



California

Statewide Communication Interoperability Plan (CalSCIP)

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EXECUTIVE SUMMARY

The California Statewide Communication Interoperability Plan (CalSCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The CalSCIP is a critical mid-range (three- to five-years) strategic planning tool to help California prioritize resources, strengthen governance, identify future investments, and address interoperability gaps.

The purpose of the CalSCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the state, regional, local, and tribal levels.
- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.
- Achieve the State's interoperable communications vision and mission through a statewide strategy planning framework.

The following are California's Vision and Mission for improving emergency communications operability, interoperability, and continuity of communications statewide.

Vision: Achieve sustainable statewide interoperable communications.

Mission: Provide strategic direction for interoperable communications and a unified public safety response communications plan that promotes national standards and addresses the unique requirements of emergency responders and designated public service organizations serving the people of California.

The following strategic goals represent the priorities for delivering California's vision for interoperable and emergency communications.

- Governance –
 - Develop a coordinated relationship between Planning Areas
 - Coordinate with the California Public Safety Radio Association (CPRA)/Northern California Chapter of the Association of Public Safety Communications Officials International (NAPCO) and state representatives, as appropriate
 - Update the California Statewide Interoperability Executive Committee (CalSIEC) Charter
 - Establish procedures for the Statewide Interoperability Coordinator (SWIC) to interface with all interoperable communications agencies
- Standard Operating Procedures (SOPs) –
 - Provide access to finalized SOPs and Tactical Interoperable Communications Plans (TICPs)

- Update California Office of Emergency Services (Cal OES) interoperable communications policies
- Review the California Interoperability Field Operations Guide (Cal IFOG) annually, and revise as needed
- Technology –
 - Develop a common interoperability platform that leverages existing technology and infrastructure, and provides a migration toward emerging technologies
 - Encourage collaboration between operational areas and provide opportunities to demonstrate and/or apply innovative interoperability communications solutions
 - Promote and leverage Communication Assets Survey and Mapping (CASM) Tool and similar tools and resources
 - Encourage state and local agencies to deploy mutual aid channel infrastructure
- Training and Exercises –
 - Provide interoperable communications training opportunities throughout the State using qualified instructors
 - Establish a working group to oversee all-hazards Communications Unit (COMU) certifications
- Usage –
 - Develop a program to regularly test communications equipment and infrastructure
 - Provide guidance and support for agencies to program and test interoperability channels
- Outreach and Information Sharing –
 - Maintain and enhance outreach program to leverage interoperability-related activities, including social media
 - Raise the State Legislature’s awareness of the need for interoperable communications
- Life Cycle Funding –
 - Identify a sustainable funding mechanism to support the following priorities:
 1. Training opportunities
 2. The SWIC position
 3. CalSIEC efforts
 - Encourage stakeholders to develop life cycle funding plans

California is dedicated to employing strong interoperable communications governance, training, and outreach to provide first responders and the wider public safety community the tools, training, and support needed to ensure the safety and security of the citizens of California. The CalSIEC will utilize this SCIP to guide and implement interoperable communications solutions throughout the state in conjunction with federal, state, county, local and association partners. Progress on the SCIP will be reported on an annual basis both to OEC and to the California legislature to ensure open-access to information about the important interoperable communications goals and initiatives outlined in this SCIP.

DRAFT

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1. INTRODUCTION

The California Statewide Communication Interoperability Plan (CalSCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The CalSCIP is a critical mid-range (three- to five-years) strategic planning tool to help California prioritize resources, strengthen governance, identify future investments, and address interoperability gaps. This document contains the following planning components:

- Introduction – Provides the context necessary to understand what the CalSCIP is and how it was developed.
- Purpose – Explains the purpose/function of the CalSCIP.
- California’s Interoperable and Emergency Communications Overview – Provides an overview of the State’s current and future emergency communications environment and defines ownership of the CalSCIP.
- Vision and Mission – Articulates the State’s three- to five-year vision and mission for improving emergency communications operability, interoperability, and continuity of communications at all levels of government.
- Strategic Goals and Initiatives – Outlines the strategic goals and initiatives aligned with the three- to five-year vision and mission of the CalSCIP and pertains to the following critical components: Governance, Standard Operating Procedures (SOPs), Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.
- Implementation – Describes the process to evaluate the success of the CalSCIP and to conduct reviews to ensure it is up-to-date and aligned with the changing internal and external environment.
- Reference Materials – Includes resources that provide additional background information on the CalSCIP or interoperable and emergency communications in California or directly support the CalSCIP.

Figure 1 provides additional information about how these components of the CalSCIP interrelate to develop a comprehensive plan for improving interoperable and emergency communications.

