



Ohio

Statewide Communication Interoperability Plan (SCIP) v3.1



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EXECUTIVE SUMMARY

The Ohio Statewide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional and multi-disciplinary statewide strategic plan to enhance interoperable and mission critical communications. The SCIP is a critical mid-range (three to five years) strategic planning tool to help Ohio prioritize resources, strengthen governance, identify future investments, and address interoperability gaps. The Statewide Interoperability Executive Committee as established by the Governor's Executive Order 2012-07K is charged with implementing the plans and processes identified in the SCIP on behalf of the public safety responders and all citizens of Ohio. Specifically, the SIEC created to "address concerns relating to operability and interoperability of local, regional, and statewide public safety voice and data communications systems, to plan for the long-term efficient implementation and operation of interconnected public safety communications systems, to improve overall public safety communications interoperability in Ohio."

The purpose of the Ohio SCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and mission critical communications at the state, regional, local, and tribal levels;
- Explain to leadership and elected officials the vision for interoperable and mission critical communications; and
- Demonstrate the need for sustainable funding.

With the promulgation of this SCIP, the SIEC continues the process of integrating planning for the development of the Nationwide Public Safety Broadband Network (NPSBN) consistent with FirstNet guidance. Also, the SIEC establishes coordination with the state 911 office for the planning and deployment of NG911 technology and coordination through the State Emergency Communications Committee (SECC), which oversees alerts and warnings. In previous versions of the SCIP, the plan focused primarily on mission-critical voice communications and Ohio's progress along the lanes of the Interoperability Continuum. Throughout this SCIP references to "public safety" and/or "mission critical" communications refers to both voice and data systems.

The Statewide Interoperability Executive Committee (SIEC) and the Statewide Communication Interoperability Plan

The Ohio SIEC is established to promote and facilitate cooperation between the state and all public safety interests in Ohio. Vision, leadership, collaboration, and compromise are important to the successful implementation of a statewide communications interoperability project covering all jurisdictional boundaries. The Ohio SIEC recognizes the independence of many agencies in the state that choose to operate systems in relative isolation. It is neither the intent nor the mission of the SIEC to replace existing systems with a "one size fits all" multipurpose statewide communications network. However, the SIEC acknowledges the state's vital interest in

a common communications network platform capable of providing functional interconnectivity between disparate systems.

Expanding existing coverage, capacity and interoperability statewide is in the common interest of state and local government agencies. Interoperability between agencies throughout the state cannot be effectively achieved without expanding both coverage and capacity. The SIEC promotes common technology solutions through cooperative partnerships supporting the system-of-systems approach to communications interoperability.

Specifically, the SIEC proposes the following solution oriented objectives:

- Cooperation with local agencies in each of Ohio's eight interoperability regions to determine appropriate technology requirements for voice and data interoperability.
- Continuing to support the design and implementation of a statewide IP-based communications network capable of supporting analog and P-25 digital interconnectivity.
- Assisting in the establishment of regional SOPs and development of a statewide SOP framework for voice and data communications interoperability.
- Establishing MOUs between the SIEC and public safety entities in all regions of the state promoting cooperation and partnership in the context of common interoperability goals and objectives.

The following are Ohio's Vision and Mission for improving mission critical communications operability, interoperability, and continuity of communications statewide.

Vision:

The State of Ohio's Vision for interoperable mission-critical communications is to have all responders throughout Ohio operating on a standards-based, shared system of systems, allowing seamless communications across all disciplines, ultimately offering all users a single integrated statewide platform maximizing operability and interoperability.

Mission:

The mission of the SIEC is to provide guidance, direction, and general oversight for Ohio's all-hazards responders, which:

- Enables them to communicate and share information day-to-day as well as during crisis situations through standard procedures;
Ensures readiness through a comprehensive training and usage plan; and
- Utilizes a secure interoperable voice and data communications network and Next Generation 911 capabilities, available to all jurisdictions and disciplines.

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

- Governance –
 - Garner more active participation in the SIEC
 - Align the strategies of the SIEC (including the Nationwide Public Safety Broadband Network [NPSBN] Subcommittee) and the ESINet (Emergency Services Internet Protocol Network) Steering Committee
- Standard Operating Procedures (SOPs) –
 - Continue to develop, distribute, and maintain statewide SOPs
 - Review and update statewide Field Operations Guide (FOG) every two years
- Technology –
 - Complete build-out of statewide Project 25 (MARCSIP - P25) upgrade
 - Support integration and interconnections of local, county, and regional radio systems to complete a statewide system of systems
 - Support continuity between Public Safety Answering Points (PSAPs) and Public Safety Dispatch Centers (PSDCs), and the statewide mission critical voice system of systems
 - Support continuity between FirstNet, PSAPs, PSDCs, and the statewide mission critical voice system of systems.
 - Support security between FirstNet, PSAPs, PSDCs, and the statewide mission critical voice system of systems
- Training and Exercises –
 - Conduct regular regional exercises
 - Conduct regular regional training
- Usage –
 - Establish a schedule to regularly test seldom-used interoperable resources
- Outreach and Information Sharing –
 - Conduct outreach and education for Multi-Agency Radio Communication System-Internet Protocol (MARCSIP) upgrade, including capabilities and advantages
 - Maintain and add updated content to the SIEC website
 - Achieve outreach plans outlined in Ohio's State and Local Implementation Grant Program (SLIGP) application
 - Maximize SLIGP activities to best prepare Ohio to interact with FirstNet

- Determine Technical Assistance (TA) offerings through a yearly process
- Life Cycle Funding –
 - Create and implement comprehensive strategies to develop, sustain, and improve public safety communications technologies at the local, regional, and statewide levels Include the life cycle process in system planning and design throughout SIEC activities
 - Formalize the SIEC's relationship with the State Administrative Agency (SAA)
 - Identify and leverage public-private partnerships relating to the NPSBN.

