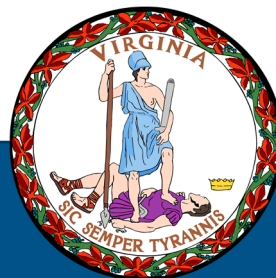


COMMONWEALTH OF VIRGINIA STATEWIDE COMMUNICATION INTEROPERABILITY PLAN (SCIP)



October 26, 2021

Developed with Support from the
Cybersecurity and Infrastructure Security Agency, Emergency Communications Division

LETTER FROM THE SECRETARY

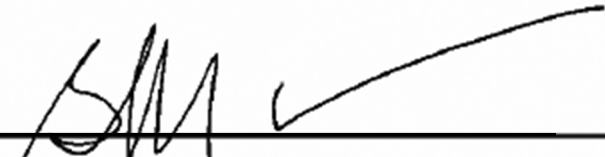
Greetings,

I am pleased to provide to you the 2021 Virginia Statewide Communication Interoperability Plan (SCIP). This SCIP represents Virginia's continued commitment and strategies for improving emergency communications interoperability and supporting the public safety practitioner community throughout the Commonwealth. In addition, this update meets the requirement of the Department of Homeland Security (DHS) grant guidelines.

Representatives from Virginia's Statewide Interoperability Executive Committee (SIEC) and a variety of emergency communications specialists collaborated to update the SCIP with actionable and measurable strategies. Beyond traditional emergency response communications, this SCIP addresses the full emergency communications ecosystem, including all functions of information exchange before, during, and after an event. Communications to and from the public, as well as between and among agencies and levels of government (including tribes) must all be considered. The goals and objectives in this SCIP focus on the five lanes of the SAFECOM Interoperability Continuum (governance, standard operating procedures, technology, training and exercises, and usage) and are designed to support the Commonwealth in planning for new technologies and navigating the ever-changing emergency communications ecosystem.

As we continue to enhance interoperability, breaking down barriers to communicating and collaborating, we must remain dedicated to maintaining our existing systems and improving our ability to communicate among disciplines and across jurisdictional boundaries. With help from the SIEC and public safety practitioners across the Commonwealth, we will work to achieve the goals set forth in this SCIP and become a nationwide model for statewide interoperability.

Sincerely,



Brian J. Moran
Secretary of Public Safety and Homeland Security,
Commonwealth of Virginia

SIEC Representation

- Secretary of Public Safety and Homeland Security
- Superintendent, Virginia State Police
- Director, Virginia Department of Fire Programs
- State Coordinator, Virginia Department of Emergency Management
- Director, Virginia Department of Health - Office of EMS
- Director, Virginia Department of Health - Office of Emergency Preparedness
- Adjutant General of the Department of Military Affairs
- Chief Information Officer, Virginia Information Technology Agency
- Commissioner, Virginia Department of Transportation
- State Forester, Department of Forestry
- SWIC (ex officio)
- Region 1 Regional Preparedness Advisory Committee – Interoperability (RPAC-I)
- Region 2 RPAC-I
- Region 3 RPAC-I
- Region 4 RPAC-I
- Region 5 RPAC-I
- Region 6 RPAC-I
- Region 7 RPAC-I
- Virginia Association of Counties
- Virginia Association of Chiefs of Police
- Association of Campus Law Enforcement Administrators
- Virginia Fire Chiefs Association
- Virginia Association of Government EMS Administrators
- Virginia NENA
- Virginia APCO
- Virginia Municipal League
- Virginia Local Government IT Executives
- Virginia Sheriff's Association
- Virginia State Firefighters Association
- Virginia Amateur Radio Emergency Services/RACES
- Virginia Professional Firefighters
- Virginia State Police Association
- Tribal governing councils
- State Council of Higher Education
- Virginia Military Advisory Council

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INTRODUCTION

The Virginia Statewide Communications Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary strategic plan to enhance interoperable and emergency communications over the next one to three years. This document contains the following components:

- Introduction – Provides the context necessary to understand what the SCIP is and how it was developed.
- Interoperable and Emergency Communications Overview – Provides an overview of Virginia's current and future emergency communications environment.
- Vision and Mission – Articulates Virginia's one to three year vision and mission for improving emergency communications operability, interoperability, and continuity of communications at all levels of government.
- Goals and Objectives – Outlines the goals and objectives aligned with the vision and mission of the SCIP as they pertain to the five lanes of the interoperability continuum.
- Implementation Plan – Describes Virginia's plan to implement, maintain, and update the SCIP and enable continued evolution of and progress toward Virginia's interoperability goals.