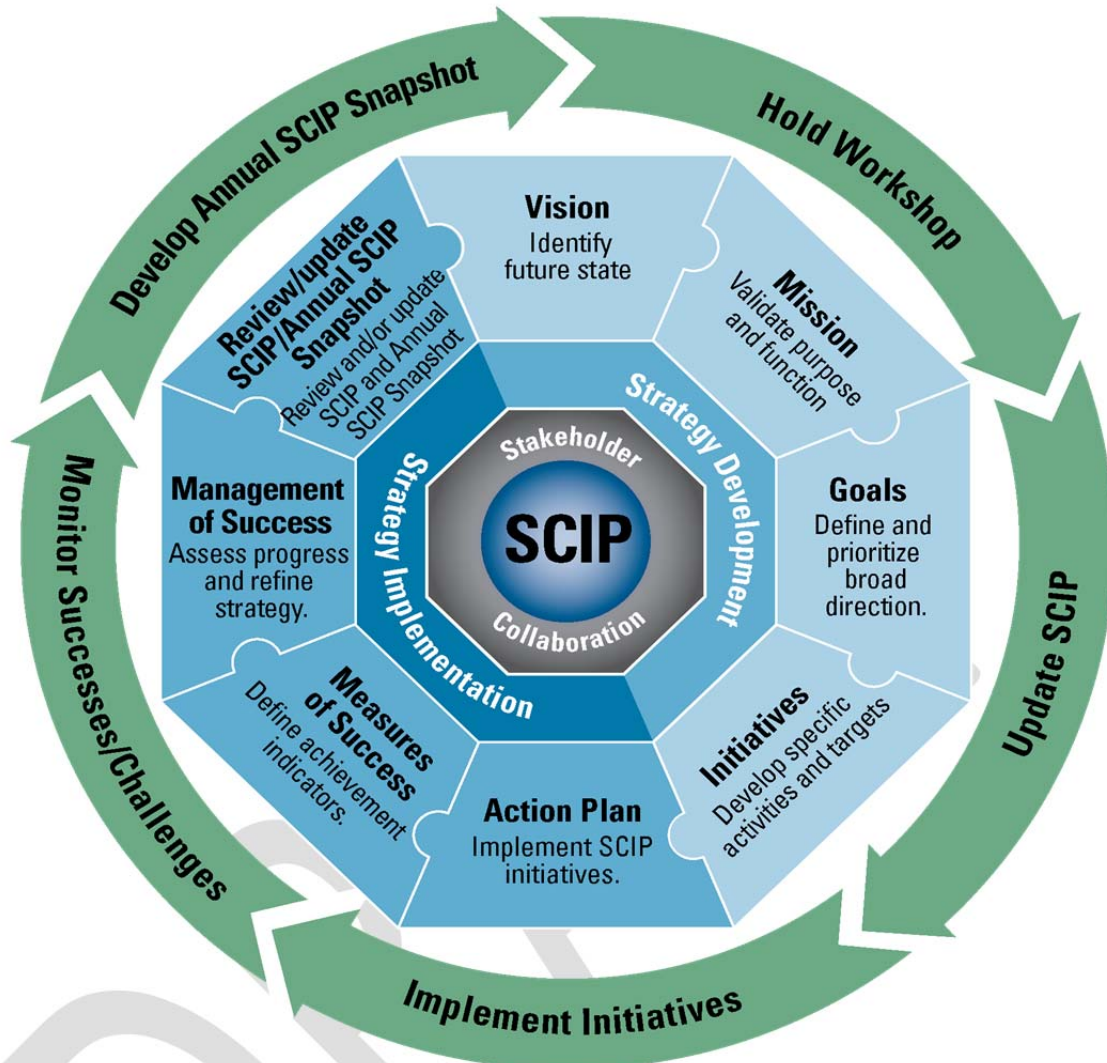


Figure 1: SCIP Strategic Plan and Implementation Components

The CalSCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. California has taken significant steps towards enhancing interoperable and emergency communications, including extensive training and exercises across the state, successful interoperability at real world events (i.e. Super Bowl 50, Rose Parade) and coordination among public safety disciplines.

However, more remains to be done to achieve California's vision. It is important to note that this work is part of a continuous cycle as California will always need to adapt to evolving technologies, operational tactics, and changes of key individuals (e.g., Governor, project champions). In the next three- to five-years, California will encounter challenges relating to operability, interoperability, geography, aging equipment/systems, emerging technologies, changing project champions, and sustainable funding.

Wireless voice and data technology is rapidly evolving and efforts are underway to determine how to leverage these new technologies to meet the needs of public safety. Figure 2 illustrates a public safety communications evolution by describing the long-term transition toward a desired converged future that was developed by FirstNET and is provided to show a potential Public Safety Communications Evolution.

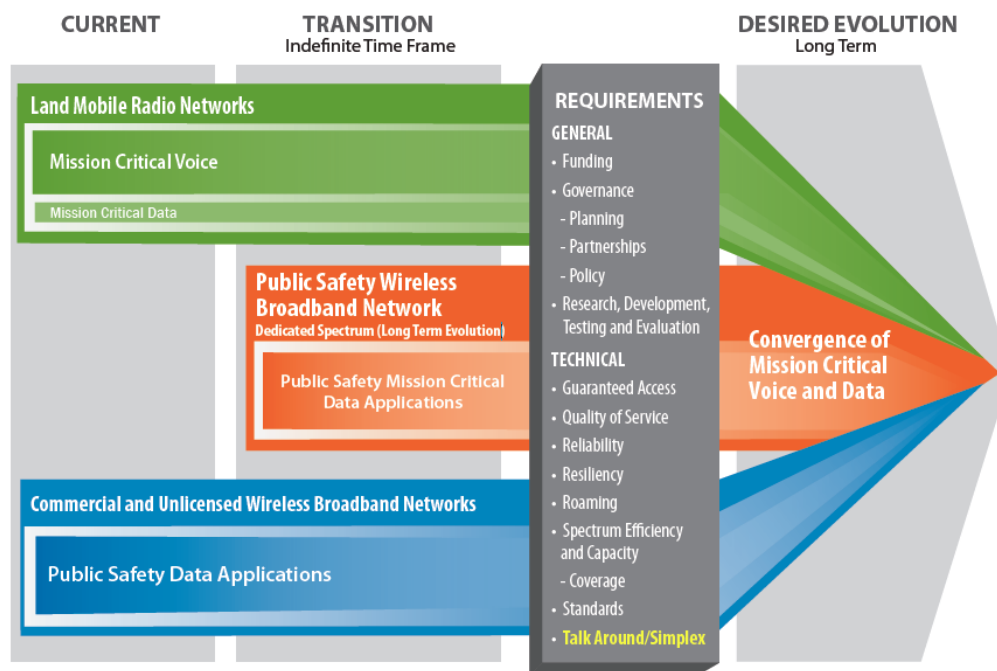


Figure 2: Public Safety Communications Evolution

California keeps up-to-date with the planning and build-out of the Nationwide Public Safety Broadband Network (NPSBN) in the near and long term in coordination with the First Responder Network Authority (FirstNet) through the California First Responder Network Board of Directors (CalFRN). The network build out will require continuing education and commitment at all levels of government and across public safety disciplines to design effective policy and governance structures that address new and emerging interoperable and emergency communications technologies. During this process, investments in LMR will continue to be necessary and in the near term, wireless data systems or commercial broadband will complement LMR. More information on the role of these two technologies in interoperable and emergency communications is available in the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) Public Safety Communications Evolution brochure.¹