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1. INTRODUCTION

The Ohio Statewide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable, mission critical communications. The SCIP is a critical, mid-range (three to five year) strategic planning tool to help Ohio 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 of the SCIP in Ohio.
- State's Interoperable and Mission-Critical Communications Overview – Provides an overview of the state's current and future mission critical communications environment and defines ownership of the SCIP.
- Vision and Mission – Articulates the state's three- to five-year vision and mission for improving mission critical 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 environment.
- Reference Materials – Includes resources that provide additional background information on the SCIP or interoperable and mission critical communications in Ohio, 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 mission critical communications.

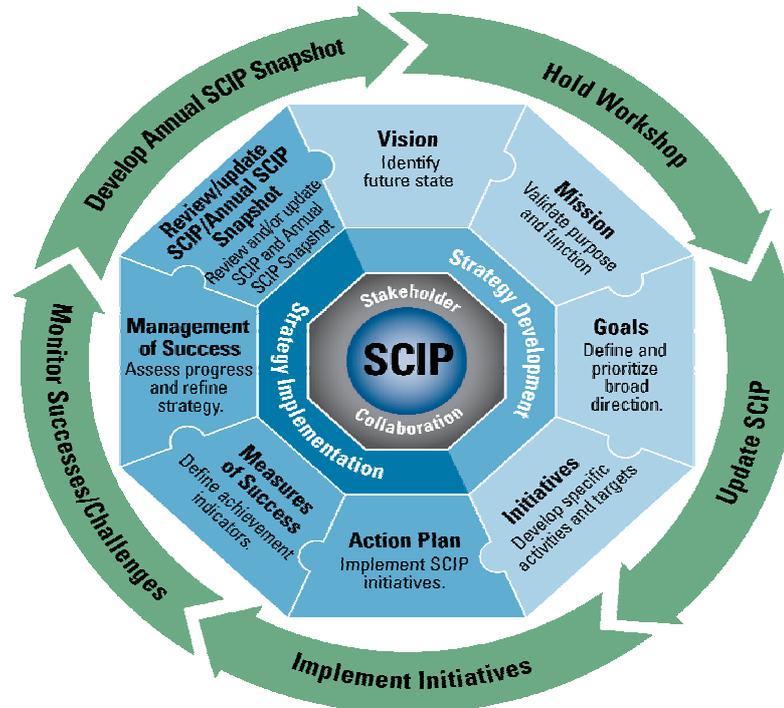


Figure 1: SCIP Strategic Plan and Implementation Components

The Ohio SCIP is based on a thorough understanding of the current and mid-range interoperable and mission critical communications environment in Ohio. Ohio has taken significant steps towards enhancing interoperable and mission critical communications, including establishing the Statewide Interoperability Executive Committee (SIEC) as the state's public safety mission critical communications authority, drafting several baseline SOPs, and funding a \$90 million project to upgrade the current statewide radio system to an IP-based, Project 25 (APCO P25 Phase 1) platform. This upgrade, on schedule to be completed in Q2 of calendar year 2015, will provide statewide coverage and capacity to offer all Ohio first responders a single integrated statewide platform providing standards-based interoperability.

However, more remains to be done to achieve Ohio's vision. It is important to note this work is part of a continuous cycle as Ohio will always need to adapt to evolving technologies, operational tactics, and changes to key individuals (e.g., Governors, project champions). In the next three to five years, Ohio will continue to 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 (specifically Title VI, relating 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 first responders 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. Expect the “transition” period to reflect the timeframe of this SCIP and perhaps future SCIPs, with the “Long term” period requiring 12-20 years to achieve.

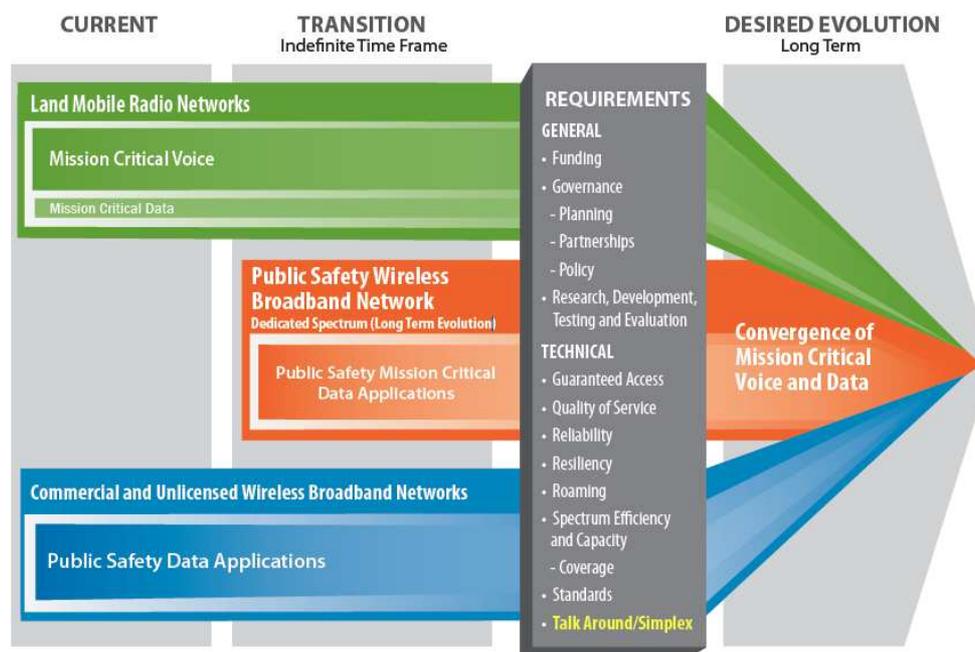


Figure 2: Public Safety Communications Evolution

Integrating capabilities such as broadband provide an unparalleled opportunity for the future of interoperable communications in Ohio. It may result in a secure path for information-sharing initiatives, Public Safety Answering Points (PSAPs), 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.

