing upon, and documenting the bylaws it will follow. Written bylaws help guide the governance body's work processes; equally importantly, they establish accountability for individual members and for the group as a whole. Further, documented bylaws promote transparency by making the governance body's work processes accessible to the communities it ultimately serves. Both accountability and transparency are essential to establishing credibility with the emergency response community and the general public. Credibility, in turn, is essential to success.

Written bylaws need not be complex. Such documents typically address two broad topics:

1. Vision, mission, and values
2. Operations

Vision, Mission, and Values

The overall vision and its specific mission must be clearly articulated in the bylaws. A vision is a broad statement of the eventual goal whereas a mission defines the governance entity's role in achieving that goal. In addition, it is useful to include a discussion of common values or principles that will inform all aspects of the group's work. These include, for example, a shared commitment to accountability and transparency, a consensus-based approach to decision making, and an agreement to set aside individual agendas on behalf of the broader goal. Whatever common values are determined by the group, formally documenting them is a useful exercise in bringing members into early agreement. Moreover, as the work evolves, a clear statement of the vision, mission, and values establishes both a point of reference and a set of standards to evaluate the effort's progress.

Sample Vision and Mission Statement

Vision

Ensure all Federal, State, local, regional, and tribal emergency responders and designated public service organizations operating within the State are able to communicate in real time, across disciplines and jurisdictions, to respond more effectively during day-to-day operations and major incidents.

Mission

Provide a statewide strategic planning framework for an innovative, inclusive, scalable, sustainable, and well-managed interoperability infrastructure that promotes national standards and is effective in addressing the unique urban and rural requirements of the emergency responders and designated public service organizations serving the residents of the State.

Operations

Each component of the statewide governance system should document the work processes or operations for their body. Clear decision-making and conflict-resolution processes for the governance structure ensure the successful development and execution of strategic efforts when multiple agencies, disciplines,

and jurisdictions are involved. Moreover, transparency in these processes helps build support for their outcomes. The bylaws should outline how the governance structure will operate. Some of the key topics that should be addressed for operations are:

- **Elections:** The method of election for the leadership (chair and vice-chair) of the various bodies should be determined and specifically described. For example, elections could be held during a meeting of each body at some predetermined and publicized date and time (such as the first meeting following the start of the fiscal year [FY]).
- **Roles and responsibilities:** Each component of the governance body should have a clearly defined role and a specific set of responsibilities. Descriptions of the roles should include the extent of that role's authority, the frequency of meetings, reporting requirements, membership duties, terms, and limitations. Sample roles and responsibilities are provided in this guidebook for each component of statewide governance within Chapter 3 (Statewide Governance Methodology—Key Elements & Fundamental Components).
- **Rules of engagement:** The way each governance component will conduct business should be clearly described. Examples of rules of engagement to define include what constitutes a quorum for meetings; the chain of command between the layers of the governance structure; the authority for calling and chairing meetings; alternate meeting options like video conferencing, web meetings, and conference calls; and other similar procedural issues.
- **Voting procedures:** Clear voting procedures are necessary for collaboration and conflict resolution. Discussion should include topics such as voting versus non-voting participation, issues requiring different levels of agreement (for example, simple majority, super-majority, unanimity, or consensus), and a procedure for breaking a tie vote. Because some members might not always be able to travel to attend a particular meeting and affect the ability to meet a quorum, it is recommended that procedures for e-voting be established.

As a reference, a sample of simple operational bylaws is provided below. While these are only a sample of what each State might include, they represent best practices that many States currently employ and which other States might consider adopting.

Sample Operational Bylaws for the Statewide Interoperability Governing Body (SIGB)

The governance structure is designed to develop recommendations from the bottom up to improve interoperable communications and establish buy-in throughout the implementation process.

High-Level Decision Making

Ultimate decision making lies with the Governor's Office. All deliverables produced from the governance process are considered recommendations until approval by the Governor's Office is received.

Meetings

A meeting calendar is developed and maintained by the statewide SWIC at the start of the Fiscal Year. At a minimum the SIGB meets once a quarter. The SWIC provides the SIGB with an agenda and, as needed, read-ahead materials for each meeting. The outcomes of each meeting are documented in writing and provided on the State's interoperability website. IWGs establish a meeting schedule in conjunction with the SIGB at initiative kick-off meetings based on the scope of the work to be completed.

Quorum and Voting

Quorum is defined as a presence of a majority of SIGB organizations. The SIGB operates by consensus whenever possible. There may be times, however, when the group needs to vote on an issue. A vote on an issue may be called by the chair, vice-chair, or any voting member of the committee.

Each organization included in the SIGB has one vote. SIGB members can abstain from voting on any issue if they so choose. One member may give another member permission to serve as a proxy on any vote. When voting is necessary, decisions are confirmed by a simple majority. In a case of a tie, the SIGB Chair casts the deciding vote. At the discretion of the chair, a vote via e-mail may be conducted after the scheduled meeting.

E-Mail Voting Procedure

A vote by e-mail may occur as deemed necessary by the SIGB chair. These following SOPs address voting by SIGB members through e-mail:

- Identification of item: Any issue to be voted on that the SIGB members could not vote on during the regular meeting time-period can be voted on by members through e-mail. The specified issue or item to be voted on must have a standardized response, e.g., multiple choices or yes/no.
- Request for vote: Upon approval by SIGB members, a vote by e-mail will be solicited by the SIGB chair.
- Voting organization: There will be one vote from each standing member organization. Only one designated member will cast the vote through e-mail.
- Vote Notification: The vote will be coordinated through e-mail, by the SIGB chair or vice-chair via a "Vote Notification." Vote notification e-mails will be sent to one designated member per organization, as determined by the SIGB members. The designated voting member will be listed in the vote notification e-mail.
- Voting Period: Vote responses will be due one week after initial vote notification or during an alternate time frame approved by SIGB members, as necessary. E-mail responses will be sent to the SWIC.
- Results: Results of the vote will be posted through e-mail one day after close of voting period. Results will include an organization's response and the name of the member submitting the vote. The results will be e-mailed to all SIGB members and designated alternates.

Costs

The SWIC pays travel-related costs incurred as a result of participating on the SIGB and IWGs if funding is available. When possible, conference calls are held to minimize the travel burden for participants.

Develop a Memorandum of Understanding (MOU)

For any State or region to improve communications interoperability, it is essential for pertinent emergency response stakeholders to collaborate and participate in a governing body. A formal governance structure provides a unified front across multiple disciplines and jurisdictions within a particular political constituency. Such unity aids the funding, effectiveness, and overall support for communications interoperability. An MOU is important because it defines the responsibilities of each party in an agreement, provides the scope and authority of the agreement, clarifies terms, and outlines compliance issues. An MOU helps practitioners establish the partnerships and authority needed to achieve an effective governance structure for interoperable communications. An MOU becomes especially important as governance bodies mature and take on responsibility of either managing a statewide shared system or a system-of-systems design to achieve interoperable communications. An MOU also streamlines the process for applying and appropriating awarded grand funds.

The *Writing Guide for a Memorandum of Understanding (MOU)* is available on the SAFECOM website¹⁸. This tool provides a detailed methodology and process for developing an appropriate MOU for any statewide interoperable communications governance components.

18 U.S. Department of Homeland Security, SAFECOM program. *Writing Guide for a Memorandum of Understanding (MOU)*. www.safecomprogram.gov/NR/rdonlyres/70169F1E-F2E9-4835-BCC4-31F9B4685C8C/0/MOU.pdf

6

Conclusion

OEC understands the enormity of the tasks each State faces. As the document indicated, statewide communications interoperability is a long-term objective that can only be achieved through a multi-phased approach of planning, implementation, and assessment. Achieving this important objective will require the State's stakeholders to leverage their governance system to develop a SCIP, plan for and implement its initiatives, and measure and review the progress to date. OEC is committed to partnering with each State to help with this important endeavor.

Whether a State envisions a system-of-systems or statewide shared system design to mitigate communications interoperability barriers, the proposed governance system will ensure multi-discipline, multi-jurisdictional, bottom-up input from the practitioner community. Encouraging regionalism, this governance system supports Federal grant application requirements. Most importantly, it maintains input from statewide leaders and ensures compliance from all involved with the statewide communications interoperability plan and vision.

The governance methodology recommended by OEC incorporates representative leadership from a wide variety of local emergency responders in a process of participatory decision-making. It also strives to gain the authority and support through State legislation or an executive order to enforce timely and cost efficient application of statewide interoperability. Relationship building at the Federal, State, regional, local, and tribal levels and outcome-based strategic planning are among the other important elements of an effective governance model.

These general governance recommendations incorporate SAFECOM's philosophy and the results of working with various States and localities to achieve and improve communications interoperability. The recommendations help identify important considerations to further define the membership, responsibilities, and decision-making procedures for a communications interoperability governance system. These general recommendations, however, should be modified according to the unique needs and circumstances of a particular State or locality. Ongoing review and adjustment of the governance approach, system, and process are critical for continuous improvement.

More significant than any of the single components of the governance methodology is the importance of building the right stakeholder relationships and ensuring that all relevant stakeholders are involved in the process of SCIP implementation. For any State and its regions to improve communications interoperability, collaboration and participation from relevant emergency response stakeholders is essential. A formalized, statewide governance system provides a unified approach across multiple disciplines and jurisdictions that can aid the funding, effectiveness, and overall support for communications interoperability. Establishing an overarching governance system is critical for successfully addressing the key challenges of achieving interoperable communications. Statewide governance and coordination also provide the framework in which stakeholders can collaborate and make decisions that reflect shared objectives.

As a multifaceted problem, improving interoperability through SCIP implementation can only occur through cooperation. The implementation lifecycle provides the project management framework to accomplish the SCIP initiatives, drive the effort's mission, and fulfill the statewide communications interoperability vision through the effective use of a stakeholder-driven governance structure. This

document provides the guidance and motivation to create a cooperative, non-hierarchical governance structure that capitalizes on the many points of connection that a central coordinator can facilitate. By bypassing the traditional hierarchy approach in which the information flow is strictly up or down and along appropriate channels, the State can realize a greater flow of communication among its stakeholder groups. The methodologies presented here reflect that of a “spider web,” where information, collaboration, and coordination is more direct, free-flowing, and multi-connected. The OEC Director and staff look forward to supporting interoperability communications leaders who are building and connecting their statewide governance system.



