



# *Commonwealth of Massachusetts*

## Statewide Communication Interoperability Plan (SCIP)

November 2015



OMB/MA Control Number: 1670-0017-MA  
Date of Approval: December 2015  
Date of Expiration: November 2020

## EXECUTIVE SUMMARY

The Massachusetts 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 Massachusetts prioritize resources, strengthen governance, identify future investments, and address interoperability gaps.

The purpose of the Commonwealth of Massachusetts 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.
- Serve as the strategic plan for expanding existing systems and programs in order to fulfill the expanding demand for voice communications capacity and coverage for Massachusetts's first responders.

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

**Vision:** To optimally share critical information in a rapid, efficient, simple, reliable, and sustainable way utilizing a variety of video, voice and data technologies by following common protocols.

**Mission:** To document common approaches, strategies, plans and procedures to achieve day- to-day communications interoperability. This mission will be accomplished through best practices, common procedures, allocation of necessary resources, and training and exercising.

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

- Governance –
  - Create an Infrastructure Issues Working Group under the State Interoperable Executive Committee (SIEC)
  - Create support for the programs related to the functions of the Statewide Interoperability Coordinator (SWIC)
- Standard Operating Procedures (SOPs) –
  - Develop best practices for operable and interoperable communications and systems
  - Ensure interoperable system owners have a policy to allow for inter-system sharing

- Refresh the Massachusetts Tactical Channel Plan (MTCP) and Massachusetts Interoperable Field Operations Guide (MIFOG)
- Technology –
  - Support the maintenance and upgrades to the statewide 700/800 trunked radio system and Tactical (TAC) Stacks
  - Develop an appropriate outreach plan to educate impacted agencies currently on the T-Band
  - Ensure continuity and interoperability of dispatch center operations
  - Mitigate negative impact of changing technologies (e.g., end of life cycle copper lease lines)
  - Expand and adopt statewide fiber backbone
- Training and Exercises –
  - Implement a repeatable and systematic statewide training process for initial and recurring training on new communications equipment / technologies / SOPs
  - Advance the Communications Unit Leader (COML) / Communications Technician (COMT) roles throughout the Commonwealth by conducting training and establishing a statewide recognition / certification process
- Usage –
  - Encourage development, deployment, and usage of specialized and trained Communications Unit (COMU) personnel (e.g., COML/COMT, Telecommunicator Emergency Response Taskforce [TERT])
- Outreach and Information Sharing –
  - Establish an outreach and information sharing program to facilitate planning and buy-in by informing stakeholders, soliciting feedback, and maintaining engagement
  - Increase coordination and information sharing among neighboring states
  - Prepare for and engage in consultation and outreach process for the Nationwide Public Safety Broadband Initiative: FirstNet
- Life Cycle Funding –
  - Implement a life cycle funding plan that takes into account all interoperable systems and equipment, the interoperability program, governance groups (e.g., the SIEC, Regional Councils), and the core elements of establishing and maintaining emergency communications in the Commonwealth

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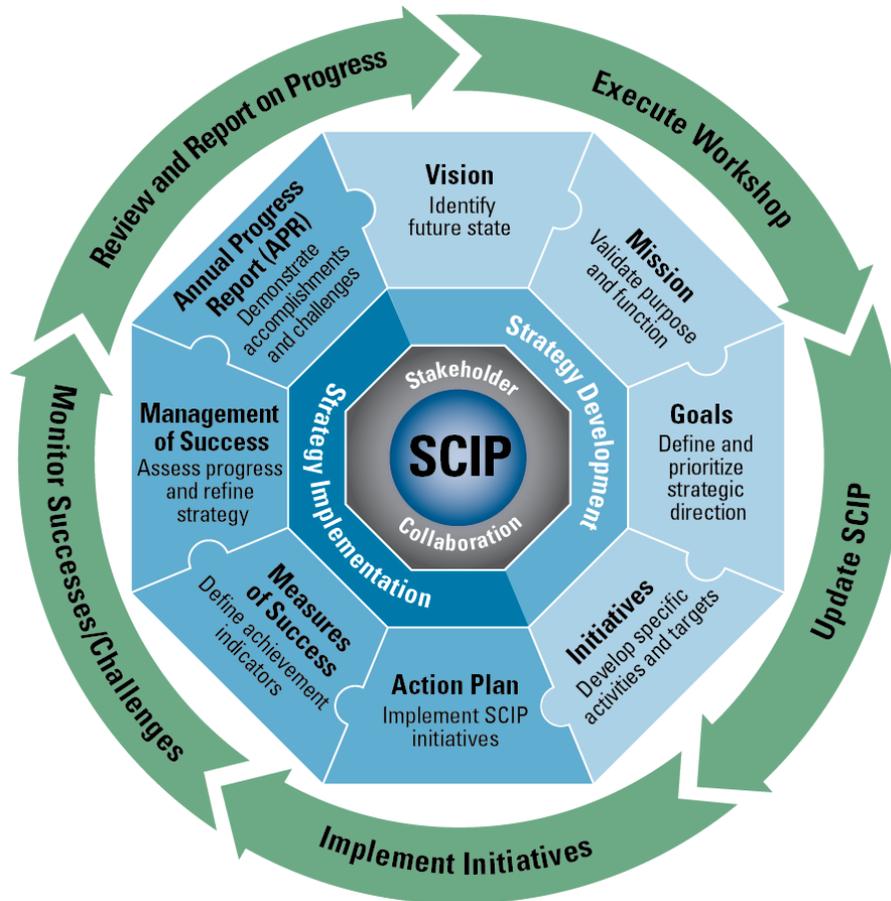
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## 1. INTRODUCTION