Currently, there is not a well-defined timeline for the deployment of the NPSBN. However, Ohio is keeping 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). Ohio's June 2015, FirstNet consultation meeting serves as an important step in its broadband planning efforts.

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, and local levels and design effective policy and governance structures that address new and emerging interoperable and mission critical 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 mission critical communications is available in the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) Public Safety Communications Evolution brochure.¹

Consistent with provisions of NPSBN, the Ohio SIEC has been established as the FirstNet State point-of-contact (SPOC). The state has established a project management office within the Ohio Office of Information Technology/MARCS Program, with three full-time positions dedicated to outreach, asset inventory issues, and to track FirstNet activities.

Funding Issues

Achieving sustainable funding in the current fiscal climate is a priority for Ohio. As state and federal grant funding diminishes, states need to identify alternative funding sources to continue improving interoperable and mission critical communications for voice and data systems.

The key priority for sustainable funding in Ohio is maintaining and upgrading MARCS, and identifying resources for the additional capital costs for local systems to connect to MARCS.

More information on a typical mission critical communications system life cycle, cost planning, and budgeting is available in OEC's System Life Cycle Planning Guide.²

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

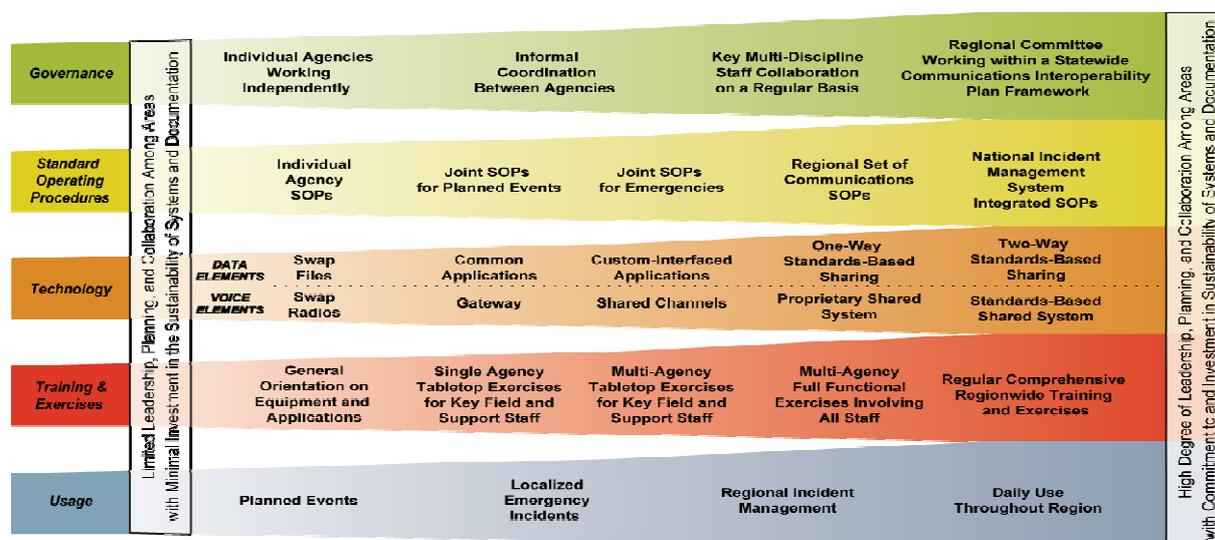


Figure 3: The Interoperability Continuum

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 mission critical communications. It is designed to assist emergency response agencies and policy makers with planning and implementing interoperability solutions for voice and data communications. 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 Ohio's efforts to address communications interoperability.
- **SOPs** – Policies, repetitive established or best 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 planned 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

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

used in Ohio and Ohio's plans to enhance interoperable and mission critical communications.

2. PURPOSE

The purpose of the Ohio SCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and mission critical communications at the state, regional, local, and tribal levels.
- Explain to leadership and elected officials the vision for interoperable and mission critical communications and demonstrate the continuing need for funding.

The development and execution of the SCIP assists Ohio 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, Ohio will develop an annual SCIP Snapshot to 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 Snapshot is available in Section 6.4.

This SCIP is owned and managed by the Ohio SIEC, with assistance from the Statewide Interoperability Coordinator (SWIC). The SIEC has the authority to and is responsible for making decisions regarding this plan. The SIEC is also responsible for ensuring this plan is implemented and maintained statewide. In April 2015, the state hosted a SCIP Update Workshop to bring together key decision makers across disciplines from state, and local agencies to update the SCIP to include ongoing public safety communications efforts, including those involving emerging technologies and lessons learned. Participants updated Ohio's statewide communications interoperability mission, goals and initiatives to account for progress in building out the statewide P25 network, and planning for the deployment of Nationwide Public Safety Broadband Network and Next-Generation 911 technology.

