



Minnesota

2014-2015 Statewide Communications Interoperability Plan (SCIP)



EXECUTIVE SUMMARY

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

The purpose of the Minnesota SCIP 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.
- Assign responsibility for planning initiatives and articulate benchmarks and timelines upon which to measure progress toward achieving the highest practical level of interoperability within the State of Minnesota.

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

Vision: Statewide public safety communications interoperability for voice, data, and Next Generation 911.

Mission: Achieve the highest level of interoperability between all agencies supporting public safety in Minnesota through:

- Stakeholder driven organization and governance structure
- Reliable, standards-based shared communications infrastructure supporting voice, data, and public access to emergency services
- Integration, sharing, and coordination of resources
- National Incident Management System (NIMS) compliance
- Standard Operating Procedures

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

- Governance –
 - Support regional governance boards, their subordinate committees, and other stakeholders through collaboration, technical support, education, and engagement
 - Encourage regional governance boards to add other public safety communications under joint powers agreements

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- Review Statewide Emergency Communications Board (SECB) by-laws on an annual basis
 - Standard Operating Procedures (SOPs) –
 - Continue to develop and maintain standards needed to support interoperability across agencies and disciplines (need to develop for new technologies)
 - Develop interoperability standards with neighboring States and Canada
 - Develop minimum State standards for NG911 and other technology resource sharing
 - Maintain, improve, and test security standards for voice, data, and NG911 communications systems
 - Develop standards for the common alerting protocol (i.e., Integrated Public Alert and Warning System [IPAWS])
 - Technology –
 - Implement interoperability solutions with neighboring States/Canada
 - Develop a technology roadmap for development, access, maintenance, and upgrades to interoperable voice, video, and data services
 - Facilitate implementation of Nationwide Public Safety Broadband Network (NPSBN) within the State
 - Training and Exercises –
 - Establish communications systems training requirements for all public safety users
 - Incorporate voice and data communications scenarios into new and existing exercises (injects into already occurring exercises)
 - Establish and conduct communications exercises with public safety organizations
 - Usage –
 - Encourage and support utilization of interoperability solutions (Cross Spectrum Interoperability System, Very High Frequency [VHF]/800 megahertz [MHz])
 - Evaluate and track use of Allied Radio Matrix for Emergency Response (ARMER) tactical communications channels/talk groups (regional tactical channels)
 - Enhance statewide understanding and use of Communication Unit Leader (COML)/Communications Unit Technician (COMT) capabilities and roles
 - Outreach and Information Sharing –

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- Improve accessibility to Regional Radio Board (RRB) Information (e.g., regional standards, meeting announcements, and minutes)
 - Provide stakeholder education on First Responder Network Authority (FirstNet) and NG911 activities
 - Continue to seek or promote tribal participation in emergency communications planning activities
 - Life Cycle Funding –
 - Develop and share life cycle funding plan for public safety communications resources, including initial infrastructure capital costs, sustainment costs, and acquisition, and routine replacement of subscriber equipment

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1. INTRODUCTION

The Minnesota Statewide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The SCIP is a critical mid-range (three to five years) strategic planning tool to help Minnesota 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 SCIP is and how it was developed.
- Purpose – Explains the purpose/function(s) of the SCIP in Minnesota.
- State's Interoperable and Emergency Communications Overview – Provides an overview of the State's current and future emergency communications environment and defines ownership of the SCIP.
- 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 SCIP and pertains to the following critical components: Governance, Standard Operating Procedures (SOP), Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.
- Implementation – Describes the process to evaluate the success of the SCIP and to conduct SCIP reviews to ensure it is up-to-date and aligned with the changing internal and external environment.
- Reference Documents – Includes documents that provide additional background information on the SCIP or interoperable and emergency communications in Minnesota or directly support the SCIP.

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

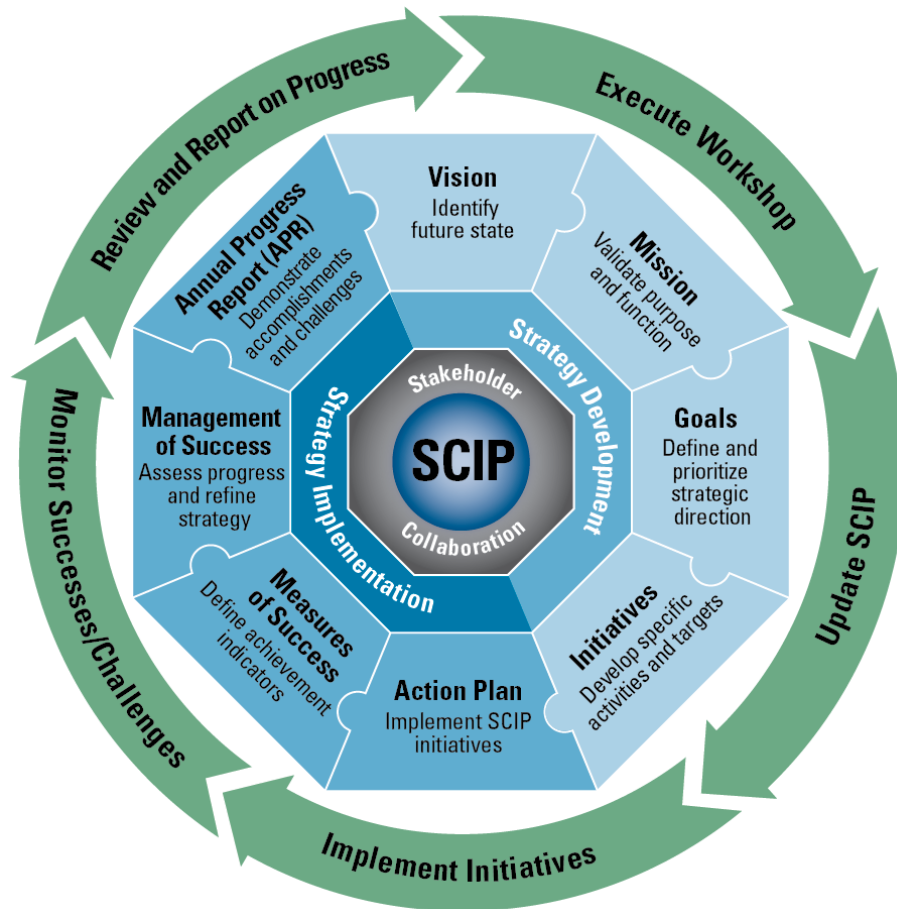


Figure 1: SCIP Strategic Plan and Implementation Components

The Minnesota SCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. Minnesota has taken significant steps towards enhancing interoperable and emergency communications, including:

- Implemented an effective State and regional governance structure. The seven Regional Radio Boards (RRBs) include representation from all 87 Minnesota counties and a number of cities, composed of county commissioners and city council members.
- Deployed a statewide, standards-based Project 25 (P25) communications system, called Allied Radio Matrix for Emergency Response (ARMER), with participation (or planned participation) from 81 of the 87 counties, all state agencies and major cities.