The Commonwealth of Massachusetts 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 Massachusetts 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 Massachusetts.
- 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 (SOPs), 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 Materials – Includes resources that provide additional background information on the SCIP or interoperable and emergency communications in Massachusetts 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.



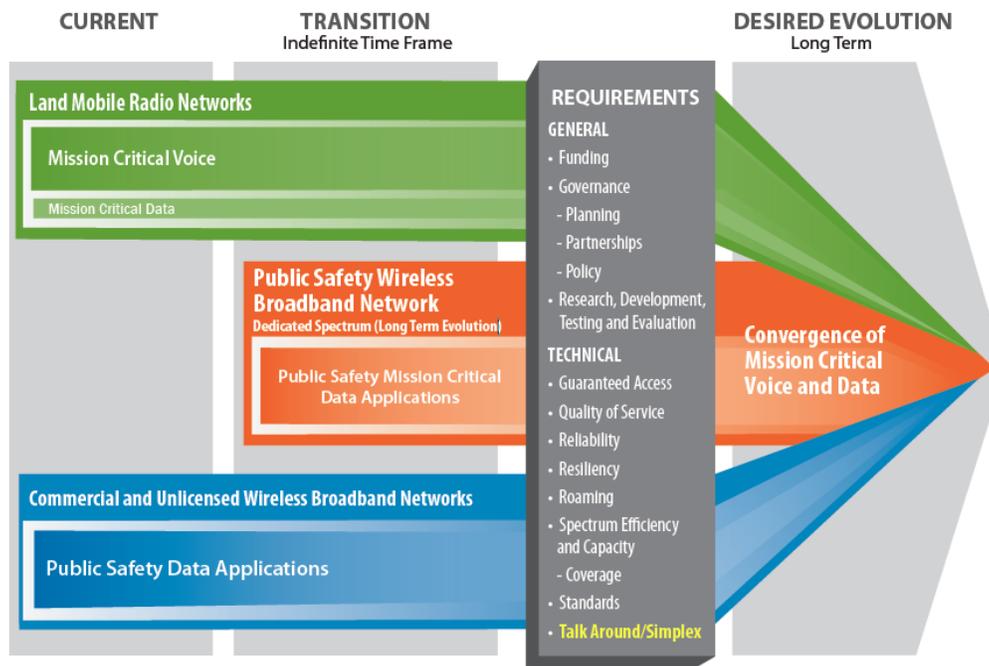
**Figure 1: SCIP Strategic Plan and Implementation Components**

The Commonwealth of Massachusetts SCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. Massachusetts has taken significant steps towards enhancing interoperable and emergency communications, including the build out of a statewide state-wide radio system for public safety use, expansion of communications programs, training an experienced cadre of COML and COMT personnel and the expansion and use of regional systems.

However, more remains to be done to achieve Massachusetts's vision. It is also important to note that this work is part of a continuous cycle as Massachusetts 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, Massachusetts 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 First Responder Network Authority (FirstNet). FirstNet 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 FirstNet 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 Massachusetts. It may result in a secure path for information-sharing initiatives, Public Safety Answering Points (PSAP), and Next Generation 911 (NG911) integration. FirstNet 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 FirstNet; however, Massachusetts will keep up-to-date with the planning and build-out of the network in the near and long term in coordination with FirstNet. FirstNet is the independent authority within the National Telecommunications and Information Administration (NTIA) and is responsible for developing the network, 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.<sup>1</sup>

Massachusetts has established a Public Safety Broadband Office (PBSO) under the purview of the Executive Office of Public Safety and Security (EOPSS) to oversee and direct all Commonwealth planning and implementation activities associated with the FirstNet. The PBSO has held informational meetings with stakeholders to provide information on FirstNet and the upcoming steps that will be taken. As FirstNet moves into the State consultations, PBSO will continue to serve as the Commonwealth's point of contact and implement programs to prepare for the network.

Additionally, achieving sustainable funding in the current fiscal climate is a priority for Massachusetts. 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 Massachusetts are:

- Identifying sources of sustainable funding for the current and planned expansion of communications systems and programs.
- Ensuring the Commonwealth's experienced cadre of COMU personnel has the funding to activate during times of emergency.
- Provide a funding stream for comprehensive training and education for all level of users on statewide systems.

More information on a typical emergency communications system life cycle, cost planning, and budgeting is available in OEC's System Life Cycle Planning Guide.<sup>2</sup>

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.