The Emergency Communications Ecosystem consists of many inter-related components and functions, including communications for incident response operations, notifications and alerts and warnings, requests for assistance and reporting, and public information exchange. The primary functions are depicted in the 2019 National Emergency Communications Plan (NECP)¹.

The Interoperability Continuum (Figure 1), developed by SAFECOM², serves as a framework to address challenges and barriers to interoperability, and continue improving operable/interoperable and public safety communications. It is designed to assist public safety agencies and policy makers with planning and implementing interoperability solutions for communications across multiple technologies, jurisdictions, and disciplines. More information on the Interoperability Continuum is available in the Emergency Communications Division (ECD's) Interoperability Continuum brochure.³

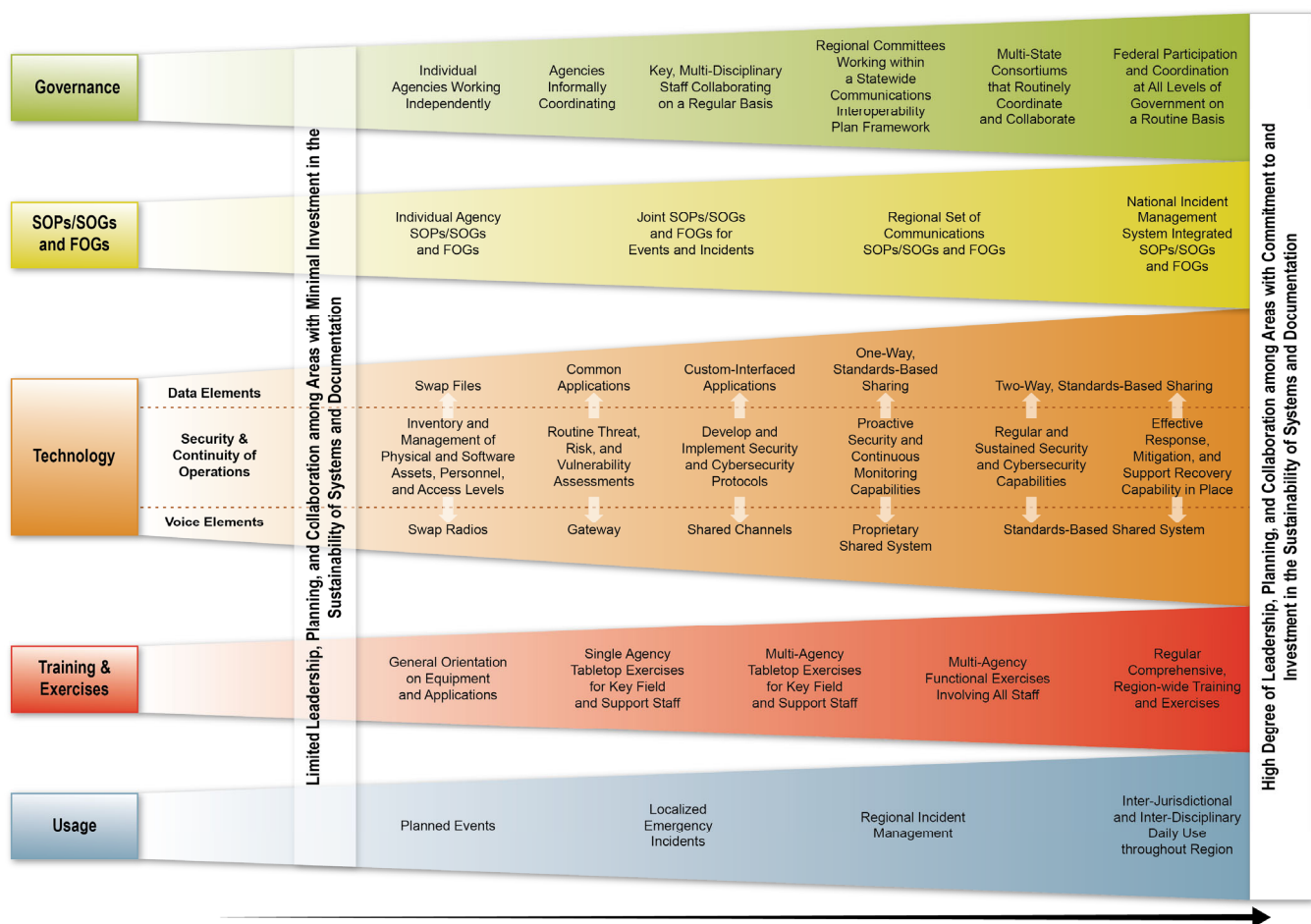


Figure 1: Interoperability Continuum

¹ The 2019 NECP is available [here](#).