However, more remains to be done to achieve Minnesota’s vision. It is also important to note that this work is part of a continuous cycle as Minnesota will always need to adapt to evolving technologies, operational tactics, and changes to key individuals (e.g., Governor, project champions). In the next three to five years, Minnesota 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 evolving rapidly and efforts are underway to determine how to leverage these new technologies to meet the needs of public safety. For example, the enactment of the Middle Class Tax Relief and Job Creation Act of 2012 (the Act), specifically Title VI, related to Public Safety Communications, authorizes the deployment of the Nationwide Public Safety Broadband Network (NPSBN). The NPSBN is intended to be a wireless, interoperable nationwide communications network that will allow members of the public safety community to securely and reliably gain and share information with their counterparts in other locations and agencies. New policies and initiatives such as the NPSBN present additional changes and considerations for future planning efforts and require an informed strategic vision to properly account for these changes. Figure 2 illustrates a public safety communications evolution by describing the long-term transition toward a desired converged future.

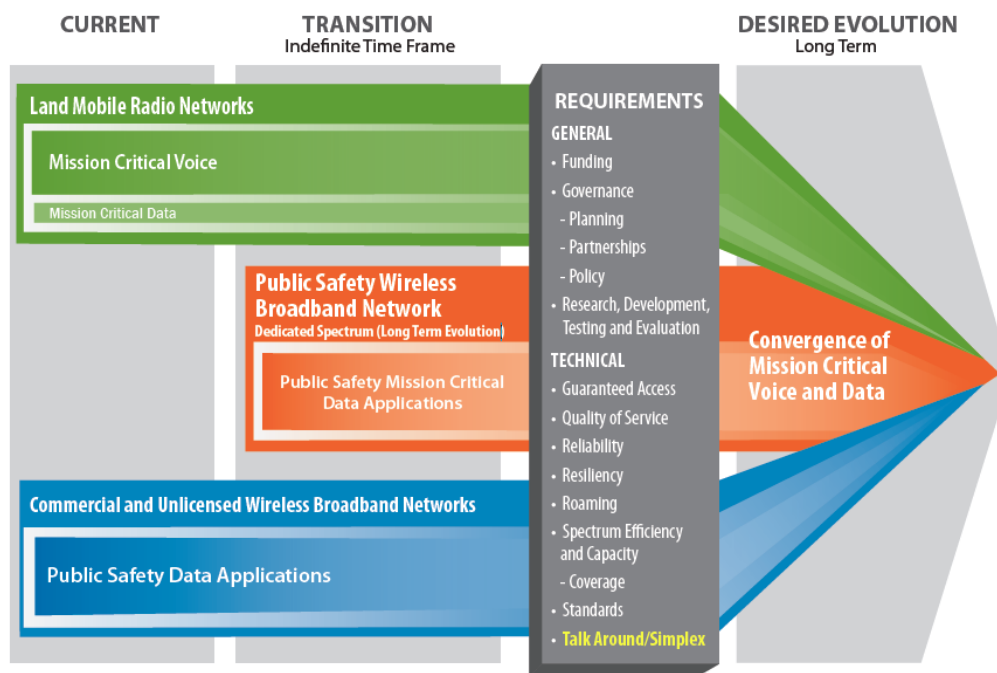


Figure 2: Public Safety Communications Evolution

Integrating capabilities such as broadband provide an unparalleled opportunity for the future of interoperable communications in Minnesota. It may result in a secure path for information-sharing initiatives, Public Safety Answering Points (PSAP), and Next Generation 911 (NG911) integration. Broadband will not replace existing Land Mobile Radio (LMR) voice systems in the foreseeable future due to implementation factors associated with planning, deployment, technology, and cost. A cautious approach to this investment is needed. Therefore, robust requirements and innovative business practices must be developed for broadband initiatives prior to any implementation.

There is no defined timeline for the deployment of the NPSBN; however, Minnesota will keep up-to-date with the planning and build-out of the NPSBN in the near and long term in coordination with the First Responder Network Authority (FirstNet). FirstNet is the independent authority within the National Telecommunications and Information

Administration (NTIA) and is responsible for developing the NPSBN, which will be a single, nationwide, interoperable public safety broadband network. The network build-out will require continuing education and commitment at all levels of government and across public safety disciplines to document network requirements and identify existing resources and assets that could potentially be used in the build-out of the network. It will also be necessary to develop and maintain strategic partnerships with a variety of stakeholder agencies and organizations at the national, State, regional, local, and tribal levels and 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 To prepare for the NPSBN, Minnesota:

- Established a broadband subcommittee, Interoperable Data Committee, within the Statewide Emergency Communications Board (SECB).
- Conducted a comprehensive wireless broadband data network requirements study from 2010-2012 to assess the needs of public safety wireless broadband in Minnesota. This study forms the foundation of Minnesota public safety broadband planning efforts and interaction with national entities such as FirstNet.
- Initiated far-reaching Minnesota-FirstNet Consultation Project (MnFCP) to prepare Minnesota for consultation with FirstNet

Additionally, achieving sustainable funding in the current fiscal climate is a priority for Minnesota. As State and Federal grant funding diminishes, States need to identify alternative funding sources to continue improving interoperable and emergency communications for voice and data systems. Key priorities for sustainable funding in Minnesota are to:

- Identify additional funding streams to maintain the ARMER system while planning and implementing new technologies.
- Ensure full life cycle support of interoperable and emergency communications systems.
- Ensure that the Minnesota Statewide Interoperability Coordinator (SWIC) has the resources necessary to continue to be an inter- and intra-State leader for interoperable and emergency communications.