Appendix A: Current Statewide Governance Structures — Sample SCIP Models

Appendix A provides an assessment of four of the most common governance models that were reported in the Statewide Communication Interoperability Plans (SCIPs) submitted to the Office of Emergency Communications (OEC) in December 2007. Readers may want to determine which model most closely aligns to their State's governance structure in order to identify potential challenges and possible areas of improvement.

While the recommended methodology in this tool is not a mandate, States that align their statewide governance structure to it are more likely to include all the relevant stakeholders in their communications interoperability effort; consequently, these States should see more progress in implementing their SCIP. This appendix is intended to:

- Assist States in identifying a governance structure that closely resembles the structure in place within that particular State.
- Identify possible advantages and potential concerns with that structure.
- Provide States with recommendations of how to bring their current governance structure closer in line with the recommended methodology (as appropriate).

Findings from a Review of the SCIP Governance Sections

The SCIPs provided OEC with a baseline understanding of the Nation's communications interoperability progress. OEC reviewed the governance sections of all 56 SCIPs, and found various approaches to the establishment of a statewide governance structure.

While there were States that had very detailed governance structures and States that had informal governance structures currently in place, four primary governance approaches emerged:

- **Subject-Specific Approach:** Demonstrates a strong focus on statewide interoperability committees that are working on specific issues such as spectrum management, procurement, training, standard operating procedure (SOP) development, etc.
- **Regional Approach:** Organizes individual interoperability committees by regions as defined by the State. Each region may have its own committees and working groups. Regional leadership tends to roll up into an executive statewide governance body.
- **Conventional Approach:** Utilizes a traditional hierarchy structure and is often found in smaller States and territories that may have fewer layers of government. The hierarchy tends to consist of the governor, a governance body (e.g., Statewide Interoperability Executive Committee [SIEC]), an interoperability advisory committee, and one or two working groups as deemed necessary.
- **Leveraged Approach:** Focuses on the existing State agency hierarchy that feeds into a statewide interoperability committee. Interoperability planning merges into or is a function of existing State agency responsibilities.

While the SCIPs revealed many paths for establishing statewide governance structures, it is clear that some States continue to struggle with developing appropriate statewide governance structures. Using the information contained within the SCIPs, OEC worked with several stakeholders groups to identify and address the needs of the States with regard to statewide governance. OEC leveraged innovative governance approaches and methodologies in practice across the Nation collectively. The information provided in this appendix was guided by these findings and conversations.

In presenting a statewide governance system recommendation, this section provides a snapshot of the common statewide governance structures documented within the various SCIPs.

Subject-Specific Approach

The Subject-Specific Approach (also known as the subject matter expert [SME] approach) to statewide governance is the most common approach reported in the SCIPs. This approach demonstrates a strong focus on statewide communications interoperability committees working on specific issues such as spectrum management, procurement, training, SOP development, program management, etc.

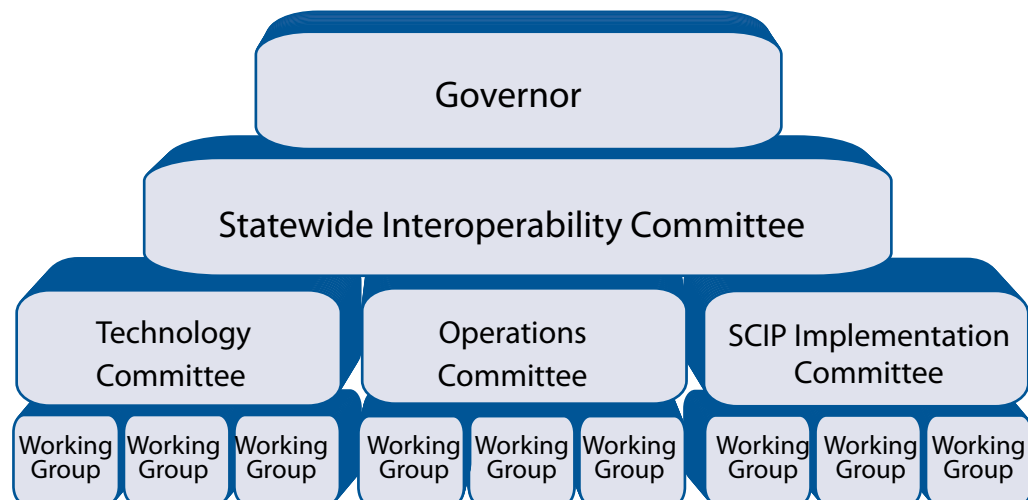


Figure A-1: Subject-Specific Structure

Subject-Specific Approach Highlights:

- Interoperability committees are formed based upon SME areas. For example:
 - Technology (Equipment)
 - Operations (Tactical)
 - Program Management (Coordination/SCIP)
- Regional support/input is obtained via the inclusion of regional members on the various SME committees and working groups.
 - May have a regional committee in-between the working group level and the SME level.
- The structure is SME-focused as opposed to region-focused.

Advantages:

- Leverages SMEs across the entire governance structure, as needed.
 - As contrasted against the regional approach – each region may not have a SME in each of the focus areas. This structure allows for SMEs to cross-cut regions throughout the State.
- Ensures consistency and coordination in SME areas across the governance structure.

Concerns:

- Requires the SME to focus on the “big picture/statewide perspective” regardless of their home region or discipline.
- Potentially precludes every region from having a specific region representative on the committee.
- Stovepipes the effort into specific issue areas.

While this approach utilizes key resources (at a State level) in their particular area of expertise, it may create a stovepipe effect, which could negatively impact the various committees’ ability to recognize and achieve the State’s overall interoperability objectives. Additionally, this approach may not be able to fully incorporate regional needs—especially when that region does not have a SME representative on a particular committee.

Recommendations:

- Ensure that the SME committees are inclusive of members from each of the various regions in the State.
- Ensure that the working groups are inclusive of members from each of the various regions in the State.
- Evaluate the possibility of incorporating specific regional committees into the existing structure.
 - This will allow States to gather specific input from the regions.
 - This will assist States in obtaining regional buy-in for implementing SCIP initiatives.
 - Utilizing an existing regional structure (e.g., Homeland Security Regions, Public Safety Regions) may be more expedient and efficient than developing specific communications interoperability regional committees.

Regional Approach

The Regional Approach to statewide governance is the second most common approach reported in the SCIPs. This approach establishes individual interoperability committees organized by State-defined regions. Each region may have its own committees and working groups.

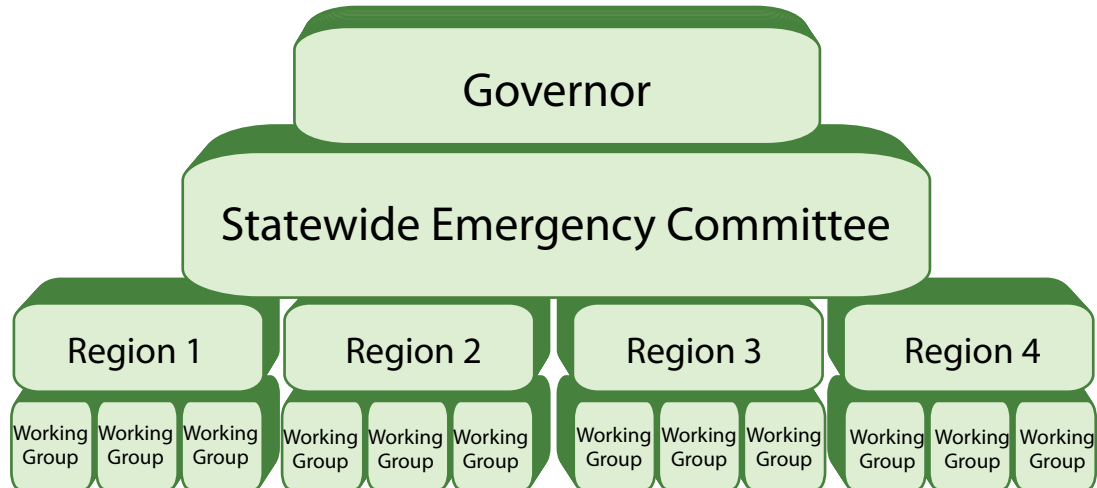


Figure A-2: Regional Structure

Regional Approach Highlights:

- Interoperability committees are organized by regions as defined by the State.
 - Many States utilized existing regional structures (e.g., Homeland Security regions, Public Safety Regions, Urban Area Security Initiative [UASI] regions, regions based upon existing memorandum of understanding [MOUs]).
- Each region focuses solely on the interests of their particular region and only at the regional level.
- Each region may form individual working groups or SME committees for their region.

Advantages:

- Provides an opportunity for greater participation at the local/practitioner level.
- Has the potential to bring to light unique concerns of each region.
- Allows the State to leverage existing regional structures, which may minimize the time necessary to establish a statewide governance structure.

Concerns:

- May not fully address the statewide aspects of interoperability (i.e., the whole may be greater than the sum of its parts).
- Does not clarify if regions are collaborating with each other on interoperability issues.
- Impacts consistency in approach and execution across the State if intra-regional coordination does not exist.

While this approach is primarily focused on regional leadership, this leadership tends to roll up into a statewide governance body, though not necessarily one that is focused on interoperability (e.g., All-Hazards Committee, Emergency Management Committee). Establishing new regions specifically for interoperability governance is not required by the Department of Homeland Security and may not be needed for effective governance; many States have existing regional structures that can meet their interoperability governance needs (e.g., Homeland Security regions, Public Safety regions, UASI regions).

Recommendations:

- Ensure that there is collaboration between the regional committees.
- Develop SME committees.
 - Incorporating SME committees that are focused on one particular area will allow the committee to develop a “depth” of experience in that given area (e.g., technology, SOPs).
 - Utilizing some SME-focused committees, as opposed to regional-focused committees, will allow States to leverage expertise from across the State.
- Consider developing a specific communications interoperability governing body (e.g., Statewide Interoperability Governing Body) to which the regional committees and working groups will coordinate with instead of an all-hazards or non-interoperability focused advisory committee.
- Utilizing an advisory body that is specifically focused on communications interoperability efforts will help ensure that the proper structure and resources are in place to facilitate the communication and execution of interoperability goals and initiatives.