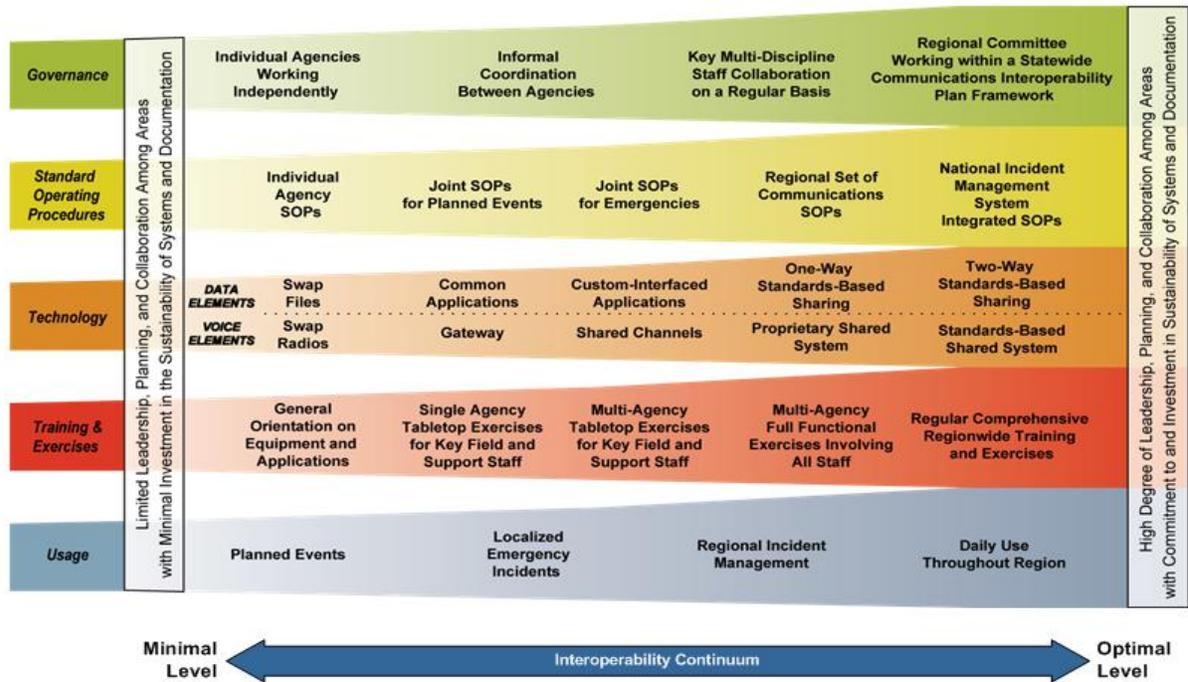
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<sup>1</sup> OEC's Public Safety Communications Evolution brochure is available here:

[http://publicsafetytools.info/oec\\_guidance/docs/Public\\_Safety\\_Communications\\_Evolution\\_Brochure.pdf](http://publicsafetytools.info/oec_guidance/docs/Public_Safety_Communications_Evolution_Brochure.pdf)

<sup>2</sup> OEC's System Life Cycle Planning Guide is available here:

[http://publicsafetytools.info/oec\\_guidance/docs/OEC\\_System\\_Life\\_Cycle\\_Planning\\_Guide\\_Final.pdf](http://publicsafetytools.info/oec_guidance/docs/OEC_System_Life_Cycle_Planning_Guide_Final.pdf)



**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 Massachusetts 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.<sup>3</sup> The following sections will further describe how the SCIP will be

<sup>3</sup> OEC's Interoperability Continuum is available here: <http://www.safecomprogram.gov/oecguidancedocuments/continuum/Default.aspx>

used in Massachusetts and Massachusetts's plans to enhance interoperable and emergency communications.

## 2. PURPOSE

The purpose of the Massachusetts 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.
- Serve as the strategic plan for sustaining and expanding existing systems and programs in order to fulfill the demand for voice communications capacity and coverage for Massachusetts's first responders.

The development and execution of the SCIP assists Massachusetts 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)<sup>4</sup> National Preparedness Goal for Operational Communications.<sup>5</sup>

In addition to this SCIP, Massachusetts 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 who has the authority to and is responsible for making decisions regarding this plan. The SWIC, in conjunction with the SIEC is also responsible for ensuring that this plan is implemented and maintained statewide. Massachusetts held a SCIP Revision Workshop in September 2014, with a follow up meeting in October 2014 to revise the vision and mission statements of the SCIP, refine and develop goals and initiatives, and provide an update to the emergency communications landscape within the Commonwealth. The (22) participants included representatives from State and local public safety agencies, dispatch services, emergency management agencies, the Massachusetts Port Authority, Commonwealth Homeland Security Regions, the Commonwealth's Public Safety Broadband Office, and the Department of State Police.

<sup>4</sup> 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>.

<sup>5</sup> 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.