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

¹ OEC's Public Safety Communications Evolution brochure is available here:

http://publicsafetytools.info/oec_guidance/docs/Public_Safety_Communications_Evolution_Brochure.pdf

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

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.

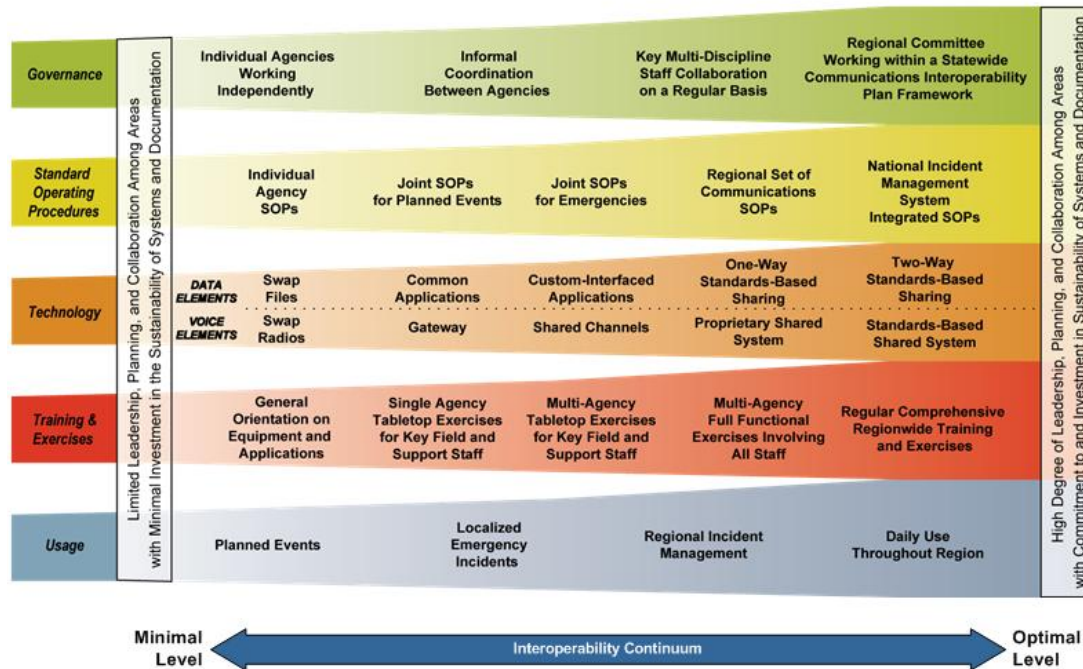


Figure 3: The Interoperability Continuum

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

- **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 Minnesota’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 SCIP will be used in the State and Minnesota's plans to enhance interoperable and emergency communications.

2. PURPOSE

The purpose of the Minnesota SCIP 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.
- Assign responsibility for planning initiatives and articulate benchmarks and timelines upon which to measure progress toward achieving the highest practical level of interoperability within the state of Minnesota.

The development and execution of the SCIP assists Minnesota 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

In addition to this SCIP, Minnesota will develop an Annual Progress Report (APR) 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 SCIP. More information on the SCIP APR is available in Section 6.4.

This SCIP is owned and managed by the SWIC in conjunction with the Minnesota SECB. The SWIC and SECB have the authority to and are responsible for making decisions regarding this plan. The SWIC is also responsible for ensuring this plan is implemented and maintained statewide. The SCIP was originally developed in 2007 as a stakeholder-driven statewide strategy to prioritize resources, strengthen governance, and address interoperability gaps. In May 2013, the State hosted a SCIP Revision Workshop to bring together key decision makers from State and local agencies and each of the State Regions to update the SCIP based on revised criteria, national-level objectives, emerging technologies, and lessons learned. Participants identified and

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

developed SCIP components to address key challenges for Minnesota’s emergency communications environment, including creating a shared vision and ensuring sustainable funding.

3. STATE’S INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

Interoperable communications in Minnesota are strategically driven by the SECB, a governance body established by Minnesota Statue 403.36, and RRBs to provide multi-disciplinary and multi-jurisdictional strategic planning direction. Reporting to each board are advisory committees and workgroups.

The fundamental building block of Minnesota’s strategy for public safety communication interoperability is the statewide implementation of P25 digitally trunked communication system, known as ARMER. In addition to providing the opportunity for all public safety agencies to operate on a common communications backbone, the ARMER system provides a statewide infrastructure that can be used to link existing public safety resources together. Utilizing this “system of systems” approach, Minnesota implemented cross-spectrum interoperability with existing legacy communication systems and non-ARMER systems at a number of levels through shared radios, gateways through console based patches and a Very High Frequency (VHF) overlay. These cross-spectrum interoperability strategies are also being applied to address public safety communication interoperability needs with neighboring States and along the international border with Canada.

While ARMER is a major element of Minnesota’s long-term interoperable communications planning, it is not the only element. The State is actively planning and preparing for the NPSBN and NG911. The Minnesota Public Safety Wireless Broadband Data Network Requirements Study conducted from 2010-2012 assessed the needs of public safety wireless broadband in Minnesota and forms the foundation of planning efforts and interaction with national entities such as FirstNet. The Department of Public Safety drafted a NG911 strategy that addresses the existing network and provides the framework to implement an Internet Protocol (IP) enabled, Next Generation ready 911 infrastructure.

4. VISION AND MISSION

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

Minnesota Interoperable and Emergency Communications Vision:

Statewide public safety communications interoperability for voice, data, & Next Generation 911

Minnesota Interoperable and Emergency Communications Mission:

Achieve the highest level of interoperability between all agencies supporting public safety in Minnesota through:

- Stakeholder driven organization and governance structure
- Reliable, standards-based shared communications infrastructure supporting voice, data, and public access to emergency services
- Integration, sharing, and coordination of resources
- National Incident Management System (NIMS) compliance
- Standard Operating Procedures

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 SCIP outlines the future direction of the Minnesota governance structure for interoperable and emergency communications. The primary governance body associated with interoperable and emergency communications in Minnesota is the SECB. The State Legislature created the SECB in 2004 with broad, multidiscipline representation. This governance structure addresses the need for local and regional planning and participation by providing for the development of RRBs. Under this structure, seven RRBs were established. The SECB was also designated as Minnesota's State Interoperability Executive Committee (SIEC) in 2007. Under the Governor's Executive Order the role of the SECB was expanded to include public safety communication interoperability among all public safety agencies operating within the State. Through this designation, the SECB is responsible for assuring that the implementation of the ARMER system addresses Minnesota's broader public safety interoperability needs for assuring interoperable communication grant funds made available to Minnesota are administered and used in accordance with the SCIP. The Governor's Executive Order was adopted into statute by the legislature in 2009.