Additionally, achieving sustainable funding in the current fiscal climate is a priority for California. As state and federal grant funding diminishes, states need to identify

¹ OEC's Public Safety Communications Evolution brochure is available here:
http://publicsafetytools.info/oec_guidance/docs/Public_Safety_Communications_Evolution_Brochure.pdf

alternative funding sources to continue improving interoperable and emergency communications for voice and data systems. Key priorities for sustainable funding in California include a dedicated Statewide Interoperability Coordinator (SWIC) position at full capacity, increased build out of infrastructure, and completing underfunded projects in rural areas, in addition to other California Statewide Interoperability Executive Committee (CalSIEC)-defined efforts. More information on a typical emergency communications system life cycle, cost planning, and budgeting is available in OEC’s System Life Cycle Planning Guide.²

The Interoperability Continuum, developed by SAFECOM and shown in Figure 3, serves as a framework to address all of these challenges and continue improving operable/interoperable and emergency communications. It is designed to assist emergency response agencies and policy makers with planning and implementing interoperability solutions for voice and data communications.

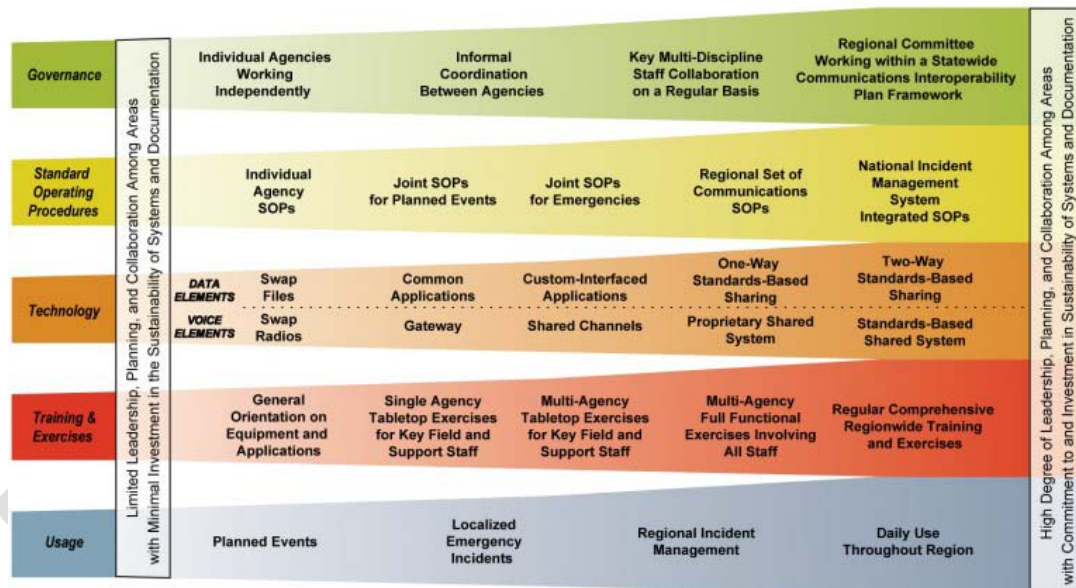


Figure 3: The Interoperability Continuum

The Continuum identifies five critical success elements that must be addressed to achieve a successful interoperable communications solution:

² OEC’s System Life Cycle Planning Guide is available here: http://publicsafetytools.info/oec_guidance/docs/OEC_System_Life_Cycle_Planning_Guide_Final.pdf

- **Governance** – Collaborative decision-making process that supports interoperability efforts to improve communication, coordination, and cooperation across disciplines and jurisdictions. Governance is the critical foundation of all of California’s efforts to address communications interoperability.
- **SOPs** – Policies, repetitive practices, and procedures that guide emergency responder interactions and the use of interoperable communications solutions.
- **Technology** – Systems and equipment that enable emergency responders to share voice and data information efficiently, reliably, and securely.
- **Training and Exercises** – Scenario-based practices used to enhance communications interoperability and familiarize the public safety community with equipment and procedures.
- **Usage** – Familiarity with interoperable communications technologies, systems, and operating procedures used by first responders to enhance interoperability.

More information on the Interoperability Continuum is available in OEC’s Interoperability Continuum brochure.³ The following sections will further describe how the CalSCIP will be used and the State’s plans to enhance interoperable and emergency communications.

2. PURPOSE

The purpose of the CalSCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the State, regional, local, and tribal levels.
- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.
- Achieve the State’s interoperable communications vision and mission through a statewide strategy planning framework.

The development and execution of the CalSCIP assists California with addressing the results of the National Emergency Communications Plan (NECP) Goals and the Federal government with fulfilling the Presidential Policy Directive 8 (PPD-8)⁴ National Preparedness Goal for Operational Communications.⁵

³ OEC’s Interoperability Continuum is available here:

<http://www.safecomprogram.gov/oecguidancedocuments/continuum/Default.aspx>

⁴ PPD-8 was signed in 2011 and is comprised of six elements: a National Preparedness Goal, the National Preparedness System, National Planning Frameworks and Federal Interagency Operational Plan, an annual National Preparedness Report, and ongoing national efforts to build and sustain preparedness. PPD-8 defines a series of national preparedness elements and emphasizes the need for the whole community to work together to achieve the National Preparedness Goal. <http://www.dhs.gov/presidential-policy-directive-8-national-preparedness>.

⁵ National Preparedness Goal – Mitigation and Response Mission Area Capabilities and Preliminary Targets – Operational Communications: Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

1. Ensure the capacity to communicate with the emergency response community and the affected populations and establish interoperable voice and data communications between Federal, State, and local first responders.