### 3. STATE'S INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

Established by Executive Order 493, the Massachusetts SIEC is the governing body responsible for managing and directing statewide interoperability efforts in the Commonwealth. Managed by an Executive Management Committee (EMC), the SIEC works closely with Massachusetts's five Regional Homeland Security Advisory Councils, which provide policy recommendations and guidance for each region. These councils, as well as State public safety and public service agencies, are guided by the Executive Office of Public Safety and Security (EOPSS). Massachusetts is in the process of transitioning the statewide radio system administration duties to the Undersecretary/Chief Information Officer in order to streamline expansion and maintenance efforts.

Massachusetts maintains a statewide trunked radio system on the 700/800 Megahertz (MHz) radio band, originally expanded and built for State Police purposes originally; however, it has been expanded to include additional State, regional, and local agencies. The system is capable of wide area communications with all cities and towns in the Commonwealth, as well as local, regional, and state emergency operations centers. In addition, there are several prominent regional radio systems used for public safety communications and mutual aid functions (e.g., Boston Area Police Emergency Network [BAPER], Western Massachusetts Law Enforcement Council System [WMLEC], and 15 Fire District Radio System). These systems are maintained through a combination of grant funding and capital funding.

Massachusetts has benefited from several emergency communications accomplishments. The Commonwealth has a large cadre of COMLs and COMTs available for incident response. However, that cadre consists entirely of volunteers from local departments rather than personnel who can be paid for time served during an emergency. The 700/800 MHz system has been built over to provide border-to-border coverage, but as the system transfers to the Undersecretary/Chief Information Officer's control, Massachusetts is actively looking into ways to expand the coverage to identified gaps and increase capacity to handle a wider array of public safety end-users.

### 4. VISION AND MISSION

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

**Commonwealth of Massachusetts Interoperable and Emergency Communications  
Vision:**

To optimally share critical information in a rapid, efficient, simple, reliable, and sustainable way utilizing a variety of video, voice and data technologies by following common protocols.

**Commonwealth of Massachusetts Interoperable and Emergency Communications  
Mission:**

To document common approaches, strategies, plans and procedures to achieve day- to-day communications interoperability. This mission will be accomplished through best practices, common procedures, allocation of necessary resources, and training and exercising.

## 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 Massachusetts governance structure for interoperable and emergency communications. The Executive Office of Public Safety and Security (EOPSS) is the Commonwealth's designated organization for requesting, awarding, and expending federal funds in support of communications interoperability. The SIEC was created by Executive Order to advise the EOPSS on statewide interoperability efforts. The EMC of the SIEC plays an active role in the Commonwealth's efforts to improve communications interoperability and oversees the subcommittees of the Council. Each Homeland Security Region has its own council which coordinates policy-making for that region in order to account for local needs and capabilities.

While the SIEC has an active EMC, work remains on engaging additional stakeholders to participate in sub-committee working groups to focus in on areas such as infrastructure issues and sustainment of current programs.

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

**Table 1: Governance Goals and Initiatives**

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
1	Create an Infrastructure Issues Working Group under the SIEC	1.1 Identify members and SMEs (e.g., 9-1-1 directors, system engineers, members of other Secretariats) with knowledge of non-tower regional infrastructure used for communications	SIEC/EMC	01/2016

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		1.2 Utilize the Working Group members to develop and promote Best Practices for the Infrastructure development process	Infrastructure Issues Sub-Committee Working Group	07/2016
		1.3 Create recommendations and identify issues, including inter-governmental challenges, to pass to the Secretary of EOPSS to improve Commonwealth infrastructure	Infrastructure Issues Sub-Committee Working Group /SIEC Chair	12/2016
2	Create support for the programs related to the functions of the SWIC	2.1 Identify and prioritize specific needs that require assistance	SWIC/SIEC	01/2016
		2.2 Identify resources needed to support and sustain the needs and the evolving mission	SWIC/SIEC	01/2016

## 5.2 Standard Operating Procedures (SOPs)

The SOPs section of the SCIP identifies the framework and processes for developing and managing SOPs statewide. Massachusetts utilizes standard operating procedures to promote information sharing and communications support for daily operations and responses to large planned and unplanned events. SOPs played a critical role during the events during and after the Boston Marathon Bombing because the Massachusetts Emergency Management Agency (MEMA), the organization within the EOPSS that coordinates communications, was able to pre-position COMU members who handled the sudden and dramatic increase in communications traffic.

Massachusetts currently utilizes regional interoperable systems as a key part of the emergency communications landscape in the Commonwealth. These systems have SOPs for use of the individual system, but Massachusetts has identified the need to review SOPs statewide to ensure system owners have the ability to facilitate inter-system sharing. In addition, Massachusetts will take steps to develop best practices to ensure that purchased equipment performs at the level expected of public safety users while also maintaining fiscal responsibility while utilizing limited resources.