² SAFECOM consists of over 60 SLTT (state, local, tribal, territorial) communications representatives and advises DHS on interoperable communications. More information is available [here](#).

³ ECD's Interoperability Continuum brochure is available [here](#).

INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

Reliable, real time communications among public safety responders, public safety agencies, and citizens is crucial to effectively carry out public safety and public service missions.

Traditional voice capabilities, such as land mobile radio (LMR) and landline 9-1-1 services have long been and continue to be critical tools for communications. However, the advancement of emerging technologies in public safety has increased the type and amount of information responders receive, the tools they communicate with, and complexity of new and interdependent systems. New technologies enhance coordination across public safety disciplines, communications functions, and levels of government to ensure emergency communications capabilities are interoperable, reliable, and secure. Virginia was the first state to opt into FirstNet and will always continue to embrace emerging technologies.

Similarly, the transition of emergency communications centers (ECCs, also known as public safety answering points, or PSAPs) to Next Generation 9-1-1 (NG9-1-1) emergency services IP network (ESINet) technology will enhance sharing of critical information in real-time through the use of multimedia - such as pictures, video, and text - among citizens, ECCs, and field responders. While the benefits of NG9-1-1 are tremendous, interfacing systems along with governance, standard operating procedures (SOPs) and training are necessary to fully realize these benefits and ensure the security of information are all key elements to successful implementation. The addition of crisis call centers, such as the Marcus Alert, creates new challenges and opportunities for interoperability with NG9-1-1.

VIRGINIA LANES TO INTEROPERABLE COMMUNICATIONS

Since September 11, 2001, the Commonwealth has worked hard to improve interoperability and break down barriers to communicating. Significant investments have been made in the Statewide Agencies Radio System (STARS), Commonwealth's Link to Interoperable Communications (COMLINC), and regional radio systems comprised of local jurisdictions. However, it is clear that one common vision and pathway is needed to ensure that the Commonwealth can meet the goals set by stakeholders across the Commonwealth as well as the framework established in the NECP.

Advancing interoperability in the Commonwealth is, and will be, a continuous, iterative process. Virginia's regional approach to improving interoperable communications, along with the specific initiatives outlined in the 2021 SCIP, will help address interoperability issues in both the short- and medium-terms.

During 2012, partner stakeholders met and organized Virginia's interoperability efforts into "lanes". The 2021 SCIP is guided by seven updated Lanes to Interoperability:

Lane #1 – Commonwealth's Link to Interoperable Communications (COMLINC)

COMLINC offers a standardized method for bridging communication barriers by interconnecting disparate land mobile radio systems with a network of IP-connected gateways, standardized computer consoles, and available mobile applications. The

COMLINC initiative has grown from its inception in 2005 and will encompass jurisdictions across the Commonwealth, Virginia's five (5) communication caches, as well as multiple state agencies, healthcare organizations, and federal partners. COMLINC, like any system, has limitations, but provides a robust, standardized system-of-systems approach to interoperable communications across the state.

Lane #2 – Communication Caches

There are five regional radio caches strategically located throughout the Commonwealth. These resources have been deployed numerous times over the years for incidents and events across the state, proving the investment to be a sound one, worthy of continued investment. In addition to technology, these teams, staffed and supported by localities, provide highly-skilled and committed personnel with broad technical, operational, and leadership abilities.

Lane #3 – Planning, SOPs, Training and Exercises

While the Commonwealth has made significant progress toward to inclusion of comprehensive planning, development of SOPs, and training, more remains to be done. Continued attention must be given to these areas in order to ensure proper use of the communications technology, teams, and planning in which the state has invested. The technologies require plans that are efficient, comprehensive, and accessible. Continuous, adaptable training is needed to improve capabilities and maximize the Commonwealth's resources. Consistent, sustainable credentialing is required.