In addition to the CalSCIP, California will develop an annual Snapshot report that will be shared with OEC and other stakeholders to highlight recent accomplishments and demonstrate progress toward achieving the goals and initiatives identified in the CalSCIP. More information on the CalSCIP Snapshot is available in Section 6.4.

This CalSCIP is managed by the SWIC, who is also responsible for coordinating the implementation of this plan's consensus-based goals and ensuring the SCIP is maintained statewide. In December 2007, the first CalSCIP was developed through the efforts of the CalSIEC and other key stakeholders across the state. California has committed to updating the CalSCIP every two years to include goals and initiatives reflective of California's emergency communications environment, priorities, and challenges. In February 2016, California hosted a one-day SCIP Update Workshop to focus on updating and streamlining the CalSCIP to reflect stakeholder driven input. Participating stakeholders represented a variety of public safety disciplines and agencies.

3. CALIFORNIA'S INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

California relies on a system-of-system approach across 12 major shared statewide or state-orientated systems and numerous regional and local systems of varying capabilities. Local and State agencies use frequency bands ranging from 2 megahertz (MHz) to 800 MHz. The only spectrum state and local agencies have for systems expansions falls within the 700 MHz band.

Interoperable and emergency communications-related efforts in California are strategically driven by CalSIEC, and this entity holds final authority over the CalSCIP. The group holds meetings to ensure that local, regional, statewide, and State-level perspectives are included in interoperability planning and implementation. The CalSIEC is the statewide governance body representative of all disciplines and jurisdictions, and channels local stakeholder input, guidance, and recommendations for CalSCIP maintenance and implementation. Four Planning Areas (Northern, Capital-Bay, Central, and Southern) comprise CalSIEC's regional governance structure, whose boundaries are based on geography and radio frequency coverage. Working groups also provide stakeholder input and subject matter expertise for plan development and implementation.

State Agencies participate in the CalSIEC Planning Areas and have been an integral part of the CalSCIP planning process. CalOES, PSC is responsible for coordinating shared uses of the public safety spectrum consistent with Federal Communications Commission (FCC) decisions and regulations.

Despite fiscal constraints, California has focused on addressing needs identified by stakeholders whenever possible. Recent accomplishments include providing training

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2. Re-establish sufficient communications infrastructure within the affected areas to support ongoing life-sustaining activities, provide basic human needs, and transition to recovery.

and exercises across the State, and establishing a process for developing and sharing statewide SOPs.

California continues to support regional systems and foster collaboration to provide State and local emergency responders with fully interoperable communications throughout the State. The system-of-systems approach will facilitate communications regardless of technologies, infrastructures or frequency bands and will allow transparency among first responders. A list of California's major radio systems can be found in Appendix A.

4. VISION AND MISSION

The Vision and Mission section describes the California vision and mission for improving public safety and emergency communications operability, interoperability, and continuity of communications statewide.

California's Interoperable Public Safety and Emergency Communications Vision:

Achieve sustainable statewide interoperable communications.

California Interoperable Public Safety and Emergency Communications Mission:

Provide strategic direction for interoperable communications and a unified public safety response communications plan that promotes national standards and addresses the unique requirements of emergency responders and designated public service organizations serving the people of California.

5. STRATEGIC GOALS AND INITIATIVES

The Strategic Goals and Initiatives section describes the statewide goals and initiatives for delivering the vision for interoperable and emergency communications. The goals and initiatives are grouped into seven sections, including Governance, SOPs, Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.

5.1 Governance

The Governance section of the CalSCIP outlines the future direction of the California governance structure for interoperable and emergency communications. The State's communications interoperability efforts are guided by the CalSIEC, which represent

stakeholders from multiple public safety disciplines, jurisdictions, various public service and private sector groups, and all levels of government. CalSIEC and interoperability efforts are managed by the SWIC, though currently the SWIC position is assigned with collateral duties in California. To better align its emergency communications efforts at all levels, California seeks to develop support in the State Legislature and at the local level by coordinating Planning Areas and public safety organizations.

Table 1 outlines California's goals and initiatives related to governance.

Table 1: Governance Goals and Initiatives

| Governance Goals and Initiatives | | | | |
|---|--|--|------------------------------|---------------------------|
| Goal # | Goals | Initiatives | Owner | Completion Date (MM/YYYY) |
| 1. | Develop a coordinated relationship between Planning Areas | 1.1 Update CalSIEC Charter | SWIC, CalSIEC, CalOES | 08/2016 |
| | | 1.2 Establish bi-annual CalSIEC meetings | SWIC, CalSIEC | 08/2016 |
| | | 1.3 Share meeting minutes and agendas between Planning Areas | CalSIEC Planning Area Chairs | 08/2016 |
| 2. | Coordinate with the California Public Safety Radio Association (CPRA)/Northern California Chapter of the Association of Public Safety Communications Officials International (NAPCO) and state representatives, as appropriate | 2.1 Appoint Points-of-Contact from each Planning Area for CPRA, NAPCO, state representatives, and other public safety stakeholder associations | Planning Area Chairs | 02/2017 |
| | | 2.2 Determine and establish outreach schedule, based on conferences and legislative deadlines | Points-of-Contact | 02/2017 |
| 3. | Update the California Statewide Interoperability Executive Committee (CalSIEC) Charter | 3.1 Planning Area Chairs review and sign updated CalSIEC Charter | SWIC | 06/2016 |
| | | 3.2 Submit updated charter to PSC and CalOES | SWIC | 07/2016 |

| | | | | |
|----|--|--|----------------------|---------|
| 4. | Establish procedures for the Statewide Interoperability Coordinator (SWIC) to interface with all interoperable communications agencies | 4.1 CalSIEC Planning areas publish meeting schedules | Planning Area Chairs | 06/2016 |
| | | 4.2 Leverage regularly scheduled public safety communications meetings and develop schedule to attend meetings | SWIC | 10/2016 |
| | | | | |

5.2 Standard Operating Procedures (SOPs)

The SOPs section of the CalSCIP identifies the framework and processes for developing and managing SOPs statewide. The CalSIEC serves as the clearinghouse for establishing and executing the process by which statewide SOPs are developed, managed, maintained, and upgraded. Most SOPs across the State are locally based and identified in detail within their respective Operational Area (OA) Tactical Interoperable Communications Plan (TICP). Localities develop memoranda of understanding (MOUs) and SOPs with participating agencies for the use of interoperable protocols and technologies such as gateways or radio caches. The regions communicate the SOPs through their existing governance structure and document the process and protocols in their TICPs.