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.

OHIO'S INTEROPERABLE AND MISSION CRITICAL COMMUNICATIONS OVERVIEW

On April 18, 2012, Governor John Kasich signed Executive Order 2012-07K, formally creating Ohio's SIEC. The SIEC is charged with addressing concerns relating to operability and interoperability of local, regional, and statewide public safety voice and data communications systems; planning for the long-term efficient implementation and operation of interconnected public safety communications systems; and improving overall communications interoperability in Ohio.

This mission is accomplished by developing policy recommendations, coordinating statewide strategies, serving as Ohio's single point of contact for federal communications entities, and evaluating the feasibility and effectiveness of implementing specific priorities of state, regional, and local communications efforts.

The state is also divided into eight Homeland Security Planning Regions, each of which has representation on the SIEC. These regions are responsible for conducting multi-agency exercises and planning. Four of the Homeland Security Planning Regions contain current or former Urban Areas Security Initiative (UASI) areas (Cincinnati, Cleveland, Columbus, and Toledo), who also have representation on the SIEC.

Critical infrastructure such as military bases, significant highways, power plants, two nuclear plants, and agricultural industry contribute to potential threats from man-made or natural disasters. To prepare for these threats, Ohio has been actively developing public safety mission critical communications capabilities since June, 1990, when the Shadyside flood disaster highlighted the need for a statewide voice and data system to bridge communications gaps.

The review of the Shadyside incident and other multi-agency response situations resulted in the development of Ohio's Multi-Agency Radio Communications System (MARCS). MARCS is an 800 MHz radio and data network utilizing trunked technology to provide statewide operability and interoperability to subscribers within the state. In addition to state users, all sheriffs' dispatch centers, PSAPs, local and county law enforcement and fire department personnel, Emergency Operations Centers (EOCs), and many emergency medical services providers, hospitals, schools, and health departments utilize MARCS. The remaining 1337 systems located within the state are encouraged either to migrate to the new MARCS/IP platform, or to interconnect to join the statewide system-of-systems.

A list of Ohio's radio systems is referenced in Section 7, Table 9 and is available upon request.

3. VISION AND MISSION

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

Ohio Interoperable and Mission Critical Communications Vision:

The state of Ohio's Vision for interoperable mission-critical communications is to have all responders throughout Ohio operating on a standards-based, shared, system of systems, allowing seamless communications across all disciplines, ultimately offering all users a single integrated platform maximizing operability and interoperability.

Ohio Interoperable and Mission Critical Communications Mission:

The mission of the State of Ohio's Statewide Interoperability Executive Committee is to provide guidance, direction, and general oversight for Ohio's all-hazards responders, which:

- Enables them to communicate and share information day-to-day as well as during crisis situations through standard operating procedures;
- Ensures readiness through a comprehensive training and usage plan; and,
- Utilizes secure interoperable voice and data communications networks and NG-911 technology, available to all jurisdictions and disciplines.

4. STRATEGIC GOALS AND INITIATIVES

The Strategic Goals and Initiatives section describes the statewide goals and initiatives for delivering the vision for interoperable and mission critical 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 current and future direction of the Ohio governance structure for interoperable and mission critical communications. The Ohio SIEC enjoys broad participation from agencies within the eight homeland security regions and virtually all emergency communications agencies and public safety associations in the state. These members provide guidance and strategic direction in support of the statewide vision while respecting local home rule authority. As necessary, the SIEC will establish ad hoc committees and working groups to develop and implement its goals and initiatives.

To plan for emerging technologies and ensure the SIEC's continuing efficiency, the state seeks to further strengthen its governance structure by synchronizing strategies among the groups addressing NG911, NPSBN development, and maintaining LMR.

For example, the SIEC established an NPSBN Subcommittee to support broadband planning and outreach throughout the state, and added the Ohio 9-1-1 Administrator as a member of its membership. It is also working to align strategies with the Emergency Services IP Network (ESINet) Steering Committee and the SECC, which oversees alerts and warnings.

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

Table 1: Governance Goals and Initiatives

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
1.	Garner more active participation in the SIEC	1.1 Identify current participants and additional SIEC partners	SIEC Secretary	December 2015
		1.2 Determine expectations for quality of participation and frequency of attendance	SIEC	Spring 2016
		1.3 Communicate the benefits of active participation to member agencies and organizations	SWIC and staff	January 2016
2.	Align the strategies of the SIEC (including the NPSBN Subcommittee) and Emergency Services IP Network (ESINet) Steering Committee, and State Emergency Communications Committee (SECC)	2.1 Assess and monitor each group's strategies and identify common ground	SIEC	Complete
		2.2 Establish a SIEC outreach subcommittee consisting of representatives from each of the three areas.	SIEC	December 2015
		2.3 Address disparate issues	SIEC, SIEC's NPSBN Subcommittee, ESINet Steering Committee Leadership, and SECC	Ongoing: 1 ST milestone June 2014

5.2 Standard Operating Procedures (SOPs)

The SOPs section of the SCIP identifies the framework and processes for developing and managing SOPs statewide. The SIEC's SOP Subcommittee is responsible for developing and disseminating new and existing SOPs for statewide utilization. Each SOP describes topics such as the procedure to request use, the roles of the provider and participating agencies, the rules or use, incident procedures,

activation/deactivation, and problem identification and resolution. Basic guidelines are defined, and require the use of plain language as well as an Incident Command System.