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

**Table 2: Standard Operating Procedures Goals and Initiatives**

<b>Standard Operating Procedures Goals and Initiatives</b>				
Goal #	Goals	Initiatives	Owner	Completion Date
3	Develop best practices for operable and interoperable communications and systems	3.1 Develop best practices on purchasing the appropriate equipment	Policy and Plans (P&P) Subcommittee	6/2016
		3.2 Develop best practices on the implementation and build-out of systems, including channel plans for all radio systems in the Commonwealth	P&P Subcommittee	6/2016
		3.3 Promote the adoption of best practices (e.g., presentations)	P&P Subcommittee	6/2016
4	Ensure interoperable system owners have a policy to allow for inter-system sharing	4.1 Identify existing interoperable systems SOPs	System Owners/P&P Subcommittee	12/2015
		4.2 Review SOPs and identify gaps	System Owners/P&P Subcommittee	12/2015
		4.3 Create SOPs to fill the gaps	System Owners	12/2019
		4.4 Review SOPs and update to ensure common information formats and content (e.g., mandatory descriptive English terminology and pronunciation for tactical voice communications)	System Owners/P&P Sub-Committee	12/2015, ongoing
5	Refresh the Massachusetts Tactical Channel Plan (MTCP) and Massachusetts Interoperable Field Operations Guide (MIFOG)	5.1 Conduct outreach	SWIC	12/2015
		5.2 Collect updated and/or current ICS 217A forms	SWIC	04/2015, annually thereafter
		5.3 Update and publish MTCP and MIFOG	SWIC	04/2016

### 5.3 Technology

The Technology section of the SCIP outlines Massachusetts'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.

Massachusetts maintains a statewide radio system with coverage over all 351 municipalities and connections for all local, regional, and state operations centers. This system initially served as the primary communications system for the Massachusetts State Police (MSP); however, it has been expanded to support day-to-day communications for State and local agencies (e.g., MEMA, Massport, and City of Worcester Police Department). In addition, first responders use systems which are designed to meet regional needs and are controlled by regional entities for daily operations (e.g., BAPER, WMLEC).

MEMA also maintains a cache of 7/800 MHz band radios, two interoperability gateways for cross-patching, two 800 MHz repeaters and several mobile communication vehicles that are available for rapid field deployment to support and bolster communications capacity in times of need (e.g., severe weather response and large events such as the Boston Marathon).

Through the Commonwealth's 7/800 MHz radio system and the regional systems coverage has been achieved over almost all of the state. However, the system requires maintenance upgrades to patch small gaps, increase the ability to interoperate, and continue to provide quality services in order to accommodate first responder public safety needs. Massachusetts has also determined the need to identify alternatives for agencies that currently have UHF T-Band licenses in order to mitigate the loss of bandwidth that will result when public safety migrates off of the band.

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

**Table 3: Technology Goals and Initiatives**

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
6	Support the maintenance and upgrades to the statewide 700/800 trunked radio system and TAC Stacks	6.1 Continue to identify current baseline of site capabilities, various upgrade needs, and corresponding risks in coordination with key stakeholders	Massachusetts State Police/EOPSS	02/2016, ongoing
		6.2 Identify coverage and capacity gaps	Massachusetts State Police/EOPSS	12/2015, ongoing
		6.3 Promote current capabilities and evaluate future enhancements with the input of system stakeholders	Massachusetts State Police/EOPSS	12/2017

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
7	Develop an appropriate outreach plan to educate impacted agencies currently on the T-Band	7.1 Gather data and information on impact of the reallocation of the T-band spectrum and identify agencies affected	EOPSS (with input from Greater Boston Police Council, Massachusetts Association of Police Chiefs, Fire Chiefs Association of Massachusetts, and other T-Band licensees)	12/2015
		7.2 Identify possible alternatives		12/2015
		7.3 Conduct outreach to T-Band licensees		12/2016, ongoing
8	Ensure continuity and interoperability of dispatch center operations	8.1 Identify successes and challenges (e.g., by analyzing after action reports), regarding: <ul style="list-style-type: none"> <li>• Radio</li> <li>• Personnel/staffing</li> <li>• Telephony</li> <li>• Data</li> <li>• Infrastructure / backhaul</li> </ul>	SWIC, EOPSS	12/2016, ongoing
		8.2 Develop best practices and recommendations to enhance dispatch center operations	EOPSS (with input from State 9-1-1 Department, local/regional dispatch centers, radio/CAD system owners)	12/2017, ongoing
9	Mitigate negative impact of changing technologies (e.g., end of life cycle copper lease lines)	9.1 Identify timeline associated with end of life cycle	EOPSS	12/2015, ongoing
		9.2 Identify alternatives	EOPSS	6/2015, ongoing
		9.3 Conduct outreach to potentially affected agencies	EOPSS	6/2015, ongoing
10	Expand and adopt statewide fiber backbone	10.1 Identify gaps in connectivity	EOPSS	12/2015, ongoing
		10.2 Identify opportunities to leverage existing infrastructure to expand	EOPSS	12/2016, ongoing
		10.3 Deploy new infrastructure as budget allows	EOPSS	12/2019

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		10.4 Encourage adoption and use of infrastructure	EOPSS	12/2019

## 5.4 Training and Exercises

The Training and Exercises section of the SCIP explains Massachusetts'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. Massachusetts has successfully trained a number of COMU personnel who regularly deploy in support of planned and unplanned events, and the State seeks to sustain that program in the coming years and advance the program by ensuring trained COMUs complete their task books and conducting an annual course to sustain the number of actively trained personnel.