While Minnesota has achieved a mature level of governance through the establishment of the SECB and seven RRBs and their respective committee structures, challenges that remain to be addressed include:

- Continued engagement and involvement of RRBs and their committees addressing meaningful and significant issues of interoperable communications
- Identification and provision of support necessary to assure that RRBs have the ability to do their job
- Development of the leadership of the RRB various committees (Regional Advisory Committees, Users Committees, and Owners and Operators Committees)

Table 1 outlines Minnesota’s goals and initiatives related to governance.

Table 1: Governance Goals and Initiatives

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
1.	Support regional governance boards, their subordinate committees, and other stakeholders through collaboration, technical support, education, and engagement	1.1 Maintain/fund Regional Interoperability Coordinator (RIC) program (regional outreach)	Emergency Communications Network (ECN) Division	June 30, 2015 (every 2 years)
		1.2 Continue annual Statewide Interoperability Conference	ECN	Yearly (April/May)
		1.3 Review attendance and accountability of board and committee members. Publish attendance list and inform county commissioners.	Regional Advisory Committee (RAC)	February and November Yearly
2.	Encourage regional governance boards to add other public safety communications under joint powers agreements	2.1 Perform outreach meeting with RRBs to discuss pro/cons of adding NG911 and NPSBN	ECN	One time meeting, December 2013
		2.2 RRBs determine if they are going to add other public safety communications functions/responsibilities and inform ECN	ECN, RRB	June 2014
		2.3 Provide organizational support with revising Joint Powers Agreements including draft language	ECN, RIC, RRB	June 2014
3.	Review SECB by-laws on an annual basis	3.1 Perform by-law review	SECB Steering Committee	September (annually)
		3.2 Document and make recommended changes	SECB Steering Committee	October (annually)
		3.3 Send to SECB Committees for review, SECB for final approval/vote	SECB Committees, SECB	November (annually)

5.2 Standard Operating Procedures (SOPs)

The SOP section of the SCIP identifies the framework and processes for developing and managing SOPs statewide. Minnesota is working to identify, develop, and maintain regional standard operating procedures (standards) that will provide the maximum level of interoperability among public safety entities within each region and to coordinate those standards with standards adopted by the SECB. The State developed a standard (1.5.0) which defines the method for RRBs to prepare, implement, and maintain regional standards to ensure consistency among SECB and RRB standards. A clear change management process exists for revising operational standards to maintain optimum system operations. Furthermore, a standards coordinator has been hired by the Division of Emergency Communication Networks (ECN) and maintains the current standards and is involved in the development and review of statewide and regional standard to ensure consistency.

Table 2 outlines Minnesota'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
4.	Continue to develop and maintain standards needed to support interoperability across agencies and disciplines (need to develop for new technologies)	4.1 Propose changes to existing standards as needed	Stakeholders	On-going
		4.2 Review and accept/reject proposed changes	Appropriate Committee	Variable depending on scope of change
		4.3 Review all standards every three years at the State level	ECN with stakeholder input	2016
5.	Develop interoperability standards with neighboring States and Canada	5.1 Document current practices on a county level for communicating with Iowa, Wisconsin, North Dakota, and South Dakota	ECN, RIC, County stakeholders	January 2014
		5.2 Draft standards for communicating with Iowa, Wisconsin, North Dakota, and South Dakota	ECN, RIC, County Stakeholders	June 2014
		5.3 Draft standards for how systems are going to work with Ontario and Manitoba and ARMER	ECN, RIC, County Stakeholders, Canadian Provinces	January 2014
6.	Develop minimum State standards for NG911 and other technology resource sharing	6.1 Review current State Enhanced 911 (E911) standards and determine what can be used for NG911	NG911 Committee	June 2014
		6.2 Identify key systems, interfaces, and applications to	ECN in conjunction with	January 2015

Standard Operating Procedures Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
		develop standards	governance bodies; County Stakeholders	
		6.3 Prioritize key items	ECN in conjunction with governance bodies; County Stakeholders	January 2015
		6.4 Use existing network requirements/standards to build minimum State standards. Focus on technology standards (National Emergency Number Association [NENA] standards).	NG911 Committee	June 2015
7.		7.1 Develop standards for external network connection to CSIS network (via VPN)	MnDOT, MnIT	January 2014
8.		8.1 Develop statewide GIS database standards for NG9-1-1 call routing and mapping	ECN	March 2014
9.	Maintain, improve, and test security standards for voice, data, and NG911 communications systems	9.1 Determine cost of security analysis	SECB, ECN, MN Department of Transportation (DOT), NG911 Committee	January 2015
		9.2 Identify staff and funding to address Security needs	ECN, MNDOT	January 2015
		9.3 Include Security in the planning for new technologies	SECB, ECN, MNDOT, System Owners	On-going, as technology is acquired
		9.4 Develop a Response/Action Plan for how to deal with a major system outage due to security breach	SECB, ECN, MNDOT, System Owners	January 2015
		9.5 Conduct independent audits as needed when deploying systems to identify vulnerabilities	SECB, ECN, MNDOT, System Owners	On-going, as technology is acquired
10.	Develop standards for the common alerting protocol (i.e., IPAWS)	10.1 Develop plan/report	IPAWS Committee	May 2014
		10.2 Draft standards as needed	IPAWS Committee	May 2014

Standard Operating Procedures Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		10.3 Submit standards for review and approval	SECB	Federal Communications Commission (FCC) deadline

5.3 Technology

The Technology section of the SCIP outlines Minnesota’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. Minnesota’s implementation of the ARMER system seeks to make a standards-based shared system available to all public safety agencies in the state. The ARMER system is a P25 trunked radio system operating in the 700/800 megahertz (MHz) spectrum with over 300 tower sites with a Radio Frequency (RF) and microwave backbone built to provide a high level of reliability for mission critical public safety operations.