The Subcommittee will continue to work towards identified gaps.

Table 2 outlines Ohio'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
3.	Continue to develop, distribute, and maintain statewide SOPs	3.1 Identify where an SOP is needed, why it is needed, and who needs the SOP	SIEC SOP Subcommittee	Ongoing: 1 st milestone March 2014
		3.2 Track SOP updates at SIEC meetings	SIEC SOP Subcommittee	October 2013 and ongoing
		3.3 Conduct an SOPs awareness campaign to identified users	SIEC SOP Subcommittee	March 2014
4.	Establish a statewide Field Operations Guide (OH-FOG)	4.1 Review and update every two years	COML Subcommittee	January 2014
		4.2 Develop the draft Ohio FOG for SIEC review	COML Subcommittee	September 2015
		4.3 Distribute the FOG	SIEC	September 2015

5.3 Technology

The Technology section of the SCIP outlines Ohio'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.

Ohio's system-of-systems approach is based on integrating or interconnecting local and regional systems across Ohio to MARCS. In May 2012, the Ohio Legislature authorized spending authority of \$90 million to the MARCS program to procure and deploy MARCS/P, a P-25 700/800 MHz trunked digital platform, including equipping a minimum of 227 towers across Ohio. Ohio has made progress with the building out of infrastructure, securing the needed equipment, and providing technical and end-user training. This upgrade has led to a set of partnership relationship opportunities referred to as "Tiers" allowing local agencies to partner with the state and tailor additional local infrastructure to fit local needs.

Ohio has also taken steps to prepare for the use of broadband and NG-911. The SIEC has established the NPSBN Subcommittee and OhioFirst.Net to ensure the successful

deployment of a statewide broadband network compatible with FirstNet's planned nationwide network.

To support NG-911 planning, the state has established a 911 Program Office within the Ohio Department of Administrative Services charged with the eventual build out of an IP-based 911 statewide network. The office is working with jurisdictions across the state to reduce the number of PSAPs to three per county or four for municipalities with a population of 175,000 or less. State officials are also working to establish minimum telecommunicator training standards, PSAP staffing levels and equipment standards in preparation for NG-911.

Table 3, shown on page 16, outlines Ohio's goals and initiatives for technology.

Table 3: Technology Goals and Initiatives

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
5.	Complete the build-out of the statewide P25 upgrade	5.1 Transition current MARCS 3.5 equipment and infrastructure to MARCS/P	MARCS	June 2016
		5.2 Complete comprehensive technical and end-user (operational) training on MARCS/P	MARCS	December 2015
		5.3 Interconnect existing metropolitan area P25 systems to the MARCS/P platform	MARCS/Lucas County (2016)/Butler County (Complete)/City of Cleveland	June 2016
6.	Support integration or interconnection of local, county, and regional radio systems to create a statewide system of systems	6.1 Identify local, county, and regional systems at end-of-life and near end-of-life	SIEC	March 2014
		6.2 Educate end-of-life system stakeholders on the benefits of the system of systems	SIEC/Regional Groups	6 mos. After SCIP approval
		6.3 Provide timely, professional technical assistance supporting integration to the system of systems	SIEC	Ongoing
		6.4 Integrate migration upgrades into statewide system of systems	SIEC	Ongoing

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
7.	Support continuity between PSAPs and Public Safety Dispatch Centers (PSDC) and the statewide mission critical voice system of systems.	7.1 Monitor and asses activities of NG-911 activity and ESINet committee for impact on mission critical systems	SIEC/MARCS/ESINet	July 2015
		7.2 Provide input to PSAP standards	SIEC/MARCS/911 Program Office	July 2015
		7.3 OEC TA Offering for NG-911 Strategic Planning	911 Program Office	September 2015
8.	Support continuity between FirstNet and PSAPs, PSDCs, and the statewide mission critical voice system of systems.	8.1 Monitor and assess activities of FirstNet for impact on PSAPs, PSDCs	NPSBN Subcommittee/911 Program Office	May 2016
		8.2 Provide input on ongoing FirstNet initiatives	NPSBN Subcommittee/911 Program Office	February 2016
9.	Support security between FirstNet, PSAPs, PSDCs, and the statewide mission critical voice system of systems.	9.1 Incorporation of the Ohio Statement of Requirements for the Ohio FirstNet Implementation Plan (OFIP)	NPSBN Subcommittee	Ongoing – July 2015
		9.2 Incorporation of NG-911 and ESINet security standards	911 Program Office	Ongoing – July 2015
		9.3 Continue to monitor and assess security standards for mission critical and voice	SIEC	May 2016

5.4 Training and Exercises

The Training and Exercises section of the SCIP explains Ohio's approach to ensure emergency responders are familiar with interoperable and mission critical communications equipment and procedures and are better prepared for responding to real-world events.

Ohio continues to leverage OEC's Technical Assistance program and partners with the Ohio Emergency Management Agency (OEMA) for training and exercise needs. The SIEC maintains a COML Subcommittee to oversee the state's COML and Communications Unit Technician (COMT) programs for training, certification, and ongoing proficiency. Ohio recognizes over 100 COMLs and approximately 50 COMTs.

In the effort to consistently and continuously move Ohio's capabilities to the right on the Interoperability Continuum, the SIEC emphasizes the importance of regular regional training and exercises.