Conventional Approach

The Conventional Approach to statewide governance utilizes a traditional hierarchy structure and is often found in smaller States and territories that may have fewer layers of government. The hierarchy tends to consist of the governor, a statewide governance body (e.g., SIEC), an interoperability advisory committee, and one or two working groups as deemed necessary.



Figure A-3: Conventional Structure

Conventional Approach Highlights:

- Often observed in States with:
 - Few layers of government. Specifically, these States possess one or several of the following features:
 - Many villages
 - Few State agencies
 - Heavy Federal or military presence
 - No existing regionalized structure in place
 - Little resources available for interoperability efforts.
- The hierarchy supports just one committee at the State and local level that is responsible for all interoperable planning efforts.

Advantages:

- Tends to be successful in smaller or less populated States.

Concerns:

- May not provide enough of an operational structure to fully accommodate and address all of the interoperable needs of the State—especially States with diverse needs across the State.
- Does not provide all regions across the State with direct input into the governance structure.

Recommendations:

- Evaluate the possibility of incorporating specific regional committees into the existing structure.
 - This will allow States to gather specific input from the regions.
 - This will assist States in obtaining buy-in from the regions for implementing SCIP initiatives.
 - Utilizing an existing regional structure (e.g., Homeland Security Regions, Public Safety Regions) may be more expedient and efficient than developing specific communications interoperability regional committees.
- Develop SME committees.
 - Incorporating SME committees that are focused on one particular area will allow the committee to develop a “depth” of experience in that given area (e.g., technology, SOPs).
 - Utilizing some SME-focused committees, as opposed to regional-focused committees, will allow States to leverage expertise from across the State.

Leveraged Approach

The leveraged approach to statewide governance is seen when there is an existing State agency management hierarchy that is utilized as the statewide interoperability committee. Interoperability planning merges into or is a function of existing State agency responsibilities. Typically, directors or agency executives form the membership of the statewide interoperability committee(s).

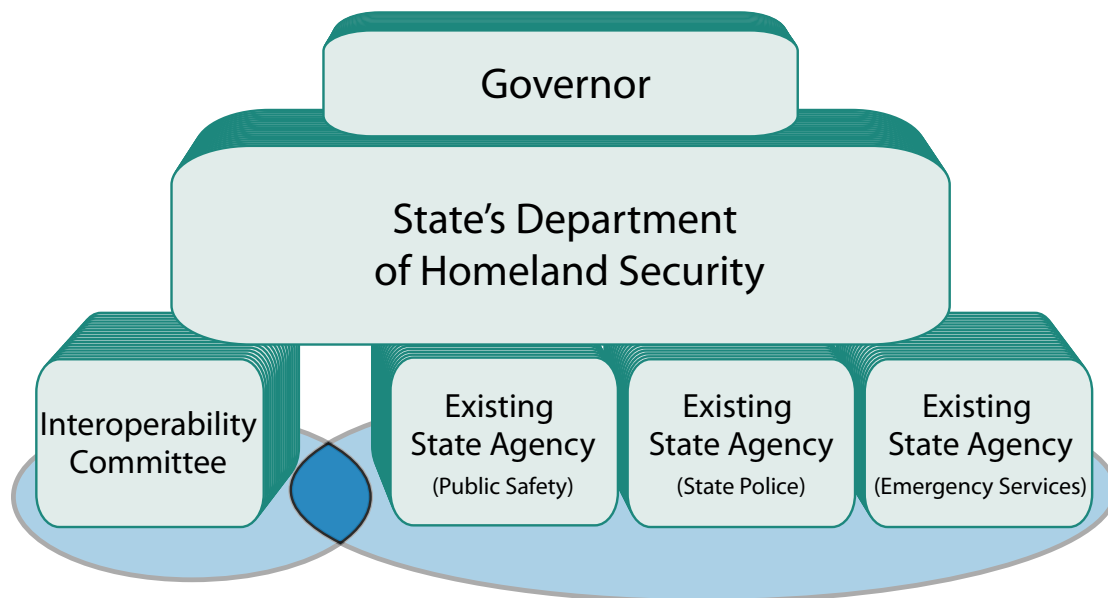


Figure A-4: Leveraged Structure

Leveraged Approach Highlights:

- This governance approach was reported in only a few States. These States possess one or several of the following features:
 - An existing State agency structure is utilized,
 - Agencies have “dotted line responsibility” to the interoperability committee
 - The agency directors or executives usually comprise the interoperability working group and/or committees.
- The responsibility for statewide interoperability is absorbed by an existing management hierarchy.

Advantages:

- Capitalizes on an existing management structure in place.
 - It leverages existing agency authority and expertise.
- Draws on existing staffing resources and structure and, as a result, may expedite efforts.

Concerns:

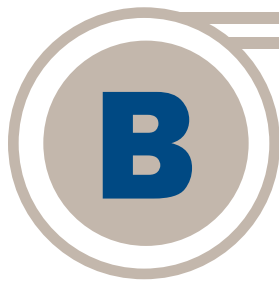
- Existing staffing resources may not be able to adequately focus on interoperability issues due to competing, non-interoperability related responsibilities.
 - These resources may have other full-time responsibilities.
- May not provide opportunities to include the best resources available in the process.
 - This approach limits the State to existing resources within an agency, ignoring SMEs who may exist in other organizations and at the regional level who might be critical players.
- Remains State-centric and tends not to include local input.
 - Since the committees are populated primarily by State employees, the committees may have difficulty obtaining information and input from the regions and may have trouble addressing regional needs.

Recommendations:

- Develop and utilize a governance structure that is primarily focused on communications interoperability.
 - Utilizing resources in existing agencies may not provide the level of focus and expertise necessary to successfully fulfill the objectives and goals of a SCIP.
- If it is necessary to utilize existing agency resources, the State should:
 - Incorporate regional committees into the structure.
 - This will allow States to gather specific input from the regions.
 - This will assist States in obtaining buy-in from the regions for implementing SCIP initiatives.
 - Incorporate SME committees that are focused on one particular area, which will allow the committee to develop a “depth” of experience in that given area (i.e., technology, SOPs).

Conclusion

Each of the observed approaches to statewide governance presents its own unique advantages, concerns and recommendations. No “one-size fits all” model exists. Leveraging the information learned in the SCIPs, however, has provided OEC with an understanding of how to better assist the States along the road to establishing and maintaining efficient and effective communications interoperability governance.



Enhancing Governance Through the Use of Standing Committees — One State's Approach

With the passage of recent legislation that takes effect in Fiscal Year 2009, Virginia's four-year old Statewide Interoperability Executive Committee (SIEC) will increase to more than 30 members¹⁹. This increase highlights a potential challenge that comes with managing a large statewide governing body: ensuring that each member has a voice in planning and decision making and a forum to provide their unique subject matter expertise.

The Virginia SIEC is unique in that it focuses on all aspects of communications interoperability and not just the roles of the traditional Federal Communications Commission SIEC (detailed in Chapter 3 [Statewide Governance Methodology—Key Elements & Fundamental Components]). As the Commonwealth's communications interoperability planning and preparedness matures and new challenges and priorities come into play, it is essential that the existing governance structure aligns to the newly identified needs. To do this, the Statewide Interoperability Coordinator and the SIEC Chair have opted to assemble standing subcommittees to the SIEC.

Using standing subcommittees provides the SIEC with an efficient mechanism for streamlining its work processes, particularly on detailed and long-term discussions. These subcommittees will be able to coordinate and implement highly detailed projects and initiatives over longer periods and streamline the discussions at the SIEC's quarterly meetings. The standing committees will have the time and expertise to exhaustively deliberate communications interoperability issues important to the Commonwealth and provide thoroughly vetted recommendations to the larger SIEC on an as needed basis.

Committees

The currently identified standing committees for the Virginia SIEC are:

- Technical Standing Subcommittee
- Operational Standing Subcommittee
- Policy/Legislative Standing Subcommittee

The Technical Standing Subcommittee will develop a technical philosophy and serve as a long-term resource for technical advice on persistent and emerging issues. This committee will be comprised of technical experts, procurement specialists, budget planners, and other key technical roles, and will serve as the deliberation group.

The Operational Standing Subcommittee will review, develop, and foster operational coordination by providing expertise in standard operating procedure development and training, reviewing protocols for standards, and resolving non-technical implementation issues. Members of this committee will be uniquely positioned to share operational lessons learned and best practices across the Commonwealth.

¹⁹ HB 839 and SB 520 passed through legislation leading to the addition of Virginia State Police, Virginia Department of Military Affairs, and Virginia State Firefighter's Association to the SIEC membership list.

The Policy/Legislative Standing Subcommittee will review and provide feedback to the SIEC on issues of political or legislative concern. Members of this committee will have relationships and positions of authority that will help them proactively guide the SIEC.

The standing subcommittees will receive assignments from, and provide reports and recommendations to, the SIEC. The standing committees will remain active for long periods of time in order to provide overall continuity to the governance structure and serve as the core knowledge base on several ongoing agenda items and discussion topics. The standing subcommittees structure will be evaluated on a regular basis and realigned when that evaluation deems it necessary to meet the Commonwealth's strategic goals and objectives. Figure B-1 (Governance Elements for Virginia) depicts the interaction among all of the statewide governance elements in the Commonwealth's organizational structure. In addition to the standing committees, ad hoc working groups can be created to work on a short-term basis to support any initiatives or projects that do not otherwise fit within the standing committee structure. The Commonwealth is also working with the Regional Preparedness Advisory Committees for Interoperability (RPAC-Is) to identify specific regional needs and capabilities. The RPAC-Is provide input to the Statewide Communication Interoperability Plan (SCIP) and work to implement the SCIP via participation on various committees or through the ad hoc working groups.