Cross spectrum and interoperability with legacy systems are essential elements of Minnesota’s implementation of the ARMER system. The statewide footprint of the ARMER backbone provides the opportunity to enhance interoperability among all public safety agencies through the use of radio control stations located at all emergency operation centers (EOCs), PSAPs, and at other critical communication sites, including federal agencies and bordering counties. Routine cross spectrum and independent system interoperability is available through gateway operations, including console based patches at all PSAPs and through VHF channel overlay that will be implemented into the ARMER backbone.

The State has achieved greater local participation in the ARMER system than originally envisioned and must continue to plan for the impact of large scale participation. Capacity issues are the largest pending question. The State seeks to resolve the question of capacity for itself and its system partners. State and local participants are jointly responsible for any capacity issues and the goals set forth.

Currently, various regional and local public safety data initiatives are in place in Minnesota. A number of those systems are currently using technology platforms that are at or near the end of their useful life. Others are based upon technology platforms that have limited useful lifespan in the face of the NPSBN. The SECB and Department of Public Safety, ECN Division, continue to monitor technical advances that will benefit the State.

Table 3 outlines Minnesota’s goals and initiatives for technology.

Table 3: Technology Goals and Initiatives

Technology Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
11.	Implement interoperability solutions with neighboring States/Canada	11.1 Identify equipment needed for interoperability with two provincial systems and neighboring States	RRB, County, Neighboring States	January 2014
		11.2 Procure equipment for interoperability with two provincial systems and neighboring States	RRB, County, Neighboring States	July 2014
		11.3 Install and test equipment	RRB, County, Neighboring States	July 2014
		11.4 Provide training on how to use equipment	RRB	July 2014
12.	Develop a technology roadmap for development, access, maintenance, and upgrades to interoperable voice, video, and data services	12.1 Continue to upgrade current system	System Owners, SECB	December 2014
		12.2 Review maintenance agreements on an annual basis	SECB	Yearly (April/May)
		12.3 Continue to communicate with users to understand requirements	ECN, RRB, SECB	Quarterly meetings
		12.4 Communicate with other States to understand their requirements & vendor relationships	MNDOT, SWIC, RECCWG	On-going
		12.5 Maintain contact with vendors to communicate consolidated State requirements	MNDOT, System Managers/ Owners	On-going
		12.6 Continue to track, monitor, and report on NPSBN activities	SECB Data Committee, SWIC	Monthly
		12.7 Release Request for Proposal (RFP) on NG911 technologies to determine what is available and emerging in the market	SECB NG911 Committee	October 2013
13.	Facilitate implementation of NPSBN within the State	13.1 Complete MN FirstNet Consultation Project	SECB, ECN, Stakeholders, FirstNet	July 2016
		13.2 Prepare for engagement with FirstNet regarding NPSBN implementation	SECB, ECN	Anticipated July 2016 pending FirstNet action

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
14.	Achieve effective usage of CSIS	14.1 Include CSIS in training/exercises as appropriate	Stakeholders	September 2014
		14.2 Complete setup for external network connection to CSIS (via VPN)	MnDOT, MnIT	January 2014
		14.3 Provide end-user equipment to utilize CSIS	SECB, ECN	March 2014

5.4 Training and Exercises

The Training and Exercises section of the SCIP explains Minnesota'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 events. Proper training and regular exercises are critical to the implementation and maintenance of Minnesota's successful interoperability solutions. Training and exercise allows vital objectives to be achieved promoting familiarity with the communications systems and developing an understanding of the standards required to achieve the highest practical level of interoperability.

There is a growing need to establish routine and standardized training for all public safety personnel. Modern communication systems offer the opportunity for greater interoperability, but also require a much higher level of initial and recurring training in equipment operations and in standard operating procedures. Although de facto training standards evolved for public safety use of the ARMER system, those training standards and capabilities require greater refinement. The continued development of standardized interoperable communication training for current and emerging technologies, including basic and advanced equipment usage, standard operating procedures, and recurring refresher training is a high priority in Minnesota, as is the desire to identify new and innovative ways to deliver that training.

Table 4 outlines Minnesota'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
15.	Establish communications systems training requirements for all public safety users	15.2 Assemble Training Best Practices Work Group	SECB	January 2014
		15.3 Define tiered competency based training guidelines/ best practice guide including	SECB, Training Best Practices Work Group	April 2014

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		metrics		
		15.4 Provide hands-on and refresher training at the user level	Local agencies, System Administrators	December 2015 (refresher for existing users after system upgrade); new hire on-going
		15.5 Track and record user training	Local agencies, System Administrators	Pending Committee and SECB approval
16	Incorporate voice and data communications scenarios into new and existing exercises (injects into already occurring exercises)	16.1 Engage Police Chiefs, Fire Chiefs, Minnesota Sheriffs' Association to provide training at conferences	ECN (Engagement)	December 2014
		16.2 Include "radio" training at entry level, academy level, community college level	SECB	Pending SECB approval
		16.3 Develop exercise templates for communications within exercises	Training Working Group, SECB	June 2014
		16.4 Publish and promote communications exercise templates	RIC, County EM/Radio Administrator	December 2014
17	Establish and conduct communications exercises with public safety organizations	17.1 Create communications specific exercise outline/ template/ scenario	Training Working Group, SECB	June 2014
		17.2 Publish and promote communications specific exercise template	Training Working Group, RIC, County Emergency Management (EM)	December 2014

5.5 Usage

The Usage section of the SCIP 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.

Minnesota continues to work to resolve the technical and operational issues required to promote the highest level of usage. The use of a standards based shared infrastructure in the Twin Cities metropolitan area since 2001 has provided the opportunity to identify operational practices that reinforce the routine use of features supporting interoperability. Similarly, cross spectrum and ARMER to independent system

operations will require substantial consideration to assure interoperability features are incorporated into routine usage to the highest practical degree.