Table 4 outlines Ohio'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
10.	Conduct regular regional exercises	10.1 Coordinate interstate communications exercises	SIEC/EMA	Ongoing – September 2015
		10.2 Leverage existing regional exercises	SIEC/EMA	Ongoing: 1 st milestone March 2014
		10.3 Participate in the State Training Exercise Planning Workshop	SIEC/EMA	December 2015
11.	Conduct regular regional training	11.1 Conduct an annual Communications Unit (COMU) training session	EMA/MARCS	Ongoing – June 2016
		11.2 Through coordination with Ohio EMA and county EMAs, integrate communications components into county-level exercises	EMA/SIEC	Ongoing – June 2016

5.5 Usage

The Usage section of the SCIP outlines efforts to ensure responders adopt and familiarize themselves with interoperable and mission critical communications technologies, systems, and operating procedures in the state. Regular usage ensures the maintenance and establishment of interoperability in case of an incident. While individual agencies regularly test for technical and operational issues, no scheduled tests are conducted to resolve issues among different organizations. Incident responses may also require interoperability across state borders, and the SIEC will continue to develop solutions to advance communications among Ohio and its neighboring states.

In response to tragedies such as the Sandy Hook School shooting, Ohio has implemented the MARCS in Schools program that installed a MARCS/IP connection in participating schools to facilitate efficient and effective communications between school authorities and first responders.

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

Table 5: Usage Goals and Initiatives

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
12.	Establish a schedule to regularly test seldom-used interoperability resources	12.1 Identify gateway resources used with border states' communications systems	MARCS/Local system owners	December 2017
		12.2 Establish and maintain an exercise schedule to test identified gateway resources	MARCS/Local system owners	December 2017
		12.3 Establish and maintain a schedule to test MARCS-In-Schools resources	MARCS/Participating Schools	December 2017

5.6 Outreach and Information Sharing

The Outreach and Information Sharing section of the SCIP outlines Ohio's approach for building a coalition of individuals and emergency response organizations statewide to support the SCIP vision and for promoting common mission critical communications initiatives.

The SIEC recognizes some areas in the state will have the opportunity to take advantage of emerging technology as other areas seek to improve operability with their existing systems. Given these challenges, the SIEC is committed to effectively sharing information regarding SIEC activities, technology updates, and cost benefits.

Table 6 outlines Ohio'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
13.	Conduct outreach and education for MARCS/IP upgrade, including capabilities and advantages	13.1 <i>*Refer to SWIC's already identified initiatives</i>	MARCS	<i>December 2015</i>
14.	Develop a SIEC website	14.1 Maintain and update SIEC website	SIEC	December 2015
		14.2 Ohio FirstNet website established	OFIP	July 2015
		14.3 911 Program Office website established	911 Program Office	January 2016
15.	Achieve outreach plans outlined in Ohio's State and Local Implementation Grant Program (SLIGP) grant application	15.1 Conduct an infrastructure assessment to determine Ohio's available assets	SPOC and staff	December 2017
		15.2 Conduct a needs assessment to determine what features and capabilities users need	SPOC and staff	December 2017
16.	Maximize SLIGP activities to best prepare Ohio to interact with FirstNet	SLIGP Activities Initiated 11/2013	SIEC; NPSBN Sub-committee	07/2016
17.	Determine TA offerings on a yearly process	17.1 Coordinate with OEC Coordinator	SIEC	December 2015

5.7 Life Cycle Funding

The Life Cycle Funding section of the SCIP outlines Ohio's plan to fund existing and future interoperable and mission critical communications priorities. The SIEC emphasizes a life cycle approach in order to efficiently utilize and sustain resources. Currently, MARCS addresses operating costs through user fees based on subscriber unit types. The fees were developed by systematically reviewing the budget and determining fee levels so the system can be self-sustaining for operations and maintenance.

By leveraging partnerships, sharing information, and recognizing on-the-ground capabilities across the state, the SIEC strives to encourage a long-range perspective in funding necessary public safety costs.

Table 7 outlines Ohio's goals and initiatives for life cycle funding.

Table 7: Life Cycle Funding Goals

Life Cycle Funding Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
18.	Create and implement comprehensive strategies to develop, sustain, and improve public safety communications technologies at the local, regional, and statewide levels	18.1 Facilitate cooperative purchasing agreements for acquisitions to obtain quantity discounts	SIEC/MARCS/911 Program Office	Ongoing: 1 st milestone December 2014
		18.2 Provide options to purchase less sophisticated radio devices that will work on interoperable systems	SIEC/MARCS	Ongoing: 1 st milestone June 2014
		18.3 Promote shared services opportunities to reduce operational and capital costs	SIEC/MARCS/911 Program Office	Ongoing: 1 st milestone June 2014
		18.4 Coordinate across state agencies regarding communications equipment procurement	SIEC/MARCS/911 Program Office	December 2015
19.	Include the life cycle process in system planning and design throughout SIEC activities	19.1 Coordinate and collaborate towards system integration	SIEC/MARCS/911 Program Office/NPSBN Subcommittee/SECC	Ongoing: 1 st milestone June 2014
		19.2 Determine the target audience	SIEC/MARCS/911 Program Office/NPSBN Subcommittee/SECC	Ongoing: 1 st milestone June 2014
		19.3 Publish best practices to and distribute as needed, including educating users on the life cycle of their equipment	SIEC/MARCS/911 Program Office/NPSBN Subcommittee/SECC	Ongoing: 1 st milestone September 2014
		19.4 Encourage systems owners to develop a plan for maintaining available funds when equipment needs to be replaced	SIEC/MARCS/911 Program Office/NPSBN Subcommittee/SECC	Ongoing: 1 st milestone September 2014
20.	Formalize the SIEC's relationship with the	20.1 Modify the grant review process to include SIEC	OEMA/SIEC	One month after SCIP approval