Training is essential for the proper use of statewide and regional systems. As Massachusetts expands its networks and technology reserve it is essential that the Commonwealth develop standardized training for all levels of use—from end users to system managers. This training will ensure personnel know what resources are available, how to request and use them, and ensure gaps and response times are reduced. The training will also promote interoperability by regularly testing system capabilities and equipment functionality.

Table 4 outlines Massachusetts'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
11	Implement a repeatable and systematic statewide training process for initial and recurring training on new communications equipment / technologies / SOPs	11.1 Encourage communications component in training and /or exercises across all statewide homeland security regions by: <ul style="list-style-type: none"> <li>• Practicing interoperable communications</li> <li>• Conducting after-action reviews of exercises to determine/measure if we are in keeping with our vision</li> </ul>	State Training Officer	12/2019, ongoing

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		<ul style="list-style-type: none"> <li>Designing training to encourage day-to-day usage</li> </ul>		
		11.2 Provide information for stakeholders to understand how to access, implement, and utilize statewide systems, protocols, and procedures to support incident communications interoperability	State Training Officer	12/2019, ongoing
		11.3 Document and maintain records of training and exercises	State Training Officer	12/2019, ongoing
12	Advance the COML/COMT roles throughout the Commonwealth by conducting training and establishing a statewide recognition / certification process	12.1 Develop a methodology to certify and track all COML/COMT resources statewide	SIEC	12/2015
		12.2 Monitor and encourage COML/COMT class participants to complete their task books and become certified by the State	EOPSS	12/2015
		12.3 Conduct annual statewide COML/COMT training	EOPSS	12/2015, annually thereafter

## 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. Public Safety responders at all levels utilize regional and statewide networks every day for normal operations.

While the statewide radio system and some regional systems utilize the 700/800 MHz bandwidth, the usage is not uniform. Massachusetts will work towards familiarity with radios capable of connecting to the statewide system to enable an efficient deployment of MEMA strategic technology reserves, if required.

The Commonwealth has established a specialized team of trained COMU personnel that are activated and used during planned and unplanned events to support communications. While participants in the current cadre of personnel often volunteer or seek funding support from their local jurisdictions for their time and travel costs, a funding stream to

sustain this effort is needed to ensure this reliable resource can continue to support communications across the Commonwealth.

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

**Table 5: Usage Goals and Initiatives**

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
13	Encourage development, deployment, and usage of specialized and trained COMU personnel (e.g., COML/COMT, TERT)	13.1 Promote use and capabilities of specialized and trained COMU personnel	COMU team members	12/2015, ongoing
		13.2 Develop operational and deployment SOPs for COMU personnel	SWIC, COMU team members	1/2016
		13.3 Identify dedicated funding source	SWIC, COMU team members	12/2019, ongoing

## 5.6 Outreach and Information Sharing

The Outreach and Information Sharing section of the SCIP outlines Massachusetts'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. The Executive Management Council provides a working space to exchange critical high-level information about emergency communications and preparedness in Massachusetts. The PSBO has been conducting regular informational meetings about FirstNet and maintains resources for local stakeholders to learn about the process.

Massachusetts is a State that features dense population in a geographically confined space. It is essential that the Commonwealth communicate with neighboring states and Federal partners to ensure a common situational awareness picture is maintained should the need for mutual aid occur. Concurrently, it is important that local chiefs and incident commanders are provided with up-to-date information about what resources are available to them should an emergency arise that requires additional communications support.

Table 6 outlines Massachusetts'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
14	Establish an outreach and information sharing program to facilitate planning and buy-in by informing stakeholders, soliciting feedback, and maintaining engagement	14.1 Identify mechanisms to conduct regular outreach and information sharing (e.g., one-day workshop)	SWIC	6/2016
		14.2 Finalize SIEC website	SWIC, OTIS	1/2016
		14.3 Promote deployments and success stories	SIEC	1/2015, ongoing
		14.4 Develop outreach and educational materials for elected officials	SIEC	6/2016
15	Increase coordination and information sharing among neighboring states	15.1 Leverage RECCWG and Regional Interoperability Council (RIC)	RECCWG Members	12/2015, ongoing
		15.2 Promote use of Interoperability Reflector or other dispatch notification systems	SWICs, OEC Coordinator, distribution list owners	12/2015, ongoing
16	Prepare for and engage in consultation and outreach process for NPSBN	16.1 Support FirstNet education and outreach activities under SLIGP Phase I	Commonwealth PSBO	12/2015
		16.2 Support FirstNet data collection needs under SLIGP Phase II	Commonwealth PSBO	Dependent on FirstNet

## 5.7 Life Cycle Funding

The Life Cycle Funding section of the SCIP outlines Massachusetts's plan to fund existing and future interoperable and emergency communications priorities.