California's population size and geographic diversity present challenges when establishing standards across the State. After the 1991 East Hills Fire in Oakland, the State legislature established the Standardized Emergency Management System (SEMS) to improve the coordination of State and local emergency responders, and is required by the California Emergency Services Act for managing multiagency and multijurisdictional responses. SEMS incorporates the use of the Incident Command System, California Disaster and Civil Defense Master Mutual Aid Agreement, the OA concept and interagency coordination to ensure local government entities are eligible for reimbursement of response-related costs.

Table 2 outlines California's goals and initiatives for SOPs.

Table 2: Standard Operating Procedures Goals and Initiatives

| Standard Operating Procedures Goals and Initiatives | | | | |
|---|--|---|---------|-----------------|
| Goal # | Goals | Initiatives | Owner | Completion Date |
| 5. | Provide access to finalized SOPs and Tactical Interoperable Communications Plans (TICPs) | 5.1 Designate a clearinghouse for finalized SOPs and TICPs | CalSIEC | 10/2017 |
| | | 5.2 Send access information to stakeholders with an invitation to upload SOPs and TICPs | CalSIEC | 01/2018 |

| Standard Operating Procedures Goals and Initiatives | | | | |
|---|---|--|-----------------------|-----------------|
| Goal # | Goals | Initiatives | Owner | Completion Date |
| 6. | Update California Office of Emergency Services (Cal OES) interoperable communications policies | 6.1 Update existing procedures to reflect recent agency name change from CalEMA to CalOES | CalOES T-Comm | 10/2016 |
| | | 6.2 Develop tracking software that can be used to assign and track interoperability channel requests and usage | CalSIEC | 10/2017 |
| 7. | Review the California Interoperability Field Operations Guide (Cal IFOG) annually, and revise as needed | 7.1 Establish a Cal IFOG subcommittee | SWIC | 08/2016 |
| | | 7.2 Identify and invite committee members | SWIC | 10/2016 |
| | | 7.3 Establish a review cycle and meeting schedule | Cal IFOG subcommittee | 01/2017 |
| | | 7.4 Review Cal IFOG and update as appropriate | Cal IFOG subcommittee | 05/2017 |
| | | 7.5 Distribute revised Cal IFOG | Cal IFOG subcommittee | 08/2017 |

5.3 Technology

The Technology section of the CalSCIP outlines California's plan to maintain and upgrade existing technology; the roadmap to identify, develop, and implement new and emerging technology solutions; and the approach to survey and disseminate information on current and future technology solutions to ensure user needs are met. The focus of California's plan to improve interoperability is a vision of a system of systems integrating existing public safety communications networks. The State works to coordinate technology purchases at a regional level and enhance connectivity through interconnecting existing legacy architectures with standards-based networks. Many existing communications systems have reached or exceeded their life expectancy; local radio systems require funding, additional channels, and modernization.

Table 3 outlines California's goals and initiatives for technology.

Table 3: Technology Goals and Initiatives

| Technology Goals and Initiatives | | | | |
|---|--|---|----------------------------------|-----------------|
| Goal # | Goals | Initiatives | Owner | Completion Date |
| 8. | Develop a common interoperability platform that leverages existing technology and infrastructure, and provides a migration toward emerging technologies | 8.1. Identify basic voice interoperability needs based on real world events | SWIC | 01/2017 |
| | | 8.2. Establish CalSIEC Technology Working Group | SWIC | 05/2017 |
| | | 8.3. Publish best practices document that outlines common interoperability platform | CalSIEC Technology Working Group | 01/2018 |
| 9. | Encourage collaboration between Operational Areas and provide opportunities to demonstrate and/or apply innovative interoperability communications solutions | 9.1 Identify planned events and communication exercises that can be used to support collaboration | SWIC | Annually |
| | | 9.2 Reach out to Planning Areas and encourage participation in planned events between Operational Areas and Planning Areas | CalSIEC | Annually |
| 10. | Promote and leverage Communication Assets Survey and Mapping (CASM) and similar tools and resources | 10.1 Establish representative in each Planning Area to serve as the CASM Liaison | SWIC | 08/2016 |
| | | 10.2 CASM Liaison will identify representative in each Operational Area to serve as CASM Liaison. | CalSIEC Planning Areas | 06/2017 |
| 11. | Encourage state and local agencies to deploy mutual aid channel infrastructure | 11.1 Publish update Interoperability Channel use and licensing requirements | CalOES T-Comm and CalOES PSC | 10/2016 |
| | | 11.2 Provide support to those Operational Areas that desire to license interoperability solutions using mutual aid channels | CalSIEC and SWIC | 06/2016 |

5.4 Training and Exercises

The Training and Exercises section of the CalSCIP explains California's approach to ensure that emergency responders are familiar with interoperable and emergency

communications equipment and procedures and are better prepared for responding to real-world incidents. The training and exercise needs of CalSIEC's four Planning Areas vary due to geography, population density, and existing mutual aid agreements. The State coordinates closely with each Planning Area Chair for the availability of resources and prioritizes training and exercise opportunities, in addition to California's annual statewide Golden Guardian Exercise.

Table 4 outlines California's goals and initiatives for training and exercises.