Life Cycle Funding Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
	State Administrative Agency (SAA)	involvement		
		20.2 Participate in the grant review process for communications-related funding	SIEC	Ongoing: 1 st milestone December 2013
		20.3 Specify communications equipment and functions for grant submission	SIEC	Ongoing: 1 st milestone December 2013
		20.4 Evaluate the feasibility and effectiveness of implementing and funding specific priorities of state, regional, and local communications efforts in coordination with national communications priorities and funding initiatives.	SIEC	December 2016
21	Identify and leverage public-private partnerships relating to the NPSBN	21.1 Identify potential private and Non-Governmental Organization (NGO) partners	NPSBN Subcommittee	[6 months following FirstNet guidance specification] June 2016
		21.2 Identify areas where public-private partnerships would be beneficial	NPSBN Subcommittee	[6 months following FirstNet guidance specification] June 2016

6. IMPLEMENTATION

6.1 Action Plan

The Action Plan section of the SCIP describes the process Ohio will use to determine a plan to execute the initiatives in the SCIP. Twenty one strategic goals and corresponding initiatives have been validated through this most recent SCIP update process.

The updated SCIP was presented to the Ohio SIEC for review and comment. Based on recommendations from voting members, the SIEC formally adopted the updated SCIP as a recognized planning tool to assist Ohio in prioritizing resources, strengthening governance, identifying future investments, addressing interoperability gaps, and informing local and state elected officials and stakeholders. The Ohio SIEC will use regularly scheduled SIEC meetings to follow up and discuss identified strategic goals and initiatives and their continuing progress.

6.2 Measures of Success

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

Table 8: SCIP Measures of Success

Goal #	Strategic Goal Supported	Current State	End State	Owner or Source
1.	Garner more active participation in the SIEC	70-80% routine participation, 1 member agency unidentified	100% identified members, 90% routine participation	SIEC Administrator
2.	Align the strategies of the SIEC (including the NPSBN Subcommittee), ESINet Steering Committee, and the SECC	Unaligned strategies – 66% accomplished	Process to maintain alignment in each sub-entity	Members of all three sub-entities' leadership
3.	Continue to develop, distribute, and maintain statewide SOPs	6 SOPs complete, 3 in draft, and 3 identified	100% identification of SOPs in demand	SIEC
4.	Establish a statewide FOG	Complete but not yet distributed, update process to be developed	100% complete and process to maintain information in place	COML Subcommittee Chair
5.	Complete build-out of the statewide P25 upgrade	Phase 1 Complete	Phase 1 & Phase 2 100% complete	MARCS Administrator
6.	Support integration or interconnection of local, county, and regional radio systems to complete a statewide system of systems	Plan established, in progress – 10% complete	88 counties interconnected	SIEC
7.	Support continuity between PSAPs and PSDCs, and the statewide mission critical voice system of systems	Limited continuity between operational entities	Continuity between entities established	SIEC/MARCS/911 Program Office

Goal #	Strategic Goal Supported	Current State	End State	Owner or Source
8.	Support continuity between FirstNet and PSAPs, PSDCs, and the statewide mission critical voice system of systems	Limited continuity between operational entities	Continuity between entities established	NPSBN Subcommittee/ 911 Program Office
9.	Support security between FirstNet, PSAPs, PSDCs, and the statewide mission critical voice system of systems	Comprehensive IT security not for systems and entities not established	IT security between systems and network established and operational	NPSBN Subcommittee/ 911 Program Office/SIEC
10.	Conduct regular regional exercises	1 exercise complete	SIEC involvement in 100% of regional exercise planning and evaluation	SIEC/EMA
11.	Conduct regular regional training	Planned for June 2016	A semi-annual exercise involving 100% of available communications assets	SIEC/EMA/MA RCS
12.	Establish a schedule to regularly test seldom-used interoperability resources	Schedule established and executed against	Published and maintained schedule	SIEC
13.	Conduct outreach and education for MARCSIP upgrade, including capabilities and advantages	Daily contact with current and potential partners	100% completion of MARCSIP upgrade	MARCS
14.	Develop a SIEC website	Complete	www.siec.ohio.gov ; anticipated 7/1/14	SIEC
15.	Achieve outreach plans outlined in Ohio's SLIGP grant application	SLIGP grant awarded 09/2013; NPSBN Subcommittee/OhioFirst.Net established	Complete contact, education/cataloguing and data capture from all 88 counties	NPSBN State Single Point of Contact
16.	Maximize SLIGP activities to best prepare Ohio to interact with FirstNet	FirstNet Consultation scheduled for June 11, 2015	Position State of Ohio to objectively decide to opt in/opt out when notified by FirstNet	SIEC/ NPSBN Sub-Committee

Goal #	Strategic Goal Supported	Current State	End State	Owner or Source
17.	Determine TA offerings on a yearly process	In development	An established process for Ohio to determine TA offerings that best meet its needs	SIEC
18.	Create and implement comprehensive strategies to develop, sustain, and improve public safety communications technologies at the local, regional, and statewide levels	MARCS Local Input Subcommittee established, other local initiatives in progress	Funding solutions acceptable to 50% of the stakeholders and reduce the cost burden by X%	SIEC/MARCS/911 Program Office
19.	Include the life cycle process in system planning and design throughout SIEC activities	Life cycle costs continue to be overlooked	Statewide long term planning, which includes realistic life cycle costs	SIEC
20.	Formalize the SIEC's relationship with the SAA	SAA participation on the SIEC; no formalized reciprocity	SAA's acceptance of the Ohio SCIP	SWIC (SIEC Administrator)
21.	Identify and leverage of public-private partnerships relating to the NPSBN	Not well-defined; SIEC integrates public and private enterprise	Partnerships established; contracts signed	NPSBN Subcommittee

6.3 Management of Success

The Management of Success section describes the iterative, repeatable method Ohio will follow to add, update and refine the measures of success.