Creating a sustainable funding stream is essential to the operations of first responders for daily operations and for planned and unplanned responses. As the need for capacity and coverage increase in order to provide critical public safety services, funding must be identified in order to alleviate the risk of primary and secondary public safety services not being able to obtain the information needed. As each town is responsible for determining interoperability solutions within its own boundaries, it has typically been challenging to develop common communication systems and protocols statewide; however, due to the fiscal climate and abilities to achieve economies of scale, many localities have demonstrated success in working together to either consolidate resources and or work together to identify the best possible interoperability solutions for their localities. As

Federal, State, and local budgetary challenges have persisted for many years, Massachusetts will pursue a comprehensive strategy to fund programs to ensure end-users have the capability and technology needed to operate and communicate.

In addition, to ensure continuity and momentum of its success, Massachusetts seeks to develop a dedicated funding stream to support the SIEC and Regional Council meetings. Currently, these groups meet to make decisions on grant funding distribution. However, the mission of these groups has expanded since their initial implementation. Many stakeholders across the Commonwealth utilize the network and subject matter expertise of the members of the various Councils to identify common solutions to interoperability challenges, or simply put, work together on interoperability for the benefit of the citizens across the State. The forward progress in the Commonwealth may be diminished if these groups are eliminated due to a lack of grant funding or without a reinforced commitment to sustain the groups.

Table 7 outlines Massachusetts'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
17	Implement a life cycle funding plan that takes into account all interoperable systems and equipment, the interoperability program, governance groups (e.g., the SIEC, Regional Councils), and the core elements of establishing and maintaining emergency communications in the Commonwealth	17.1 Identify the interoperable systems, at-risk communications infrastructure, equipment, programs, administration, or tools that need sustainment funding, estimate funding requirements based on historical budget information, and identify funding streams for each step in the system life cycle plan (e.g., planning, acquisition, implementation, maintenance, refreshment, and disposition)	SWIC	Ongoing
		17.2 Develop a modernization / renovation budget for systems and equipment reaching the end of their useful life or vendor support	SWIC and EOPSS	Ongoing
		17.3 Identify risks if funding is not obtained for sustainment	SWIC and EOPSS	Ongoing

## 6. IMPLEMENTATION

### 6.1 Action Plan

The Action Plan section of the SCIP describes the process Massachusetts will use to determine a plan to execute the initiatives in the SCIP. EOPSS will conduct an initial review of the draft Massachusetts SCIP and update it as appropriate. SIEC members will then review and comment on the document, prior to a final review and approval by the SWIC and EOPSS. The SWIC will publish the Massachusetts SCIP to the SIEC website and send the final and approved version to OEC.

### 6.2 Measures of Success

The Measures of Success section of the SCIP defines the measures that Massachusetts will use to monitor progress and indicate accomplishments toward achieving the vision for interoperable and emergency communications. Measures of success are used to meaningfully assess the outcomes and impacts of program functions and processes in meeting strategic goals. Table 8 outlines these measures for Massachusetts. 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 Measurement	Measure Completion Date	Owner or Source
1.	Create an Infrastructure Issues Working Group under the SIEC	The SIEC has active subcommittees (e.g., P&P); however there is a need for a group of subject matter experts to meet and discuss infrastructure issues to address impending impact of aging infrastructure	Infrastructure Issues Working Group members identified and have met at least once	12/2016	SIEC/EMC

<b>Measures of Success</b>					
Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
2.	Create support for the programs related to the functions of the SWIC	The SWIC has collateral duties and could benefit from extra staff support to help achieve goals and initiatives set forth in the SCIP	At least one full-time equivalent resource identified with defined role and responsibilities	12/2015	SWIC/SIEC
3.	Develop best practices for operable and interoperable communications and systems	Additional guidance on purchasing equipment is needed for localities facing decisions on end of life cycle equipment	A presentation highlighting the identified best practices is complete and briefed at five stakeholder meetings across the Commonwealth	6/2016	P&P Subcommittee
4.	Ensure interoperable system owners have a policy to allow for inter-system sharing	Some SOPs exist for regional systems, but limited number related to inter-system sharing	Interoperable communications policies are updated every two years, at minimum, and uploaded to a common repository	12/2019	System Owners/P&P Sub-Committee
5.	Refresh the Massachusetts Tactical Channel Plan (MTCP) and Massachusetts Interoperable Field Operations Guide (MIFOG)	MTCP and MIFOG printed and distributed widely; however, additional system information is required	100% completion of MTCP update and MIFOG	4/2016	SWIC

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
6.	Support the maintenance and upgrades to the statewide 700/800 trunked radio system and TAC Stacks	Many site locations for the statewide trunked radio system are not hardened nor do they fully support coverage across the State	100% of existing sites upgraded to appropriate standards	12/2017	Massachusetts State Police/EOPSS
7.	Develop an appropriate outreach plan to educate impacted agencies currently on the T-Band	An appropriate alternative plan has not yet been identified for impacted agencies	Alternative plan approved by SIEC	12/2016	EOPSS
8.	Ensure continuity and interoperability of dispatch center operations	After Action Reports of real-world events have identified gaps in dispatch center operations	SIEC publishes best practices on dispatch center operations	12/2017	SWIC, EOPSS
10.	Expand and adopt statewide fiber backbone	Program deployment started, but not yet complete. Questions remain regarding the partnership with private sector on statewide fiber deployment	Fiber backbone expansion plan developed and 100% complete	12/2019	EOPSS
11.	Implement a repeatable and systematic statewide training process for initial and recurring training on new communications equipment / technologies / SOPs	Few incident commanders fully understand all interoperable and emergency resources	Annual training calendar and online training available on accessible website	12/2019	State Training Officer