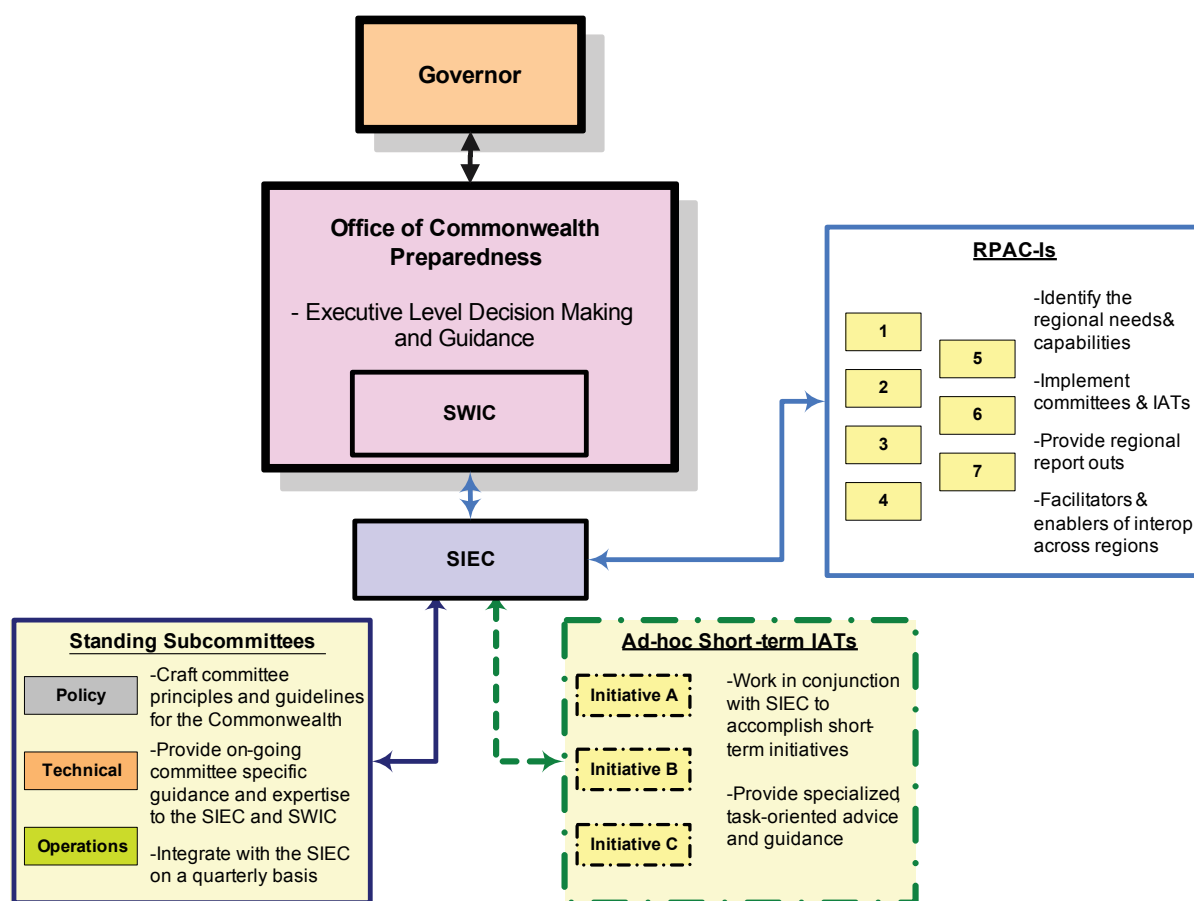


Figure B-1: Governance Elements for Virginia



Beyond our Borders — An Approach to Interstate Communications Interoperability

In 2002, leaders from Illinois, Indiana, Kentucky, Michigan, and Ohio joined together to form the Midwest Public Safety Communications Consortium (MPSCC) as a way to coordinate their interoperable communications efforts. The MPSCC plans to expand to include other surrounding States in an effort to increase interstate communications interoperability and incorporate planning and training exercises for the benefit of all States involved.

One of MPSCC's primary objectives is to save lives through interstate, interoperable communications—specifically by ensuring that emergency responders who cross State lines retain the capacity to effectively communicate. To support that effort, the MPSCC created an initiative that ties together each State's statewide communications system to the extent that is technologically and fiscally feasible.

Shortly after its formation, the MPSCC began to brainstorm ways to tie the States' separate systems together and to draft a memorandum of understanding (MOU). This MOU was intended to serve as concrete evidence that the States were committed to achieving a set of common initiatives and goals. MPSCC representatives met to share information on communications sites, system specifications, and channel/frequency issues. By sharing resources, conducting volume pricing, and combining knowledge, the MPSCC has worked to save money for all of the participating States.

Today, as a result of the Consortium:

- Indiana and Ohio have a truly “shared systems” technology, where each State has agreed to exchange “system key” files which permit cross programming of radios and access to each other's radio systems. Individuals from the Ohio National Guard, Indiana National Guard, and local emergency response agencies participated in a large-scale disaster preparedness event that tested the interoperability scenarios of these States.
- Illinois, Indiana, Michigan, and Ohio utilize 800 megahertz National Public Safety Planning Advisory Committee channels. These channels facilitate interoperable communications for users within and across State lines. The State of Kentucky will be joining soon.

Although each State applies its own standard operating procedures (SOPs) for their respective State system and users, the MPSCC develops SOPs that govern the management of sharing resources across State lines. It is the policy of the MPSCC to allow State, regional, local, and tribal emergency response agencies to develop practical policies and guidelines particular to their own operational needs and goals.

Although the MPSCC States are each implementing or have implemented a statewide communications system, they nevertheless are enthusiastically working together to find ways to expand interoperable communications across State lines.



Sample Communications Interoperability Long-Term Performance Measurement Tool

Leveraging the 2006 SAFECOM National Baseline Survey Interoperability Continuum Measurement Tool²⁰ and the *2008 National Communications Capabilities Framework*²¹ this appendix provides general resources to develop statewide long-term measures to assess programmatic progress of a statewide communications interoperability effort. As the SAFECOM Interoperability Continuum is used across the Nation as a macro-level guide for communications interoperability progress, rightward mobility along the lanes of the Continuum can be used as a measure of that progress. The high-level framework introduced in this appendix may be used to identify interoperable emergency communications capability needs, evaluate available State and local capabilities, determine gaps, and measure progress. Capability needs are defined across the elements of governance, standard operating procedures (SOPs), technology, training and exercises, and usage.

Capability Assessment Framework

The National Communications Capabilities Report capability assessment framework presents a broad range of capabilities that contribute to successful interoperable emergency communications. The framework supports the development of statewide performance measurements based on the critical elements of interoperability—governance, SOPs, technology, training and exercises, and usage. The framework builds on this foundation by expanding the characteristics of each of the Continuum’s elements and National Baseline’s sub-elements to address emergency communications operability and interoperability assurance.

Table D-1 shows the Capability Assessment Framework from the National Communications Capabilities Report. Since implementation of the Statewide Communication Interoperability Plan (SCIP) occurs at the State, regional, local, and tribal levels, the statewide assessment must collect data from each level of government and roll it up to obtain a measured statewide assessment. The shadowed, tabbed pages behind the main table represent these multiple levels of government and the statewide compilation of all of the data.

20 U.S. Department of Homeland Security, SAFECOM program. National Interoperability Baseline Survey: Interoperability Continuum and Measurement Tool - Appendix A. December 2006.
www.safecomprogram.gov/SAFECOM/library/background/1295_2006national.htm

21 U.S. Department of Homeland Security, SAFECOM program. DHS National Communications Capabilities Report: Final Results, July 2008.

22 U.S. Department of Homeland Security, SAFECOM program. Interoperability Continuum, June 2008.
www.safecomprogram.gov/SAFECOM/tools/continuum/default.htm

| Capability Elements | Sub Elements | Descriptions | |
|--------------------------------------|--|---|---|
| Governance | Leadership | Level of government leaders' awareness, support, and advocacy for interoperable emergency communications | LOCAL REGIONAL STATE TRIBAL STATEWIDE COMPILATION |
| | Decision-Making Groups | Presence and scope of inter-agency partnerships to address interoperable emergency communications issues | |
| | Agreements | Range of formal and informal interoperable emergency communications agreements (e.g., MOU/MOA/MAA, Ordinances, Executive Orders) and scope of agencies involved | |
| | Funding | Level of funding available and dedicated to interoperable emergency communications | |
| | Strategic Planning | Presence/scope of strategic planning processes for interoperable emergency communications | |
| Standard Operating Procedures | Policies, Practices, and Procedures | Range of formal and informal emergency communications policies, practices, and procedures (e.g., Command and Control [NIMS]) | |
| Technology | System Functionality* | Range of fixed and mobile/deployable systems and equipment, and associated voice, video, and data capabilities | |
| | System Performance* | Levels of system performance, including availability (e.g., coverage, capacity), reliability (e.g., availability, security, and redundancy) | |
| | Interoperability* | Range of ad-hoc to permanent interoperable emergency communications solutions | |
| | Continuity of * Communications | Range of primary and backup infrastructure, systems, and facilities, associated levels of survivability, security, and redundancy | |
| Training and Exercises | Training | Scope and frequency of interoperable emergency communications training and availability of sufficiently trained human resources | |
| | Exercises | Scope and frequency of interoperable emergency communications exercises | |
| Usage | Frequency of Use and Familiarity | Level of familiarity, proficiency, and frequency with which interoperable emergency communications solutions are activated and used | |

EMERGENCY RESPONSE PROVIDERS

Table D-1: Capability Assessment Framework

Capability Needs Chart

Leveraging the Capability Assessment Framework, OEC defined an overarching set of interoperable emergency communications needs that supported the development of an Interoperability Continuum measurement tool. This tool, described below, can be used by emergency response agencies to assess available capabilities and identify gaps. The capability needs listed in the Capability Needs Chart build from those defined in the Interoperability Continuum and reflect key characteristics of each capability element. Key factors that influence advancement within each element include the inclusiveness and level of participation across levels of government, and the range of potential emergencies addressed from small-to large-scale events. These descriptions are not intended to be all-inclusive and do not reflect agency-specific target requirements or solutions.