Table 4: Training and Exercises Goals and Initiatives

| Training and Exercises Goals and Initiatives | | | | |
|--|--|---|----------------------------------|-----------------|
| Goal # | Goals | Initiatives | Owner | Completion Date |
| 12. | Provide interoperable communications training opportunities using qualified instructors | 12.1. Identify funding that can be used for Per Diem and travel for instructors | SWIC | 10/2016 |
| | | 12.2. Leverage ICTAP TA to train additional instructors | SWIC, CalSIEC | 12/2016 |
| | | 12.3. Provide facilities that can be used for training | Planning Areas | 10/2016 |
| 13. | Establish a working group to oversee all-hazards Communications Unit (COMU) certifications | 13.1. Identify and invite working group members | SWIC | 10/2016 |
| | | 13.2. Establish meeting schedule and desired outcomes for the working group | COMU Certification Working Group | 05/2017 |

5.5 Usage

The Usage section of the CalSCIP outlines efforts to ensure responders adopt and familiarize themselves with interoperable and emergency communications technologies, systems, and operating procedures in the State. Regular usage ensures the maintenance and establishment of interoperability in case of an incident. California's ultimate goal for emergency communications is to have interoperability utilized on the statewide system of systems on a daily basis to ensure users are kept abreast of current protocols, equipment operations, and techniques.

Many of the regional and local systems conduct weekly tests, though usage among counties and across systems is a challenge. Regular usage tests are important to maintain equipment and resources, as well as to keep users fully trained on available equipment in preparation for a real-world incident. To promote relationship-building among agencies, the State encourages users to take advantage of existing system tests and other established activities.

Table 5 outlines California's goals and initiatives for usage.

Table 5: Usage Goals and Initiatives

| Usage Goals and Initiatives | | | | |
|------------------------------------|---|---|--------------|-------------------|
| Goal # | Goals | Initiatives | Owner | Completion Date |
| 14. | Develop a program to regularly test communications equipment and infrastructure | 14.1. Add systematic test schedule to the Public Interoperability Calendar, and encourage universal participation | CalSIEC/SWIC | 12/2016, annually |
| | | 14.2. Provide online calendar access to Planning Area chairs to post relevant training, exercise, and testing information | SWIC | 12/2016 |
| | | 14.3. Promote regular testing of gateways and interoperability solutions | CalSIEC | 12/2016 |
| 15. | Provide guidance for agencies to program and test interoperability channels | 15.1. Ensure Cal IFOG reflects interoperability channel programming details | SWIC | 12/2016 |
| | | 15.2. Include Interoperability channel testing procedures as part of the Cal IFOG | SWIC | 12/2017 |

5.6 Outreach and Information Sharing

The Outreach and Information Sharing section of the CalSCIP outlines California's approach for building a coalition of individuals and emergency response organizations statewide to support the SCIP vision and for promoting common emergency communications initiatives. California places a strong emphasis on promoting interoperability and coordination across the state. The CalSIEC encourages local cross-jurisdictional and cross-disciplinary participation through the Planning Areas and their engagement with the Mutual Aid Regional Advisory Committee's (MARACs) and local stakeholders.

To support stakeholder engagement, Cal OES utilizes numerous social media sites such as Facebook and Twitter. Currently, there is no protocol for content transmitted to stakeholders, and how to communicate with them most effectively. The SWIC seeks to enhance the program by developing a more targeted approach to what stakeholders would like to know, how often, and how they would like to be informed.

Table 6 outlines California’s goals and initiatives for outreach and information sharing.

Table 6: Outreach and Information Sharing Goals and Initiatives

| Outreach and Information Sharing Goals and Initiatives | | | | |
|--|---|---|------------------|-----------------|
| Goal # | Goals | Initiatives | Owner | Completion Date |
| 16. | Maintain and enhance outreach program to leverage interoperability-related activities, including social media | 16.1. Develop a protocol for stakeholder engagement to post information to social media outlets and other outreach mechanisms | SWIC | 09/2017 |
| 17. | Raise the State Legislature’s awareness of the need for interoperable communications | 17.1. Identify stakeholders to champion interoperability efforts with the State Legislature | CalSIEC | 05/2017 |
| | | 17.2. Determine possible champions within the State Legislature | CalSIEC | 05/2017 |
| | | 17.3. Schedule meetings with legislative staff | CalSIEC | 10/2017 |
| | | 17.4. Develop information sharing materials based on the intended audience | CalSIEC and SWIC | 10/2017 |

5.7 Life Cycle Funding

The Life Cycle Funding section of the CalSCIP outlines California’s plan to fund existing and future interoperable and emergency communications priorities. Funding for California’s interoperability efforts are solely funded through Homeland Security grants. Strategies to identify sustainable funding continue to stall due to the State’s fiscal environments, though the State leverages its current capabilities through coordination and outreach.

Though the Planning Areas and Urban Area Security Initiatives (UASIs) receive some grant assistance through State Homeland Security grants, California does not have a dedicated funding stream. As a result, the SWIC position can only be funded at a 10%-20% capacity despite the identified need for a full-time SWIC position. This lack of long-term funding also affects planning and progress in each lane of the Interoperability Continuum, and prohibits the State from planning or keeping up with the pace of emerging technology.

Table 7 outlines California’s goals and initiatives for life cycle funding.

Table 7: Life Cycle Funding Goals and Initiatives

| Life Cycle Funding Goals and Initiatives | | | | |
|---|--|--|---------------------------|-------------------|
| Goal # | Goals | Initiatives | Owner | Completion Date |
| 18. | Identify a sustainable funding mechanism to support the following priorities: <ol style="list-style-type: none"> 1. Training opportunities 2. The SWIC position 3. CalSIEC efforts | 18.1. Distribute annual SAFECOM grant guidance to CalSIEC members | SWIC | 05/2016, annually |
| | | 18.2. Distribute State fund information related to emergency communications activities | CalSIEC | 05/2016 |
| | | 18.3. Submit 2016 Investment Justification | SWIC | 10/2016 |
| 19. | Encourage stakeholders to develop life cycle funding plans | 19.1 Distribute OEC Guidance document on life cycle funding | SWIC | 06/2016 |
| | | 19.2 Seek creative solutions to ongoing funding challenges | CalSIEC/Local Governments | 07/2017 |
| | | 19.3 Address interoperability activities in State budget to enable life cycle planning | CalSIEC | 12/2018 |