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

Table 5: Usage Goals and Initiatives

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
18	Encourage and support utilization of interoperability solutions (Cross Spectrum Interoperability System, VHF/800)	18.1 Identify which local areas need equipment	RRB, RIC, ECN	October 2013
		18.2 Submit plan on how equipment will be used	County Grantees, ECN	December 2013
		18.3 Procure and install equipment	Grantees, RRB	June 2014
		18.4 Deliver training	Grantees, ECN, RRB, RIC, Training Working Group	June 2014
		18.5 Develop field reference guide, update MN Field Operations Guide (FOG) to promote use by field personnel	SWIC	June 2014
19	Evaluate and track use of ARMER tactical communications channels/talk groups (regional tactical channels)	19.1 Communicate with Local System Administrators loading implications of non-use	RIC, Local System Administrators, MNDOT Managers	June 2014
		19.2 Review monthly status reports	Local System Administrators, Local User Groups	June 2014
		19.3 Review event communications across the Region using the reports	Local User Groups	As problems arise
20	Enhance statewide understanding and use of Communications Unit Leader (COML)/Communications Unit Technician (COMT) capabilities and roles	20.1 Provide presentation at Regional EM meetings	RIC	Every 2 years
		20.2 Propose regional standards for COML use	RIC, RRB	June 2014
		20.3 Confirm that COML list is current with the State Duty Officer	SWIC	As changes occur, annual Regional review

5.6 Outreach and Information Sharing

The Outreach and Information Sharing section of the SCIP outlines Minnesota'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. Minnesota is focused on increasing its efforts associated with outreach and information sharing both internally and externally.

Table 6 outlines Minnesota’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
21	Improve accessibility to RRB Information (e.g., regional standards, meeting announcements, and minutes)	21.1 Discuss at Regional Meetings	RIC	September 2013
22	Provide stakeholder education on FirstNet and NG911 activities	22.1 Develop and distribute informational materials (white papers, presentations)	ECN, SWIC	As needed, changes occur
		22.2 Develop public education campaigns for NG911	ECN	As capability becomes available
23	Continue to seek or promote tribal participation in emergency communications planning activities	23.1 Provide NPSBN education to the Minnesota Indian Affairs Council and tribal governments	ECN, SWIC	December 2013
		23.2 Encourage RRB to maintain an open invitation to tribal governments	ECN, RIC, RRB	Yearly (look at membership review dates)
		23.3 Provide outreach regarding new technology capabilities	ECN, SWIC	As capability becomes available

5.7 Life Cycle Funding

The Life Cycle Funding section of the SCIP outlines Minnesota’s plan to fund existing and future interoperable and emergency communications priorities. Currently, emergency communications systems in Minnesota are funded through a 911 fee deposited into a special revenue account. The 911 fee funds the 911 program, 911 wireline and wireless carrier cost recovery, 911 PSAP equipment and proficiency expenses. The special revenue account also provides funding for the east and west medical communications centers, debt services on revenue bonds sold to construct the

ARMER system, ARMBER backbone maintenance and operation costs, and Minnesota’s interoperability program.

Minnesota completed a comprehensive wireless broadband data network requirements study to assess the needs of public safety wireless broadband in Minnesota and submitted its application to the State and Local Implementation Grant Program (SLIGP), which provides funding for planning and preparation related to NPSBN implementation. However, the build-out and implementation of the NPSBN will likely require State funding to augment federal funding. Additionally, the State realizes that the current funding source may not provide adequate resources to maintain current systems while planning and implementing new technologies (e.g., NPSBN, NG911).

Table 7 outlines Minnesota’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
24	Develop and share life cycle funding plan for public safety communications resources, including initial infrastructure capital costs, sustainment costs, and acquisition, and routine replacement of subscriber equipment	24.1 Review legislate mandate	SECB, Finance Committee	June 2013
		24.2 Stand up Task Force	SECB, Finance Committee	June 2013
		24.3 Develop and Release RFP for independent consultant	ECN, Task Force	July 2013
		24.4 Complete life cycle funding plan and provide SECB for approval	Independent Consultant, ECN, Task Force, SECB	November 2013
		24.5 Provide funding recommendations to legislature	ECN, SECB	January 15, 2014

6. IMPLEMENTATION

6.1 Action Plan

The Action Plan section of the SCIP describes the process Minnesota will use to determine a plan to execute the initiatives in the SCIP. Twenty-one new strategic goals and associated initiatives have been developed through this most recent SCIP review and revision process. This revised SCIP will be presented to the SECB, as well as its associated committees and work groups, for their review and comment. The process is designed for and intended to gather input and garner buy-in from the public safety and wireless communication communities, as well as to prioritize the strategic goals and initiatives and assign responsible parties or groups to oversee their implementation.

Based on recommendations from its various committees and working groups, the SECB will formally adopt the revised SCIP and then use this document as a recognized planning tool to help Minnesota prioritize resources, strengthen governance, identify

future investments, address interoperability gaps, and educate and inform local and State elected officials and stakeholders. Minnesota plans to use its regular SECB meetings to work closely with the stakeholders' assigned specific goals and initiatives. As a result, regular reporting to the SECB by relevant stakeholders on their identified goals and initiatives is anticipated throughout the year to ensure success.

6.2 Measures of Success

The Measures of Success section of the SCIP defines the measures that Minnesota will use to monitor progress and indicate accomplishments toward achieving the vision for interoperable and emergency communications. Table 8 outlines these measures for Minnesota. 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 Supported	Current State	Target Measurement	End State	Owner or Source
1.	Support regional governance boards related to public safety communications, their subordinate committees, and other stakeholders through collaboration, technical support, education, and engagement	The State is providing support for local and regional communications planning and coordination	75% attendance for local and regional governance boards and committees	Active participation and accountability at the local and regional levels of government through personal recognition, technical seminars, or similar professional development opportunities	ECN
2.	Encourage regional governance boards to add other public safety communications under joint powers agreements	Regional governance boards primarily deal with LMR systems and issues	Inclusion of wireless broadband and NG911 related oversight in new and existing joint powers agreements at the regional level by summer of 2014	All regional public safety communications joint powers agreements will include LMR, wireless broadband, and NG911 oversight	ECN
3.	Review SECB by-laws on an annual basis	SECB by-laws are reviewed and amended on an as needed basis	Establishment of an annual review and revision process beginning in 2013	Review the SECB by-laws at least once per year to ensure applicability and relevance	SECB Steering Committee
4.	Continue to develop and maintain standards needed to support interoperability across agencies and disciplines (need to develop for new technologies)	Standards are currently developed and maintained for LMR technologies	Inclusion of wireless broadband and NG911 technologies in standards development and adoption	Development and maintenance of standards for all public safety related LMR, wireless broadband, and NG911 technologies by 2016	ECN and Stakeholders