Table D-2 provides an overview sample of capability needs across each element as mapped to the Capabilities Assessment Framework and the Interoperability Continuum.

| CAPABILITY ELEMENTS | SUB-ELEMENTS | CAPABILITY NEEDS |
|-------------------------------|-------------------------------------|--|
| Governance | Leadership | Government leaders should: <ul style="list-style-type: none"> ✓ Demonstrate that interoperable emergency communications is a priority. ✓ Serve as advocates to ensure long-term political support. ✓ Conduct inter-agency coordination across levels of government. |
| | Decision-making Groups | Decision-making groups should: <ul style="list-style-type: none"> ✓ Be formal planning and governing bodies with defined missions, responsibilities, and authorities. ✓ Include, coordinate with, and proactively recruit participants from multiple jurisdictions and across levels of government, disciplines, and the private sector, as appropriate. ✓ Address a broad range of emergency communications issues and plan for a range of emergency events—from small-scale to large-scale, all-hazards events. |
| | Agreements | Agreements should be: <ul style="list-style-type: none"> ✓ Formal, and address inter-agency coordination and the use of communications solutions as needed, during a range of emergency events. ✓ Developed and/or updated on a regular basis, including after significant events and technology upgrades. |
| | Funding | Funding should be: <ul style="list-style-type: none"> ✓ Reliable and sufficient to support one-time capital investments and recurring, long-term needs (e.g., operations and maintenance, upgrades). ✓ Strategically informed by communications plans and prioritized alongside other core preparedness priorities. ✓ Identified for emergency needs that may arise during large-scale events. ✓ Coordinated among agency partners to achieve efficiencies. |
| | Strategic Planning | Strategic planning should be: <ul style="list-style-type: none"> ✓ Formal, and accepted by all participating stakeholders. ✓ Inclusive, and address emergency communications issues across a range of emergency events. ✓ Reviewed on a regular basis, including after significant events or technology upgrades. |
| Standard Operating Procedures | Policies, Practices, and Procedures | Policies, practices, and procedures should be: <ul style="list-style-type: none"> ✓ NIMS-compliant, with all necessary agencies for small-scale to large-scale responses. ✓ Institutionalized and regularly updated. ✓ Consistent across agencies. |
| Technology | System Functionality | System functionality should: <ul style="list-style-type: none"> ✓ Provide appropriate fixed and mobile/deployable systems and equipment. ✓ Utilize current technology, and provide features and capabilities that meet mission requirements. ✓ Adhere to recommended government and industry standards. ✓ Include the upgrade and modernization of systems. |
| | System Performance | System performance should: <ul style="list-style-type: none"> ✓ Fully meet availability and reliability metrics as well as other performance metrics. ✓ Provide scalability to support a range of emergency events and responders. ✓ Include preventative maintenance (e.g., routine monitoring, testing) to assess and improve system performance. |
| | Interoperability | Interoperability solutions should: <ul style="list-style-type: none"> ✓ Include sufficient fixed and mobile/deployable solutions to support interoperability for small- to large-scale events. ✓ Utilize standards-based technologies. ✓ Incorporate interim solutions as appropriate, such as Internet Protocol (IP)-based backbones or patches. ✓ Enable communications through limited third-party intervention, where possible. |
| | Continuity of Communications | Continuity of communications should: <ul style="list-style-type: none"> ✓ Integrate primary and backup infrastructure, systems, and facilities. ✓ Provide adequate survivability, security, and redundancy. ✓ Support continuity during small- to large-scale events. |
| Training and Exercises | Training | Training should: <ul style="list-style-type: none"> ✓ Involve all necessary responders. ✓ Include planned and regular instruction using all systems and equipment. ✓ Address policies, practices, and procedures needed to enable communications in a range of emergency events. ✓ Ensure sufficiently trained personnel are available to support agency needs to plan, manage, and coordinate emergency communications processes and solutions, as needed. ✓ Be assessed and adapted to address gaps and needs. |
| | Exercises | Exercises should: <ul style="list-style-type: none"> ✓ Involve all necessary responders and organizations, and have planned and regular cycles. ✓ Include tabletop and fully functional operational exercises. ✓ Address interoperable emergency communications processes and solutions for small- to large-scale emergency events. ✓ Be evaluated through after-action reports and adapted to address gaps and needs. |
| Usage | Frequency of Use and Familiarity | Responders and organizations should: <ul style="list-style-type: none"> ✓ Consistently use (as appropriate) and be familiar with communications solutions and procedures for small- to large-scale events. ✓ Evaluate and incorporate lessons learned from after-action reports to improve familiarity and proficiency. |

Table D-2: Capability Needs

Governance

Given the importance of interoperable emergency communications as a means of supporting emergency responders, it is vital that agencies form partnerships to understand capabilities and expectations, and coordinate efforts and resources to develop effective, mutually beneficial solutions. Governance—through strong government leadership, interagency working groups, established agreements, formal strategic plans, and appropriate funding—provides the structure needed to ensure that near-term and long-term solutions are not only developed, but that investments are effectively managed throughout the lifecycle.

Leadership:

Leadership refers to the involvement of government leaders and their commitment to ensuring the political and fiscal priority of interoperable emergency communications. Strong sponsorship helps drive and facilitate interagency coordination across levels of government as well as with the private sector. Leaders ensure that decision-making groups have the authority and funding necessary to address interoperable emergency communications issues. They also serve as advocates and act to ensure that long-term political and fiscal support is in place to support communications, continue improvements, and increase participation.

Decision-making Groups:

Decision-making groups are a collection of emergency response practitioners and leaders who combine their expertise to improve interoperable emergency communications. These groups, ranging from local emergency coordination entities to Federal and State working groups and committees, are needed to identify, analyze, and collectively resolve critical communications issues related to governance, technology, and operations. Formal governance bodies should include representation across disciplines, levels of government, and non-governmental organization and private sector partners. These bodies should be established with defined missions, responsibilities, and authorities. Decision-making groups should address interoperable emergency communications issues for small- to large-scale events, and work to build sustainable, repeatable, and reliable solutions. These groups should continually seek to recruit additional participants from the emergency response community.

Agreements:

Agreements are mechanisms approved to govern interagency coordination and the use of interoperable emergency communications solutions. They may be established to share frequencies, pool dispatch services, or maintain and distribute radio caches. All necessary agreements (e.g., Memoranda of Understanding or Agreement, Executive Orders, Intergovernmental Agreements, legislation) should be in place to support communications coordination and delivery during both small- and large-scale emergency events. The formality of the agreements and number of agencies included increases as organizations plan for more complex emergency events. Agreements should be developed and/or updated regularly—at least every three to five years—and following significant events and technology upgrades.

Funding:

Funding refers to the levels and reliability of financial resources available for one-time capital investments and recurring operating costs that support interoperable emergency communications. Additional funding considerations include the budgeting processes and mechanisms in place to coordinate and prioritize funding. Strategically-informed budgeting for communications expenditures are needed to support the sustainability of systems and solutions, and should be considered within the broader landscape of preparedness resource priorities. In addition to funding for multi-agency communications capabilities, emergency response entities should identify emergency funding for all-hazards responses to plan for the additional resources needed during a major event. The objective is for multiple organizations and standing committees to budget strategically for the acquisition and maintenance of sustained interoperable emergency communications.

Strategic Planning:

Strategic planning involves disciplined efforts and processes to establish long-term goals and objectives for interoperable emergency communications. Strategic plans should identify stakeholders and decision-making groups; outline goals, objectives, and initiatives; delineate roles and responsibilities; determine required and priority capabilities; develop performance and effectiveness measures; and address sources of funding to improve communications capabilities and preparedness for emergency events. Agencies should perform strategic planning and update their plans regularly, annually, and after significant events or technology upgrades.

Standard Operating Procedures

Policies, Practices, and Procedures:

The SOP capability element comprises the range of informal and formal practices and procedures that guide emergency responder interactions and the use of interoperable emergency communications solutions. Agencies should develop, coordinate, and share best practices and procedures that encompass both operational and technical components. Command and control protocols should be compliant with the National Incident Management System (NIMS), incorporating the Incident Command System as an operational guide. Procedures for the activation, deployment, and deactivation of technical resources should be included, as well as roles and responsibilities for operation, management, recovery, and sustainment of equipment and infrastructure during an event. Agencies should identify procedures used to trigger and implement backup communications solutions should primary systems and solutions become unavailable. As the scale of the event expands, procedures for the integration of communications solutions become increasingly critical. Procedures should be incorporated into emergency operations plans to ensure tactical coordination of communications protocol (e.g., use of common language, shared frequency plan) across agencies during an event.

Agencies must institute processes by which policies, practices, and procedures are regularly developed and reviewed for consistency across agencies. All participating agencies should also review SOPs annually to update organizational resources and points of contact. SOPs should also be reviewed following significant events or technology upgrades to incorporate lessons learned and feature enhancements. To ensure personnel familiarity and proficiency and solution functionality, SOPs should incorporate training and testing requirements.

Technology

Technology encompasses the systems and equipment that enable emergency responders to share information efficiently and securely during an emergency incident. This element also addresses the functionality, performance, interoperability, and continuity capabilities of emergency communications systems and equipment.

System Functionality:

Emergency responders require a basic level of operability to meet day-to-day and large-scale emergency communications needs that range from basic voice communications to integrated data, video, and voice applications. To coordinate and share information during an incident, emergency responders require real-time, secure voice communications with minimal call setup time and third party intervention. Responders also require the ability to communicate with multiple field users and support personnel, segregate communications between multiple channels or talkgroups, and prioritize communications over shared systems. Data and video communications may also be needed—both at the incident scene and between the scene and remote field offices—to enhance situational awareness and command and control capabilities. The technologies implemented should also comply with recommended government and industry standards such as Project 25 and the Advanced Encryption Standard to facilitate compatibility and interoperability between differing systems and equipment. Emergency response entities must plan for both future technology needs, including additional features and applications as well as for the replacement, upgrade, and modernization of aging or dated systems, equipment, and facilities.

System Performance:

Emergency responders require communications systems and equipment that are reliable, available on demand—when needed to respond to an incident—and designed to support the requirements of the relevant user groups' mission. Systems must provide sufficient coverage, capacity, transmission rate, and quality of service to support day-to-day activities; be scalable, as needed, to provide additional coverage and capacity; and accommodate additional users without sacrificing functionality or performance. In the case of mobile and deployable assets, agencies should account for equipment deployment and setup times.