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
12.	Advance the COML/COMT roles throughout the Commonwealth by conducting training and establishing a statewide recognition / certification process	Effective number of COML/COMT trained personnel exist across the State; however, the sustainability of the program could be solidified	90% of real-world incidents will include a staffed, formally certified COML/COMT or other SME position	12/2016	EOPPS
13.	Encourage development, deployment, and usage of specialized and trained COMU personnel (e.g., COML/COMT, TERT)	A cadre of individuals currently serve as a COMU deployment team for planned and unplanned events, many individuals often volunteer their time and localities volunteer resources to continue this asset in large-scale events across the State	A sustainable funding source is identified for the deployment of COMU teams	12/2019	SWIC, COMU team members
14.	Establish an outreach and information sharing program to facilitate planning and buy-in by informing stakeholders, soliciting feedback, and maintaining engagement	Occasional miscommunications occur among intra-State regions, but general information sharing is strong and should be continued.	Feedback from the State and from intra-State regions during monthly SIEC meetings is consistently disseminated to other regions and down to the municipal level , as well as to State decision-makers	6/2016	SIEC, OTIS

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
15.	Increase coordination and information sharing among neighboring states	Border communities consistently coordinate with neighboring States for mutual aid situations; an increase in formal coordination would serve the State well in large-scale events (e.g., power outages due to storms, COMU team deployments)	Conduct annual meeting with neighboring States to discuss interoperability issues	12/2015	SWICs, OEC Coordinator, distribution list owners
16.	Prepare for and engage in consultation and outreach process for NPSBN	Conducted initial planning call for NPSBN as well as five regional meetings across the Commonwealth	SLIGP implementation is in accordance with the schedule and grant requirements	Dependent on FirstNet	Commonwealth PSBO
17.	Implement a life cycle funding plan that takes into account all interoperable systems and equipment, the interoperability program, governance groups (e.g., the SIEC, Regional Councils), and the core elements of establishing and maintaining emergency communications in the Commonwealth	Decreased funding for emergency communications has altered previous budgets	Sustainability plan documented and funding source identified	SWIC and EOPSS	Ongoing

### **6.3 Management of Success**

The Management of Success section describes the iterative, repeatable method Massachusetts will follow to add, update and refine the measures of success. To accomplish these tasks, the SIEC will review the Massachusetts SCIP on an annual basis, each fall. During this review, the SWIC and SIEC members will determine the current status of each goal and initiative, document achievements, and adjust completion dates, as necessary.

### **6.4 Strategic Plan Review**

The Strategic Plan Review section outlines the process Massachusetts 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. As noted in Section 6.3, the SIEC will review the Massachusetts SCIP on a yearly basis to verify the document is current and make changes, where necessary.

## 7. REFERENCE MATERIALS

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

**Table 9: SCIP Reference Materials**

Title	Description	Source/Location
Executive Order 493	Executive Order creating the Massachusetts SIEC	<a href="http://www.mass.gov/governor/legislative/execorder/executiveorder/executive-order-no-493.html">http://www.mass.gov/governor/legislative/execorder/executiveorder/executive-order-no-493.html</a>
2009 SIEC Charter	Charter Document of the Massachusetts SIEC	 SIEC Charter.doc



**APPENDIX B: LIST OF ACRONYMS**

AAR	After Action Report
APR	Annual Progress Report
BAPEREN	Boston Area Police Emergency Network
COML	Communications Unit Leader
COMT	Communications Technician
COMU	Communications Unit
DHS	U.S. Department of Homeland Security
EMC	Executive Management Committee
EOPSS	Executive Office of Public Safety and Security
FCC	Federal Communications Commission
FirstNet	First Responder Network Authority
IP	Internet Protocol
MHz	Megahertz
LMR	Land Mobile Radio
MSP	Massachusetts State Police
MEMA	Massachusetts Emergency Management Agency
MIFOG	Massachusetts Interoperable Field Operations Guide
MTCP	Massachusetts Tactical Channel Plan
NECP	National Emergency Communications Plan
NG911	Next Generation 911
NPSBN	Nationwide Public Safety Broadband Network
NTIA	National Telecommunications and Information Administration
OEC	Office of Emergency Communications
PBSO	Public Safety Broadband Office
P&P	Policy and Plans Subcommittee
PPD	Presidential Policy Directive
PSAP	Public Safety Answering Point
SCIP	Statewide Communication Interoperability Plan
SIEC	Statewide Interoperability Executive Committee
SOP	Standard Operating Procedure
SWIC	Statewide Interoperability Coordinator
TERT	Telecommunicator Emergency Response Taskforce
TICP	Tactical Interoperable Communications Plan
WMLEC	Western Massachusetts Law Enforcement Council System