Measures of Success

Goal #	Strategic Goal Supported	Current State	Target Measurement	End State	Owner or Source
5.	Develop interoperability standards with neighboring States and Canada	Local governments and public safety agencies have adopted and use different interoperability standards depending upon location in the State	50% of existing RRBs develop and adopt interoperability standards with neighboring states and Canada by January 2014	Consistent and uniform cross-border public safety communications interoperability standards throughout the State	ECN
6.	Develop minimum State standards for NG911 and other technology resource sharing	State of Minnesota maintains minimum standards for E911 technologies	Build minimum statewide PSAP standards to include NG911 technologies by summer of 2015	Statewide PSAP standards to include current and future voice and data technologies	NG911 Committee
7.	Maintain, improve, and test security standards for voice, data, and NG911 communications systems	Minimal security standards exist for public safety voice, data, and E911 capabilities	Develop public safety communications security protocols by January 2015	Statewide security standard and protocol for public safety communications systems	SECB, ECN, MNDOT. & NG911 Committee
8.	Develop standards for the common alerting protocol (i.e., IPAWS)	No complete standardized protocols for the use of public alert warning systems	Develop minimum standard protocols for the activation and use of public alert warning systems by summer of 2014	Statewide common public alerting protocol	IPAWS Committee
9.	Implement interoperability solutions with neighboring States/Canada	Local governments and public safety agencies have adopted and use different communications interoperability solutions depending upon location in the State	50% of existing RRBs develop and adopt interoperability standards with neighboring states and Canada by January 2014	Consistent and uniform cross-border public safety communications interoperability capability throughout the State	RRBs, Counties

Measures of Success

Goal #	Strategic Goal Supported	Current State	Target Measurement	End State	Owner or Source
10.	Develop a technology roadmap for development, access, maintenance, and upgrades to interoperable voice, video, and data services	Communications equipment vendors develop and promote technology solutions, including maintenance and sustainment strategies, for the public safety community	Develop and adopt of a needs based technology plan for public safety voice, data, and video interoperability in the State by 2014	Statewide interoperable communications technology plan used as template for local governments when acquiring, maintaining, or sustaining public safety communications systems	System Owners, SECB
11.	Facilitate implementation of NPSBN within the State	Awaiting further direction from FirstNet regarding details of the NPSBN	Be the first State to employ the NPSBN and related technologies / applications	Statewide coverage for wireless public safety broadband data applications	SWIC
12.	Establish communications systems training requirements for all public safety users	Agency specific communications training (initial and refresher training) being provided	Develop and publish standardized competency based communications training guidelines by the spring of 2014	Statewide public safety communications training curriculum	SECB
13.	Incorporate voice and data communications scenarios into new and existing exercises	Communications is not routinely included in training exercises	Incorporate communications related "injects" into at least one (1) public safety training exercise every calendar year	Routine inclusion of communications as a part of all training exercises in the State of Minnesota	ECN

Measures of Success

Goal #	Strategic Goal Supported	Current State	Target Measurement	End State	Owner or Source
14.	Establish and conduct communications exercises with public safety organizations	No communications specific exercises in the State	Hold at least one (1) State sponsored public safety communications centered exercise each calendar year	Annual public safety communications exercise to include the dissemination of an After Action Report (AAR) that describes lessons learned	Training Working Group
15.	Encourage and support utilization of interoperability solutions	Public safety communications interoperability solutions are available but are not widely used on a daily basis	Acquire, install, and train public safety personnel on the benefits of the routine use of interoperability resources available at the local level	Seamless statewide daily use of interoperability resources supporting public safety missions	RRBs, RICs, & ECN
16.	Evaluate and track use of ARMER tactical communications channels/talk groups (regional tactical channels)	ARMER status and use reports are produced but not being used to full potential	Use of ARMER monthly status reports by 50% of local system administrators to determine system efficiency by the summer of 2014	Uniform routine usage of ARMER status reports by RICs and local system administrators to effectively utilize ARMER capabilities for public safety interoperability needs	RICs & Local System Administrators
17.	Enhance statewide understanding and use of COML/COMT capabilities and roles	COMLs and COMTs being sporadically employed by local first responders	Designate and use COMLs and/or COMTs at 100% of large scale and multi-jurisdictional events to effectively support public safety communications needs	Standardized use of COMLs and COMTs to enhance public safety communications	RICs

Measures of Success

Goal #	Strategic Goal Supported	Current State	Target Measurement	End State	Owner or Source
18.	Improve accessibility to RRB Information (e.g., regional standards, meeting announcements, and minutes)	RRB websites and informational tools are dissimilar and are not being promoted	Develop a standard messaging scheme to make routine information and notices available to anyone interested	RRB websites and messaging standardized to facilitate their ease of use	RICs
19.	Provide stakeholder education on FirstNet and NG911 activities	Only limited information regarding NPSBN and NG911 concept and design is currently available to stakeholders and decision makers	Develop and disseminate educational / informational materials as they become available	Readily accessible information regarding new and emerging public safety communications technologies for all interested persons	ECN & SWIC
20.	Continue to seek or promote tribal participation in emergency communications planning activities	Limited engagement by the Tribal Nations within the State in public safety communications planning	Develop outreach program to educate and incentivize the Tribal Nations in public safety communications activities in the State by January 2014	Active engagement of the Tribal Nations in public safety communications planning activities and exercises	ECN & SWIC
21.	Develop and share life cycle funding plan for public safety communications resources, including initial infrastructure capital costs, sustainment costs, and acquisition, and routine replacement of subscriber equipment	Most State and local agencies dependent on Federal funding alternatives for communications infrastructure maintenance and sustainment	Identify new or existing funding stream(s) that can be used to purchase and maintain public safety communications capabilities at both the local and State levels of government by January 2014	Secure and sustainable communications life cycle funding plan that covers procurement and sustainment of existing and emerging technologies	SECB & Finance Committee

6.3 Management of Success

The Management of Success section describes the iterative, repeatable method Minnesota will follow to add, update and refine the measures of success. The SECB will task its existing committees, as well as any new working groups that may be formed, to manage the implementation of the SCIP and its associated strategic goals and initiatives. The SWIC will work with these committees and working groups to measure the progress made towards achieving the goals identified herein. The SWIC is also responsible for a semi-annual review of the identified measures of success in order to track their progress, and will report back to the SECB at least twice a calendar year on their status.