Preventative maintenance and testing of interoperable emergency communications systems and equipment is critical for achieving and maintaining satisfactory system performance. All necessary interoperable emergency communications solutions should be maintained and tested on a regular basis (e.g., weekly, monthly, or quarterly) with test results evaluated to ensure acceptable system and equipment performance. Agencies should also monitor their system failures and maintenance needs to ensure that systems and equipment will be available when required.

Interoperability:

As the number of agencies, jurisdictions, and responders involved in an event increase, technology challenges associated with achieving interoperable emergency communications increase as well. Agencies implement a number of interoperability solutions to address these challenges, ranging from small-scale, ad hoc solutions such as radio swaps to robust, permanent solutions such as shared systems. The manner

and ease with which these solutions are activated varies by whether they are improvised or are available and authorized without external intervention.

The scope of interoperability ranges from wide area (repeated) to local area (radio-to-radio). Interoperability between command and control centers is critical to ensure that decisions are coordinated and information is shared and disseminated in a timely manner. Emergency response personnel and agencies also require the flexibility to set up ad hoc interoperability solutions as needed to augment or back up their permanent solutions, and to establish interoperability with unexpected partners. Agencies can best achieve interoperability through the use of voluntary consensus standards-based equipment and systems.

Continuity of Communications:

As evidenced during the events of September 11, 2001, and Hurricanes Katrina and Rita, emergencies—whether man-made, natural, or terrorist-related—can have devastating effects on critical public and private communications infrastructure components, such as towers, leased lines, and electrical power sources, and on support facilities. The degree to which critical infrastructure and facilities are impacted will dictate what resources and response capabilities are required. Alternative means of communication; the integration of primary and backup systems and emergency operations facilities such as Public Safety Answering Points and Emergency Operations Centers; and the ability to restore operations and physical security to emergency communications infrastructure, systems, and facilities are all critical factors in the sustained success of emergency response and recovery. Agencies should plan for contingency and restoration services and expand upon their primary systems to ensure survivability, security, and redundancy of emergency communications infrastructure, systems, and facilities during emergency events.

Training and Exercises

Training and exercises play a vital role in preparedness, readiness, and proficiency in accessing and using communications capabilities during emergency events. Preparedness is essential to ensuring that interoperable emergency communications equipment is well maintained, operational, and ready for deployment. Achieving appropriate levels of readiness and proficiency ensures that personnel can manage, deploy, set up, and use equipment effectively, individually and in conjunction with other emergency responders. Conducting training and exercises helps emergency responders understand their roles and properly prepare to respond to a wide range of emergency events.

Sufficiently trained and qualified personnel are necessary to support the delivery of services and equipment and to provide incident commanders and response personnel with the tools they need to complete their missions. The knowledge, skills, and abilities required for successful interoperable emergency communications varies across emergency response organizations; these success factors are determined by existing elements such as the role of the organization, solutions utilized, and agreements with other agencies and neighboring jurisdictions. Typical participant roles can include:

- Communications Planners
- Communications System Operators
- Dispatchers

- Logisticians
- Radio Programmers
- Radio and Telecommunications System Managers
- Radio and Telecommunications Technicians
- Spectrum or Frequency Managers

Training:

Training helps emergency response providers build the skill sets required to establish and maintain interoperable emergency communications. Training can be delivered through a variety of methods, including classroom instruction, demonstrations, exercise-based training, on-the-job coaching, computer-based training, or written self-study materials and certifications.

Interoperable emergency communications training should address technical and operational issues. This may include information regarding the proper use, care, and operation of systems and equipment; capabilities and limitations; and policies and procedures for implementing solutions in coordination with other responders. Emergency responders must also understand the factors that can disrupt, interfere with, or intercept communications, and the appropriate preventative actions and countermeasures that should be used.

Comprehensive training programs should be established to deliver regular training to all emergency responders who use communications equipment. This training should be conducted within agencies to build knowledge and competency; across disciplines, jurisdictions, and levels of government; and with key private sector organizations, as appropriate. Programs should be comprehensive enough to address small- to large-scale events in order to build capability in coordinating with a full range of emergency response providers during all-hazards scenarios. These programs should also be evaluated regularly to determine their effectiveness and impact on performance and proficiency levels, and to ensure that existing content remains valid and new content is incorporated as appropriate.

Exercises:

Exercises involving emergency scenarios are used to practice interoperable emergency communications knowledge and skills, reinforce training, and build competency. Working through these scenarios helps the emergency response community develop proficiency in identifying available and needed communications resources; implement processes and procedures; and leverage solutions to effectively establish and maintain communications. Several types of exercises are typically used, including:

- Workshops
- Tabletop Exercises
- Functional Training Exercises
- Full-Scale Exercises

To support preparedness for a range of events, exercises should involve diverse representation from across emergency response providers. Exercises should also address all-hazards events and incorporate guidance from the Homeland Security Exercise and Evaluation Program (HSEEP). HSEEP constitutes a national standard for all exercises, providing a standardized methodology and terminology for exercise design, development, execution, evaluation, and improvement planning. Scenarios may be designed based on

recent events, agreed-upon risks or threats, or potential incidents involving high-value or target hazards. Exercises should evaluate the ability of agencies to activate and execute their continuity of operations or continuity of government plans to assure communications operability and interoperability when infrastructure is greatly impacted. Ultimately, exercises help emergency responders identify strengths and weaknesses in their processes and solutions. Evaluators and participants should conduct post-exercise debriefings and results should be documented in an after-action report. Responsible parties should be charged with addressing any identified gaps and operational requirements so improvements can be implemented prior to the next exercise or emergency.

Usage

Frequency of Use and Familiarity:

Usage addresses the frequency and familiarity with which emergency responders utilize interoperable emergency communications solutions. Building capabilities through usage improves the ability and proficiency of emergency responders to establish and maintain interoperable emergency communications. “Frequency of use” denotes the regularity with which agency personnel activate and operate communications solutions. “Familiarity” refers to agency personnel’s level of awareness of and proficiency with their agency’s communications systems and processes. To build capabilities in these areas, emergency responders should be:

- Knowledgeable of available interoperable emergency communications solutions
- Capable and proficient in operating and implementing interoperability solutions
- Familiar with procedures for establishing interoperability during small- and large-scale emergencies

As the scale of an incident increases, emergency personnel must be familiar and proficient with an increasing number of interoperability and backup solutions as well as with interagency SOPs that support coordination with a broader range of emergency response providers. Evaluation of after-action reports is another necessary step in addressing usage in scalable incidents; this analysis ensures that lessons learned are incorporated into emergency communications procedures. These evaluations help identify communications gaps and improve the methods, procedures, and protocols used to establish and maintain communications during emergency events.

Interoperability Continuum Measurement Tool

Leveraging the 2006 National Interoperability Baseline Survey, the below sample measurement tool (table D-3) expands the Interoperability Continuum governance lane into the detailed sub-elements as identified in the Capability Assessment Framework and the Capability Needs Chart of the National Communications Capabilities Report. The sub-elements and their associated measurement descriptions of early, moderate, full and advanced development should be asked as part of a statewide capabilities performance assessment to provide a structure for measurement.

When measuring performance, remember not all agencies or localities need to reach the advanced description to meet their specific communications interoperability requirements. The statewide assessment survey should ask all participants to identify their current state within the Interoperability

| ELEMENTS | SUB-ELEMENTS | EARLY DEVELOPMENT | MODERATE DEVELOPMENT | FULL DEVELOPMENT | ADVANCED DEVELOPMENT |
|-------------------|-------------------------------|---|--|---|---|
| Governance | Leadership | Government leaders are aware of interoperable emergency communications needs to support the protection of citizens and the safety of responders | Government leaders understand the importance of interoperable emergency communications, provide some political and fiscal support, and begin inter-agency coordination across levels of government | Government leaders demonstrate that interoperable emergency communications are a political and fiscal priority and conduct inter-agency coordination across levels of government | Government leaders serve as interoperable emergency communications advocates and act to ensure long-term political and fiscal support |
| | Decision-making Groups | No inter-agency partnerships or forums in place | Informal inter-agency partnerships or forums exist to address common interests, day-to-day emergency communications, and technology | Formal interoperable emergency communications planning and governing bodies with defined missions, responsibilities, and authorities are in place for large-scale, multi-agency events | Proactive recruiting of new participants to include cross-governmental membership and various types of responders |
| | Agreements | Unofficial, informal agreements in practice | Some of the necessary agreements (e.g., MOU/MOA/MAA, Ordinance, Executive Order, IGA, and Legislation) are in place to support multi-agency interoperable emergency communications during events | All necessary agreements (e.g., MOU/MOA/MAA, Ordinance, Executive Order, IGA, and Legislation) are in place to support interoperable emergency communications during large-scale, multi-agency events | Institutionalized processes are in place to develop and review agreements at least every three to five years and after significant events and technology upgrades |
| | Funding | Limited and fragmented funding dedicated to interoperable emergency capabilities exists | Long-term planning for partially funded multi-organization interoperable emergency communications capabilities exists | Acquisition of long-term funding for multi-organization communications capabilities, as well as for emergency funding for all-hazards response | Multiple organizations and standing committees are working to strategically acquire and manage sustained interoperable emergency communications and maintenance funding |
| | Strategic Planning | No interoperable emergency communications strategic plan or strategy are in place | Strategic planning process is in place and communications plan is under development for multi-jurisdictional emergency events | Formal strategic plan is in place and accepted by all participating stakeholders for large-scale, multi-jurisdictional emergency events | Institutionalized processes to review are in place strategic plans on an annual basis and after significant events or technology upgrades |

Table D-3: Sample Interoperability Continuum Measurement Tool—Governance

Continuum Measurement Tool and their desired future state based upon their distinctive requirements. Additional guidance on using the Interoperability Continuum Measurement Tool as a basis for measuring performance of a statewide communications interoperability effort can be found within Appendix D: Interoperability Self-Assessment Scorecard of the Department of Justice's Office of Community Oriented Policing Services and SAFECOM-produced Tech Guide for Communications Interoperability²⁵.