Each SIEC meeting will include updates on goals' progress from the measure owner, with special attention to goals with upcoming completion dates or milestones. Based on these updates, the SIEC will be able to evaluate the effectiveness of the SCIP, and to refine Ohio's interoperable communication strategy as needed. These regular periodic updates will also facilitate the completion of Ohio's annual SCIP Snapshot.

6.4 Strategic Plan Review

The Strategic Plan Review section outlines the process Ohio 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 mission critical communications environment as well as to track and report progress against the defined initiatives and measures of success.

An annual SCIP review and update is essential to maintain Ohio's statewide interoperable communication strategy. The SIEC is primarily responsible for the SCIP's maintenance and revision, as coordinated by the SWIC and SIEC Administrator. The SWIC will review and distribute the updated SCIP and SCIP Snapshot to SIEC members. Then, the SWIC will review and include relevant comments and edits provided by stakeholders. Once complete, the updated documents will be sent to the SIEC for approval. Approved documents are then provided to OEC.

7. REFERENCE MATERIALS

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

Table 9: SCIP Reference Materials

Title	Description	Source/Location
SIEC Website	Provides comprehensive information and important documents from the Ohio SIEC	www.siec.ohio.gov ,
Executive Order 2012-07K	Established Ohio's SIEC as stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide committee with the goal of enhancing interoperable and emergency communications	www.siec.ohio.gov/Portals/0/EO%202012-07K.pdf
List of Acronyms – Appendix A	Self-Explanatory	Pages 29-30
Major Systems – Appendix B	Listing of all known public safety radio systems in Ohio	Available upon request

APPENDIX A: LIST OF ACRONYMS

AAR	After Action Report
AUXCOMM	Auxiliary Communications
BSSA	Buckeye States Sheriffs' Association
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit
DHS	U.S. Department of Homeland Security
EMA	Emergency Management Agency
ESINet	Emergency Services Internet Protocol Network
FCC	Federal Communications Commission
FirstNet	First Responder Network Authority
FOG	Field Operations Guide
IP	Internet Protocol
MHz	Megahertz
LMR	Land Mobile Radio
MARCS	Multi-Agency Radio Communications System
MARCS/IP	Multi-Agency Radio Communications System Internet Protocol
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NCSWIC	National Council of Statewide Interoperability Coordinators
NECP	National Emergency Communications Plan
NG911	Next Generation 911
NIMS	National Incident Management System
NPSBN	Nationwide Public Safety Broadband Network
NRF	National Response Framework
NTIA	National Telecommunications and Information Administration
OACP	Ohio Association of Chiefs of Police

OARNet	Ohio Academic Resources Network
OEC	Office of Emergency Communications
OFCA	Ohio Fire Chiefs' Association
OFIP	Ohio FirstNet Implementation Plan
P25	Project 25
PPD	Presidential Policy Directive
PSAP	Public Safety Answering Point
PSDC	Public Safety Dispatch Center
SAA	State Administrative Agency
SCIP	Statewide Communication Interoperability Plan
SECC	State Emergency Communications Committee
SIEC	Statewide Interoperability Executive Committee
SOP	Standard Operating Procedure
SWIC	Statewide Interoperability Coordinator
TA	Technical Assistance
VHF	Very High Frequency
UHF	Ultra High Frequency

APPENDIX B: MAJOR SYSTEMS –FORMAT – DATA AVAILABLE UPON REQUEST – OHIO SIEC

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

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
<p>[Choose the drop-down menu item that most accurately describes the system type (e.g. Shared Statewide System, State Agency(ies) System, Multi-County/Parish System, Multi-City System, City/County System, or Local System)] (Choose system type)</p>	<p>[Insert name of the system]</p>	<p>[Insert the name of the person(s)/organization(s) responsible for the system]</p>	<p>[Choose the appropriate descriptors for the major system] (Choose frequency Choose P25 description Choose make Choose digital/analog Choose trunked/conventional Choose encryption level)</p>	<p>[Insert the estimated number of subscribers as well as the number of agencies on the system]</p>	<p>[Check the box(es) that identifies all levels of government for which there are users on the system] (Choose level)</p>	<p>[Choose the drop-down menu item that describes the system's status. If the status is "Updated," describe the changes or updates to the system in the space below (e.g., expansion or decrease in terms of infrastructure or user base)] (Choose status)</p> <hr/> <hr/> <hr/> <hr/>
			<p>[Check the box that describes the primary usage of the system (e.g., voice, data, or voice and data)] (Choose primary usage)</p>			
			<p>[Identify the number of system sites]</p>			
<p>Example: Shared Statewide Radio System</p>						
See Next Page - 29						

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
Shared Statewide System	MARCS	MARCS Program Office	700/800MHz P25 Compliant Motorola Digital Trunked	48,000 system IDs	State Local/State	Updated System <u>The build-out is currently underway and fully funded by the Ohio Legislature</u>
			Voice and Data			
			<i>[Identify the number of system sites]</i>			