Based on these reviews the SECB will not only be able to evaluate the effectiveness of the SCIP, but will also be able to refine the measurement process and reshape Minnesota's interoperable communication strategy as needed. The results of these periodic reviews will be included as a part of the Annual Performance Report (APR) to the State legislature and the OEC.

6.4 Strategic Plan Review

The Strategic Plan Review section outlines the process Minnesota will use to conduct reviews of the SCIP 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. An annual review and update of the SCIP is an essential element to achieving Minnesota's vision for interoperable public safety communications and operations. The SECB assumes the primary responsibility for maintaining and updating the SCIP, and will do so through the SWIC.

From a more substantive procedural view, the process and periodic progress and status reports will be vested in the SECB's Interoperability Committee, designed to broadly represent the multitude of public safety disciplines (federal, state and local) including representatives from non-governmental organizations, military, and tribal governments operating in the State of Minnesota.

The Interoperability Committee is also designed to include representation from each of the radio regions and regional advisory committees where a similar multi-disciplinary approach is reflected in their organizational structure. Administrative support and coordination for this process will be a significant responsibility of the SWIC, who will provide technical assistance and input on the status and activities throughout the State, including the status of interoperability in bordering states and along the Canadian border.

ECN Staff, including the SWIC, will develop and present a draft APR to the SECB for approval in September of each year beginning in 2014. This report will be sent on to the OEC as part of an annual requirement and will be primarily used as a tool to track the progress of specific goals and initiatives. The SCIP will also serve to educate and inform stakeholders and decision makers regarding new and emerging communications technologies.

7. REFERENCES

The References section outlines resources that contribute additional background information on the SCIP and interoperable and emergency communications in Minnesota. Table 9 includes the links to these references.

Table 9: SCIP References

Title	Description	Reference
Statewide Emergency Communications Board Website	Provides comprehensive information about the Statewide Emergency Communications Board and its activities.	https://dps.mn.gov/entity/SRB/Pages/default.aspx
Emergency Communications Network Website	Provides information on the Emergency Communication Networks Division of the MN Department of Public Safety with oversees the Statewide 911 Program, ARMER radio communications network, and the Interoperability Program.	https://dps.mn.gov/divisions/ecn/Pages/default.aspx
Minnesota Public Safety Wireless Broadband Data Network Requirements Study	This comprehensive study was conducted through 2010-2012 to assess the needs of public safety wireless broadband in Minnesota. It is available in five sections, which each focus on a different interest area in public safety broadband. This study will form the foundation of Minnesota public safety broadband planning efforts and interaction with national entities such as FirstNet.	https://dps.mn.gov/divisions/ecn/programs/armer/Documents/Broadband_Study_Summary_Findings_v3.pdf
2009 Statewide Radio Board Governance Structure Assessment	The study focuses on how the current organizational and governance structure is capable of addressing the changing nature of public safety communications.	https://dps.mn.gov/divisions/ecn/programs/armer/Documents/Final%20Statewide%20Radio%20Board%20report%20(2).pdf
Minnesota Public Safety Broadband State and Local Grant Plan	Minnesota's proposed plan to satisfy the State's Objectives for the State Local Implementation Grant Program.	https://dps.mn.gov/divisions/ecn/programs/armer/Documents/Minnesota%20Phase%20Report%20v19.pdf

APPENDIX A: MAJOR SYSTEMS

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

Major System Information						
System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
Shared Statewide Radio System	ARMER	Minnesota Department of Transportation, SECB, RRB, ECN	Motorola, Project 25	80,000+	State, Local, Regional, and Tribal	Implementation nearing completion
			Digital trunked 700/800 MHz			
			Provides statewide interoperable voice capability			
			400 state and local sites (planned) approx. 300 current			
Shared Regional Computer Aided Dispatch and Mobile Data System	North East Minnesota Enforcement Safety Information System (NEMESIS)	Counties of Louis, Koochiching, Lake, Cook, Carlton, Pine, and local jurisdictions within	Ultra High Frequency (UHF) Mobile Radio Cellular air cards Secure mobile data hot spots		Local and Regional	Existing, since 2004
Regional Data System	Metropolitan Area High Performance Data (HPD) System	Minneapolis, St. Paul	Motorola HPD system. Delivers 9.6 kilobits per second (Kbps) of data to jurisdictions within the metropolitan area. Operates on old 764-804 interleaved public safety data plan under waiver provisions			Existing

APPENDIX B: LIST OF ACRONYMS

AAR	After Action Report
APR	Annual Progress Report
ARMER	Allied Radio Matrix for Emergency Response
COML	Communications Unit Leader
COMT	Communications Unit Technician
DHS	U.S. Department of Homeland Security
DOT	Department of Transportation
E911	Enhanced 9-11
ECN	Emergency Communications Network Division
EM	Emergency Management
EOC	Emergency Operations Center
FCC	Federal Communications Commission
FirstNet	First Responder Network Authority
FOG	Field Operations Guide
HPD	High Performance Data
IP	Internet Protocol
IPAWS	Integrated Public Alert and Warning System
Kbps	Kilobits per second
MHz	Megahertz
LMR	Land Mobile Radio
MSA	Minnesota Sheriffs' Association
NECP	National Emergency Communications Plan
NEMESIS	North East Minnesota Enforcement Safety Information System
NENA	National Emergency Number Association
NG911	Next Generation 911
NIMS	National Incident Management System
NPSBN	Nationwide Public Safety Broadband Network
NTIA	National Telecommunications and Information Administration
OEC	Office of Emergency Communications
P25	Project 25

PPD	Presidential Policy Directive
PSAP	Public Safety Answering Point
RAC	Regional Advisory Committee
RECCWG	Regional Emergency Communications Coordination Working Group
RF	Radio Frequency
RFP	Request for Proposal
RIC	Regional Interoperability Coordinator
RRB	Regional Radio Board
SCIP	Statewide Communication Interoperability Plan
SIEC	Statewide Interoperability Executive Committee
SLIGP	State and Local Implementation Grant Program
SOP	Standard Operating Procedure
SECB	Statewide Emergency Communications Board
SWIC	Statewide Interoperability Coordinator
VHF	Very High Frequency
UHF	Ultra High Frequency