25 U.S. Department of Justice, Office of Community Oriented Policing Services. Law Enforcement Tech Guide for Communications Interoperability, December 2006. www.cops.usdoj.gov/ric/ResourceDetail.aspx?RID=238
(Note that many of the sub-elements changed as part of the 2008 National Communications Capabilities Report. Revised sub-elements are presented here in Figure D-1: Capability Assessment Framework.)

Compile Statewide Measurement Distribution

Once the statewide assessment is complete at the State agency level, data from the regional, local, and tribal levels needs to be rolled up or aggregated to produce a statewide perspective on the effort's progress. The sample measurement scorecard below (table D-4) demonstrates what the aggregated statewide data may look like based on the Interoperability Continuum and the capability sub-elements presented in the Capabilities Assessment Framework. The analysis chart should represent the current state aggregated percentages as well as the desired future state aggregated percentages. The difference between the two percentages demonstrates areas of need at a statewide level. The State agency, regional, local, and tribal data sheets provide further specificity on where additional support is needed. For instance, a State may find that rural areas do not require advanced development for a specific capability sub-element, but a UASI does have this requirement. This will help the State determine where to concentrate resources and support. The leadership capability sub-element row is populated with sample data as an example.

| ELEMENTS | CAPABILITY SUB-ELEMENTS | EARLY DEVELOPMENT | MODERATE DEVELOPMENT | FULL DEVELOPMENT | ADVANCED DEVELOPMENT | Statewide Compliance |
|-------------------------------|-------------------------------------|---|---|--|---|----------------------|
| Governance | Leadership | Government leaders are aware of interoperable emergency communications needs to support the protection of citizens and the safety of responders | Government leaders understand the importance of interoperable emergency communications, provide some political and fiscal support, and begin inter-agency coordination across multiple levels of government | Government leaders demonstrate that interoperable emergency communications are a political and fiscal priority and conduct inter-agency coordination across levels of government | Government leaders serve as interoperable emergency communications advocates and act to ensure long-term political and fiscal support | |
| | | Current State: 30% | Current State: 20% | Current State: 40% | Current State: 10% | |
| | | Desired Future State: 0% | Desired Future State: 0% | Desired Future State: 50% | Desired Future State: 50% | |
| | | | | | | |
| | Decision-making Groups | | | | | |
| Standard Operating Procedures | Agreements | | | | | |
| | Funding | | | | | |
| | Strategic Planning | | | | | |
| | Policies, Practices, and Procedures | | | | | |
| Technology | System Functionality | | | | | |
| | System Performance | | | | | |
| | Interoperability | | | | | |
| | Continuity of Communications | | | | | |
| Training and Exercises | Training | | | | | |
| | Exercises | | | | | |
| Usage | Frequency of Use and Familiarity | | | | | |

Table D-4: Sample Aggregated Statewide Measurement Scorecard

SAFECOM Self-Assessment

The Self-Assessment Analysis builds upon the previous success of the SAFECOM program's 2006 National Interoperability Baseline Survey, which randomly surveyed 22,400 emergency response agencies across the Nation between May 2006 and July 2006. The 2006 National Interoperability Baseline Survey measured interoperable communications nationwide for the purpose of improving effectiveness for emergency response practitioners. To further assist agencies with improving their interoperable communications, the SAFECOM program developed the Self-Assessment Analysis specifically for agencies that did not participate in the 2006 National Interoperability Baseline Survey, but would like to evaluate their capacity for interoperability. The Self-Assessment Analysis consists of 13 questions, taken directly from the 2006 National Interoperability Baseline Survey, that allow agencies to both compare their progress against similar agencies surveyed and measure their current capacity for interoperability. The on-line Self-Assessment is available at: www.safecomprogram.gov/SAFECOM/selfassessment.



Finding Funding — New Uses for Old Fees

The Indiana Integrated Public Safety Commission (IPSC) is comprised of fire, law enforcement, and emergency personnel from throughout the State. Project Hoosier Safety Acting for Everyone-Together (SAFE-T), Indiana's statewide public safety communications system, was created to connect Federal, State, and local emergency responders and public officials throughout 95 percent of Indiana with 95 percent reliability. While practically complete today, it began with a shared vision for statewide communications interoperability.

While contemplating the development of a shared radio system, leaders in Indiana realized that:

- A statewide shared system could improve the ability of emergency responders to respond to incidents.
- Taxpayer dollars could be saved by eliminating duplicate communications systems and by providing significant price discounts through quantity purchasing.
- Cash-poor, local agencies could not afford to pay a hefty share of the costs traditionally required to implement a statewide communications system.

The State's leaders felt that if they could somehow build the system, fund the system, and convince the local community to support and join the system, the State could truly achieve statewide communications interoperability. The major hurdle, as in many circumstances, was funding.

State leaders obtained initial funding from numerous sources, including congressional appropriations, U.S. Department of Justice and Department of Transportation grants, and State funding sources. But for long-term funding, Indiana took an innovative approach.

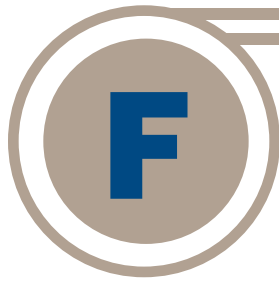
In 2002, the Indiana General Assembly passed House Enrolled Act (HEA) 1001, establishing a funding mechanism for Project Hoosier SAFE-T. Under HEA 1001, an existing \$1.25 fee that was already being collected on each transaction made at the Bureau of Motor Vehicles (BMV) was reallocated to the IPSC system infrastructure fund to pay the costs of an integrated wireless public safety communications system. This fee is in place through July 1, 2019.

These monies, approximately 46 percent from Federal sources, 10 percent from the Indiana General Fund (operating account), and 44 percent from BMV revenues, have been utilized to construct and maintain the networks' 131 transmission sites.

Key aspects of the Indiana model:

- Indiana was able to raise nearly one-half of the funds required to build the system without creating new sources of funding.
 - They added no new taxes or fees by re-directing existing fees that were being collected by the BMV.
- By relieving a majority of the financial pressure off of local emergency responders, Indiana has effectively allowed smaller agencies to have a state of the art system they otherwise would not have been able to afford on their own.

- Indiana built successful partnerships that have brought, and continue to bring, Federal dollars to the project.
- Indiana considered the needs of the State's local emergency responders.
 - Local agencies save in at least three ways:
 - Member agencies do not have to pay for infrastructure, construction, or maintenance.
 - Member agencies are able to capitalize upon significant discounts when purchasing their equipment via bulk purchasing.
 - Member agencies do not have to pay user fees because the costs are being funded by the State (HEA 1001).
 - In addition to funding the majority of the system, Indiana chose a technological solution that minimized equipment purchases by local agencies, thus making the decision to join and support the system even more attractive to the local community.
 - Member agencies are only required to pay for user and dispatch center equipment, much of which is eligible for government grants.



Statewide Governance Development — A Checklist

Statewide Interoperability Coordinator's Office

- ☐ Identify a champion for the statewide interoperability effort who will promote the need for a practitioner-driven statewide governance system to enhance statewide interoperability through coordination.
- ☐ Hire a Statewide Communications Interoperability Coordinator and an appropriate support staff.
- ☐ Leverage the existing State agency interoperability or communications committee for their baseline knowledge of the interoperability issue.
- ☐ Secure seed money via grant funding to establish a program management office. This office will be charged with implementing the statewide effort and supporting the Statewide Interoperability Coordinator's Office (SWIC) for a limited period of time.
- ☐ Secure long-term, sustainable funding to support the governance coordination effort and the SWIC.

Statewide Interoperability Governing Body Development

- ☐ Leverage national best practices and the State's individual requirements to determine the appropriate stakeholder representation for the Statewide Interoperability Governing Body (SIGB) and to reach out to association executive directors and agency heads to invite them to be members.
- ☐ Ask for formal letters of appointment from emergency responder associations, relevant State agencies, and alternate representatives on the SIGB.
- ☐ Develop a charter and rules of operations document.
- ☐ Seek legitimacy and authority from a governor's executive order or codification by the State's legislature.
- ☐ Utilize the Statewide Communication Interoperability Plan (SCIP) methodology to develop or update a SCIP that identifies the statewide mission, vision, goals, initiatives, and implementation timeline.

Regional Interoperability Committees Development

- ☐ Leverage existing State Homeland Security Regions or State Mutual Aid boundaries to develop Regional Interoperability Committee (RIC) borders.
- ☐ Leverage appropriate SIGB associations and the State's Association of County Executives to reach out to local policymakers regarding the State's desire for RICs.

- ☐ Host an RIC kick-off meeting in each of the State's determined regions.
 - Invite local communications interoperability stakeholders from each of the regions' counties, large cities, pre-existing communications operational areas, and Urban Areas.
 - Strive for a mix of operational and policy stakeholders representing all stakeholder disciplines.
 - Identify a chairperson and co-chairperson to lead the regional effort.
 - Name the chairperson to represent the region on the SIGB.
- ☐ Identify specific committee representatives and ask local and county leaders to submit formal letters of appointment for these representatives to the SWIC.
- ☐ Develop a charter and rules of operations document for the RIC.
- ☐ As appropriate, develop a memorandum of understanding that establishes the authority of the RIC for all localities and counties to agree to and sign.
- ☐ Develop a regional communications interoperability plan.
- ☐ Develop a regional Tactical Interoperable Communications Plan.