6. IMPLEMENTATION

6.1 Action Plan

The Action Plan section of the SCIP describes the process California will use to determine a plan to execute the initiatives in the SCIP. Nineteen strategic goals and corresponding initiatives have been developed through this most recent SCIP update process. The CalSIEC working groups will review the revised CalSCIP, and then present the document to the full CalSIEC for approval via consensus. The SWIC will also present the final draft to Cal OES Director for support. Based on recommendations from the working groups and members, the CalSIEC will formally adopt the updated CalSCIP as a recognized planning tool to assist California prioritize resources, strengthen governance, identify future investments, address interoperability gaps, and inform local and State elected officials and stakeholders. The approved CalSCIP will be posted to the Cal OES website. The CalSIEC will also send the CalSCIP to the appropriate State agencies, Planning Areas, MARACs, FIRESCOPE Communications Work Group, communications-based State legislative committees, and other key stakeholder groups. The CalSIEC, Planning Areas, and various working groups will use

regularly scheduled meetings to follow and discuss identified strategic goals and initiatives.

6.2 Measures of Success

The Measures of Success section of the CalSCIP defines the measures that California will use to monitor progress and indicate accomplishments toward achieving the vision for interoperable and emergency communications. Table 8 outlines these measures for California. More information on how these measures are managed is included in Section 6.3.

Table 8: SCIP Measures of Success

| Measures of Success | | | | | |
|---------------------|---|---|---|-------------------------|-------------------------------|
| Goal # | Strategic Goal(s) Supported | Initial State | Target | Measure Completion Date | Owner or Source |
| 1. | Develop a coordinated relationship between Planning Areas | Each Planning Area meets regularly and Planning Area Chairs coordinate at CalSIEC meetings and quarterly conference calls. CalSIEC charter has been updated and needs to be ratified. | Ratified CalSIEC charter. Regular CalSIEC Meetings. Update Website with meeting minutes | 08/2016 | SWIC, CalSIEC, CalOES |
| 2. | Coordinate with the CPRA/APCO and state representatives, as appropriate | Messaging to Planning areas has begun. | Planning Area Chairs will appoint members. Planning Area members and SWIC will attend conferences and meetings | 02/2017 | Planning Area Chairs and SWIC |
| 3. | Update the CalSIEC Charter | Charter has been rewritten | Ratify Charter in each Planning Area and forward to CalOES | 07/2016 | SWIC |

| | | Measures of Success | | | |
|--------|---|--|--|-------------------------|--------------------------------|
| Goal # | Strategic Goal(s) Supported | Initial State | Target | Measure Completion Date | Owner or Source |
| 4. | Establish procedures for the SWIC to interface with all interoperable communications agencies | Planning areas have regular meetings with exception of Capital Bay. | Get SWIC on agenda for regular meetings with FIREScope, Planning Areas, NAPCO, CPRA, RPC and CalFRN | 10/2016 | SWIC |
| 5. | Provide access to finalized SOPs and TICPs | State Interoperability website is under development | Identify location to store TICP and SOPs and other interoperability documents and provide access via web | 01/2018 | CalSIEC |
| 6. | Update Cal OES interoperable communications policies | Procedures that need updating have been identified and initial outreach has been started | Updated procedures and tracking tool is online | 10/2017 | CalOES and CalSIEC |
| 7. | Review the Cal IFOG annually, and revise as needed | Subcommittee has been started, TA has been approved, initial meeting has occurred | Updated Cal IFOG | 08/2017 | Cal IFOG subcommittee and SWIC |
| 8. | Develop a common interoperability platform that leverage existing technology and infrastructure, and provide a migration toward emerging technologies | Work has not started | Publish best practices document to outline common interoperability platform | 01/2018 | CalSIEC and SWIC |

| | | Measures of Success | | | |
|--------|--|---|--|-------------------------|---------------------------------|
| Goal # | Strategic Goal(s) Supported | Initial State | Target | Measure Completion Date | Owner or Source |
| 9. | Encourage collaboration between operational areas and provide opportunities to demonstrate and/or apply innovative interoperability communications solutions | Planning Areas are identifying planned events and communication exercises | Publish list of planned events and exercises and have Planning areas encourage participation | 10/2016 | CalSIEC and SWIC |
| 10. | Promote and leverage CASM and similar tools and resources | Some Planning areas have identified CASM POC | Each Planning Area identifies CASM POC | 06/2017 | CalSIEC Planning Areas and SWIC |
| 11. | Encourage state and local agencies to deploy mutual aid channel infrastructure | Channel use guides exist but need to be updated. Process is defined that outlines how to license interop channels | Update Channel use guides and provide information to planning areas on how to license interop channels | 10/2016 | Cal OES and SWIC |
| 12. | Provide interoperable communications opportunities using qualified instructors throughout the state | SWIC submitted 2016 IJ that includes funding for these activities | Approval of 2016 IJ and receipt of funds | 10/2016 | SWIC |
| 13. | Establish a working group to oversee all-hazards COMU certifications | Work has not begun | Working group identified as part of CalSIEC and meeting schedule is established. | 05/2017 | SWIC and CalSEIC |
| 14. | Develop a program to regularly test communications equipment and infrastructure | Work has not begun | Develop test procedure and publish, encouraging Planning Areas to implement | 12/2016 | SWIC and CalSEIC |

| | | Measures of Success | | | |
|--------|---|--|---|-------------------------|-----------------|
| Goal # | Strategic Goal(s) Supported | Initial State | Target | Measure Completion Date | Owner or Source |
| 15. | Provide guidance for agencies to program and test interoperability channels | TA for IFOG has been started. Interoperability Guidance has been developed | Publish updated IFOG | 12/2017 | SWIC |
| 16. | Maintain and enhance outreach program to leverage interoperability-related activities, including social media | Work has not begun | Work with Planning areas to develop a plan to use Social Media, perhaps a SWIC/CalSIEC facebook page. | 09/2017 | SWIC |
| 17. | Raise the State Legislature's awareness of the need for interoperable communications | Work has not begun | Identify Stakeholders to engage legislators. Regular meetings with state legislators | 10/2017 | CalSIEC |
| 18. | Identify a sustainable funding mechanism to support the follow priorities: 1. Training opportunities 2. The SWIC position 3. CalSIEC efforts | 2016 HSGP IJ has been submitted | Funding dedicated to support SWIC, Training and CalSEIC efforts. Continue TA requests | 10/2017 | SWIC |
| 19. | Encourage stakeholders to develop life cycle funding plans | Work has not begun | Distribute OEC Guidance Engage CalSIEC | 12/2018 | CalSIEC |

6.3 Management of Success

The Management of Success section describes the iterative, repeatable method California will follow to add, update and refine the measures of success. Each CalSIEC meeting will include updates on goals' progress from the measure owner, with special attention to any obstacles to success. Based on these updates, the CalSIEC will be able to evaluate the effectiveness of the CalSCIP, and to refine California's interoperable communication strategy as needed. These regular periodic updates will also facilitate the completion of annual progress through the CalSCIP Snapshot.

6.4 Strategic Plan Review

The Strategic Plan Review section outlines the process California will use to conduct reviews of the CalSCIP to ensure it is up to date and aligned with the changing internal and external interoperable and emergency communications environment as well as to track and report progress against the defined initiatives and measures of success. A biannual CalSCIP review and update is essential to maintain California's statewide interoperable communication strategy. The CalSIEC is primarily responsible for the SCIP's maintenance and revision, as coordinated by the SWIC and Planning Area Chairs.

7. REFERENCE MATERIALS

The Reference Materials section outlines resources that contribute additional background information on the CalSCIP and interoperable and emergency communications in California. Table 9 includes the links to these reference materials.

Table 9: SCIP Reference Materials

| Title | Description | Source/Location |
|-----------------|---|---|
| Cal IFOG | The California Interoperability Field Operations Guide available for download | http://www.caloes.ca.gov/cal-oes-divisions/public-safety-communications/telecommunications-governance-services-branch/california-interoperable-communications |
| CalSIEC Webpage | Important information and updates relating to CalSIEC and the Planning Areas | http://www.caloes.ca.gov/cal-oes-divisions/public-safety-communications/telecommunications-governance-services-branch/california-interoperable-communications |

APPENDIX A: MAJOR SYSTEMS

Table A-1: Major Systems, Updates, and New Systems

| Major Systems Information | | | | | | |
|--|-------------|--|---|---|---|----------------------------|
| System Type | System Name | System Owner(s) | System Description | # Subscribers and Agencies | Users' Level of Government | Status and Changes/Updates |
| | Sample | <i>[Insert the organization(s) or governing body responsible for the system]</i> | <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"><i>[Check the box that describes the primary usage of the system (e.g., voice, data, or voice and data)]</i></div> <div style="border: 1px solid black; padding: 2px;"><i>[Identify the number of system sites]</i></div> | <i>[Insert the estimated number of subscribers as well as the number of agencies on the system]</i> | <i>[Check the box(es) that identifies all levels of government for which there are users on the system]</i> | |
| <i>This section will be updated in the next SCIP version</i> | | | | | | |

APPENDIX B: LIST OF ACRONYMS

| | |
|----------|---|
| APR | Annual Progress Report |
| BCP | Budget Change Proposal |
| Cal IFOG | California Interoperability Field Operations Guide |
| Cal OES | The Governor's Office of Emergency Services |
| CALCORD | California On-Scene Emergency Coordination |
| CalFRN | California First Responder Network Board of Directors |
| CalSCIP | California Statewide Communication Interoperability Plan |
| CalSIEC | California Statewide Interoperability Executive Committee |
| CESRS | California Emergency Services Radio System |
| CHP | California Highway Patrol |
| CLEMARS | California Law Enforcement Mutual Aid System |
| CMARS | California Multi-Agency Radio System |
| CMD | California Military Department |
| COML | Communications Unit Leader |
| COMT | Communications Unit Technician |
| COMU | Communications Unit |
| CPRA | California Public Safety Radio Association |
| DHS | U.S. Department of Homeland Security |
| EMA | Emergency Management Agency |
| FCC | Federal Communications Commission |
| FIREMARS | Fire Mutual Aid Radio System |
| FirstNet | First Responder Network Authority |
| HEAR | Hospital Emergency Administrative Radio System |
| IC | Incident Commander (of a specific incident) |
| ICS | Incident Command System |
| IJ | Investment Justification |
| LMR | Land Mobile Radio |
| MARAC | Mutual Aid Regional Advisory Committee |
| MHz | Megahertz |
| MIGU | Mobile Interoperability Gateway Unit |

| | |
|--------|---|
| MOU | Memorandum of Understanding |
| NAPCO | Northern California Chapter of the Association of Public Safety Communications Officials International |
| NECP | National Emergency Communications Plan |
| NG911 | Next Generation 911 |
| NIMS | National Incident Management System |
| NPSBN | Nationwide Public Safety Broadband Network |
| NTIA | National Telecommunications and Information Administration |
| OA | Operational Area |
| OASIS | Operational Area Satellite Information System |
| OEC | Office of Emergency Communications |
| PPD | Presidential Policy Directive |
| PSAP | Public Safety Answering Point |
| PSCO | Public Safety Communications Office |
| RECCWG | Regional Emergency Communications Coordination Working Group |
| SCIP | Statewide Communications Interoperability Plan |
| SEMS | Standardized Emergency Management System |
| SIGB | Statewide Interoperability Governing Body |
| SLIGP | State and Local Implementation Grant Program |
| SOP | Standard Operating Procedure |
| STACOM | State Communications System |
| SWIC | Statewide Interoperability Coordinator |
| TICP | Tactical Interoperable Communications Plan |
| TWG | Technical Working Group |
| UASI | Urban Area Security Initiative |
| UHF | Ultra High Frequency |
| VHF | Very High Frequency |