References

U.S. Department of Homeland Security

A cornerstone of the Department of Homeland Security's (DHS) philosophy is a commitment to partner closely with other Federal agencies, State and local governments, emergency responders, and law enforcement entities to ensure the security of the United States. Its website explains how DHS and local governments can work together.

www.dhs.gov

SAFECOM Program

SAFECOM is a communications program of DHS. SAFECOM provides research, development, testing and evaluation, guidance, tools, and templates on interoperable communications-related issues to Federal, State, local, and tribal emergency response agencies. The Office of Emergency Communications (OEC) supports SAFECOM's development of grant guidance, policy, tools, and templates, and provides direct assistance to Federal, State, local, and tribal practitioners. The Office for Interoperability and Compatibility (OIC) supports SAFECOM's research, development, testing and evaluation, standards, and tools such as reports and guidelines. OEC is an office within the Directorate for National Protection and Programs. OIC is an office within the Science and Technology Directorate.

www.safecomprogram.gov

SAFECOM Grant Guidance

Although SAFECOM is not a grant-making body, it has developed coordinated grant guidance to help maximize the efficiency and effectiveness with which emergency response communications related grant dollars are allocated and spent. The grant guidance document outlines recommended grant funding eligibility—including applicants and activities, application criteria, guidelines, and resources—to assist the emergency response community in strengthening interoperability.

www.safecomprogram.gov/SAFECOM/library/grant/1341_fy2008.htm

Grants Program Directorate

The Office of Grants and Training within DHS is responsible for providing training, funds for the purchase of equipment, support for the planning and execution of exercises, technical assistance and other support to assist states and local jurisdictions to prevent, respond to, and recover from acts of terrorism.

www.ojp.usdoj.gov/odp

National Emergency Communications Plan

The National Emergency Communications Plan (NECP) is a strategic plan that establishes a national vision for the future state of emergency communications, sets national goals and priorities for addressing deficiencies in the Nation's emergency communications structure, and provides recommendations and milestones for emergency response providers and relevant government officials to improve their communications capabilities. The NECP seeks to align Federal, State, local, and tribal planning efforts through a common vision and set of goals, objectives, and priority initiatives that target emergency communications. For State, regional, local, and tribal governments, the NECP provides guidance for future strategic planning efforts as well as recommended initiatives for improving emergency responders' communications capabilities.

www.safecomprogram.gov/SAFECON/natlemergencycommplan/1372_nationalemergency.htm

SAFECON Interoperability Continuum

The SAFECON Interoperability Continuum provides a graphical depiction that demonstrates the five critical success factors to achieving interoperability, beyond just technology. This tool also provides a framework from which all emergency response agencies at the Federal, State, local, and tribal levels could use to baseline their planning and implementation of interoperability solutions.

www.safecomprogram.gov/SAFECON/tools/continuum

Operational Guide for the SAFECON Interoperability Continuum

At the Urban Area Summit, held on October 27-28, 2004, in Washington, D.C., emergency response practitioners and leaders from the ten RapidCom Urban Areas along with key stakeholders from the Federal, State, and local levels convened to share best practices, lessons learned, and other experiences gained from planning and implementing communications interoperability solutions. The purpose of this report is to share the valuable information learned from the representatives of the emergency response community that participated in RapidCom and to provide a framework for communities and regions to use in their communications interoperability planning efforts.

www.safecomprogram.gov/NR/ronlyres/5189828C-8D5E-4F66-9B3E-CFF847660023/0/LessonLearnedFinal101305.pdf

Statewide Communications Interoperability Planning (SCIP) Guidebook

This tool provides an explanation of the statewide plan criteria, a step-by-step guide for developing an interoperability plan, and a recommended layout for the statewide plans. Detailed explanations include common questions to consider, helpful hints in completing each section, and a list of the criteria each section addresses.

www.safecomprogram.gov/SAFECON/library/interoperabilitybasics/1311_statewideinteroperability.htm

Creating a Charter for a Multi-Agency Communications Interoperability Committee

This tool provides guidance for developing charter documents for multi-agency communications interoperability committees. The document is laid out in a recommended charter structure with suggested headings for each section. Each section poses questions to consider when writing content for a charter. Sample paragraphs are included for reference.

www.safecomprogram.gov/NR/rdonlyres/49A7EC9B-7227-45D5-930A-83D9145EE1F1/0/Governance_t1.pdf

Writing Guide for a Memorandum of Understanding (MOU)

This tool provides guidance for developing a memorandum of understanding (MOU). The document is laid out in a recommended MOU structure with suggested headings for each section. Each section poses questions to consider when writing content for an MOU. Sample paragraphs are included for reference.

www.safecomprogram.gov/NR/rdonlyres/70169F1E-F2E9-4835-BCC4-31F9B4685C8C/0/MOU.pdf

Writing Guide for Standard Operating Procedures

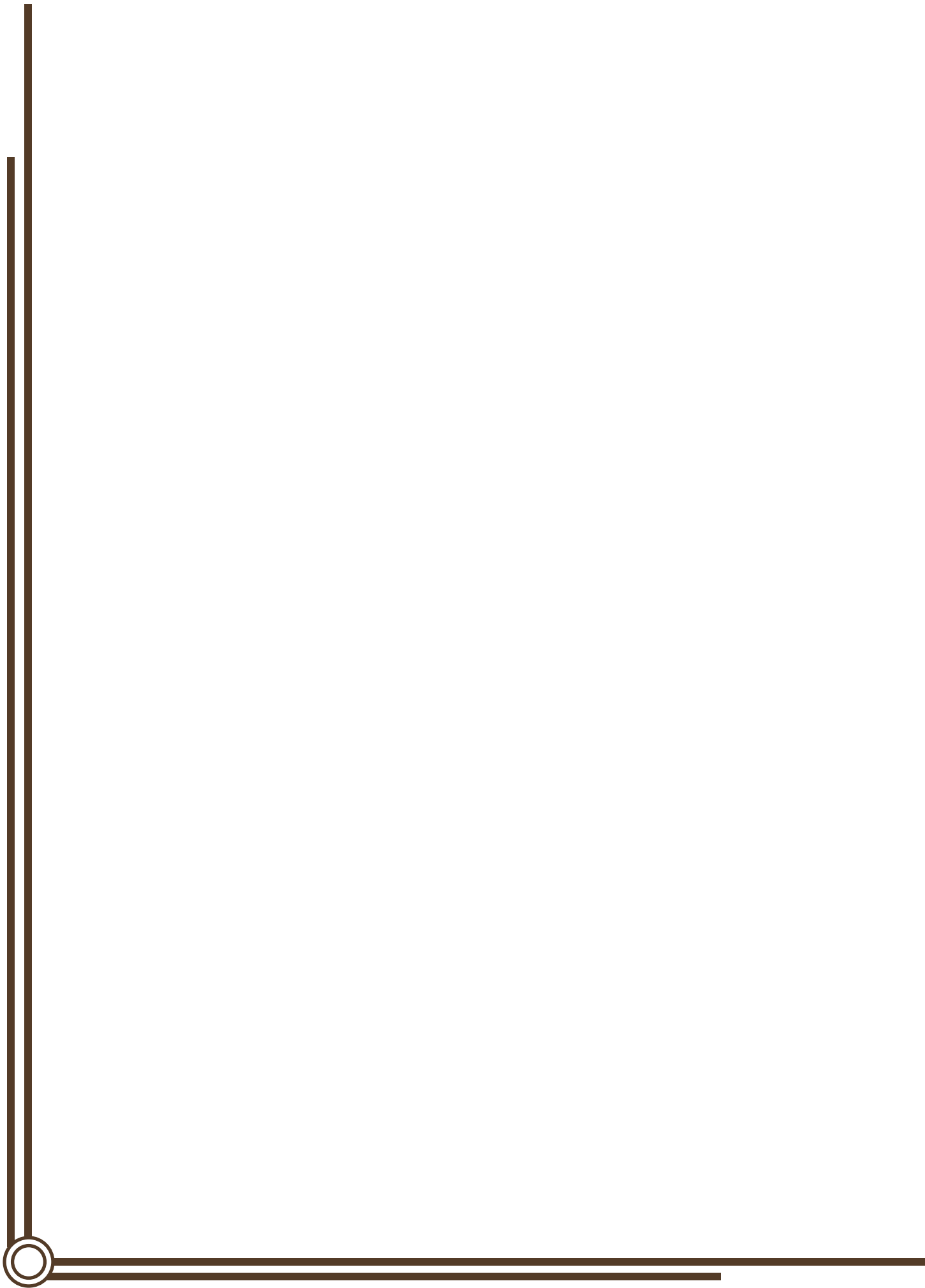
The purpose of the Writing Guide for Standard Operating Procedures is to assist communities that want to establish formal written guidelines or instructions for incident response. Each section poses questions to consider when writing content for standard operating procedures. Sample paragraphs are included for reference.

www.safecomprogram.gov/NR/rdonlyres/2D396F0E-CE19-4DCB-A30A-35982721F5AA/0/SOP.pdf



Acronyms

| | | | |
|--------------|---|----------------|--|
| APCO | Association of Public-Safety Communications Officials | NPSTC | National Public Safety Telecommunications Council |
| BMV | Bureau of Motor Vehicles | OEC | Office of Emergency Communications |
| CASM | Communication Assets Survey and Mapping | OHS | Office of Homeland Security |
| COPS | Community Oriented Policing Services | OIC | Office for Interoperability and Compatibility |
| DHS | Department of Homeland Security | PSAP | Public Safety Answering Point |
| EMS | Emergency Medical Services | RECCWG | Regional Emergency Communications Coordination Working Groups |
| FEMA | Federal Emergency Management Agency | RIC | Regional Interoperability Committee |
| FCC | Federal Communications Commission | RPAC-Is | Regional Preparedness Advisory Committees for Interoperability |
| FY | Fiscal Year | SAA | State's Administrative Agent |
| HEA | House Enrolled Act | SAFE-T | (Project Hoosier) Safety Acting for Everyone-Together |
| HSEEP | Homeland Security Exercise and Evaluation Program | SCIP | Statewide Communication Interoperability Plan |
| IPSC | Indiana Integrated Public Safety Commission | SIEC | Statewide Interoperability Executive Committee |
| IWG | Initiative Working Group | SIGB | Statewide Interoperability Governing Body |
| LMR | Land Mobile Radio | SME | Subject Matter Expert |
| MOU | Memorandum of Understanding | SOPs | Standard Operating Procedures |
| MPSCC | Midwest Public Safety Communications Consortium | SWIC | Statewide Interoperability Coordinator |
| NECP | National Emergency Communications Plan | TICP | Tactical Interoperable Communications Plan |
| NENA | National Emergency Number Association | UASI | Urban Area Security Initiative |
| NGO | Non-Governmental Organization | | |
| NIMS | National Incident Management System | | |





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