Lane #4 – Broadband

Public Safety Broadband provides an unparalleled opportunity for the future of interoperable communications in the Commonwealth. It provides a secure path for information-sharing initiatives, NG9-1-1 integration, PSAPs, and COMLINC. Broadband expands on existing systems and offers other emerging capabilities. A cautious but intentional approach to this investment is needed. Therefore, robust requirements and innovative business practices are being developed for broadband initiatives prior to any implementation.

Lane #5 – Information Sharing

As communication and information sharing opportunities continue to expand (examples include geographic information system (GIS), data and voice communications, computer-aided dispatch (CAD), NG9-1-1, and video-streaming technologies), the Commonwealth should continue to strive for collaborative information-sharing strategy and initiatives.

Lane #6 – Shared Interoperable Channels and Common Language Protocol

Improving voice interoperability requires common access to shared channels with standardized names, including those listed in the National Interoperability Field Operations Guide⁴ (NIFOG) as well as Virginia-specific channels. All state and national interoperability

⁴ The current NIFOG can be found at <https://www.cisa.gov/safecom/field-operations-guides>

channels, including but not limited to, 700 and 800 megahertz (MHz), UCALL/UTAC, VCALL/VTAC, VTAC33-38, fire-ground, emergency medical services (EMS) and law enforcement Channels must be programmed into all radios as applicable, and must remain in analog mode during use (e.g. very high frequency (VHF) users should program VTAC channels). The Commonwealth executed an MOU in 2018 allowing statewide access to Federal interoperability channels for authorized intercommunication with federal entities. The SIEC will publish a statewide channel nomenclature and zone programming reference. The use of Common Language during all incidents is required.

Lane #7 – Regional System-of-Systems Approach

The regional systems-of-systems approach incorporates targeting investments in order to allow jurisdictions to partner together in a cooperative manner in an effort to create regional communications capabilities that maximize existing investments and expand communications footprints. This includes supporting the interconnection of existing systems through technology programs, the sharing of mutually beneficial infrastructure, and the development or expansion of cooperative governance structures.

VISION AND MISSION

Stakeholders worked to develop specific goals, initiatives, and measures of success that “operationalize” Virginia’s Seven Lanes to Interoperability. All of the work, regardless of lane, aligns with an overall vision and mission for interoperable communications in Virginia.

The following section describes Virginia’s vision and mission for improving emergency communications operability, interoperability, and continuity of communications statewide:

Vision:

Leading the nation by making information sharing a reality for everyone every day.

Mission:

- 1) Stakeholder-driven governance that delivers standard operating procedures, ideal and sustained technology, functional training, relevant exercises, and smart usage.
And
- 2) To provide a statewide strategic plan for inclusive, scalable, sustainable, and reliable systems that align with the NECP, effectively addressing the unique requirements of public safety users and supporting entities.

GOVERNANCE

Statewide Interoperability Executive Committee (SIEC)

The Virginia SIEC is established under the direction of Virginia’s Secretary of Public Safety and Homeland Security (SPSHS) to be the statewide interoperability governing body serving as the primary steering group for the Virginia SCIP⁵ and meeting the requirements in Section 2.2-221 of Virginia Code. The SIEC is made up of representatives from various state and local agencies, including:

- Locality executives
- Information technology (IT) professionals
- Operations personnel
- RPAC-I chairs
- Public safety associations

The Virginia SIEC is housed within SPSHS under the direction of the SWIC and the SIEC Chair. The SIEC meets at least quarterly. There is substantial involvement and input from the RPAC-I representatives into the efforts pushed forward by the SIEC to the Commonwealth for decision making.



Figure 2: Emergency Communications Governance in the Commonwealth of Virginia

⁵ Additional duties of the SIEC are available [here](#)

The following table outlines goals and objectives related to governance:

Governance	
Goals	Objectives
1. Refine the SIEC purpose and membership	1.1 Based on recommendations from SIEC and Governor's Office, identify challenges the SIEC will focus on (e.g., technological, financial, political, etc.)
	1.2 Identify resources required based on challenges, workload, membership, pace, etc.
	1.3 Present and finalize recommendations for SIEC purpose and membership
	1.4 Establish process to reevaluate SIEC purpose and membership
	1.5 Engage in outreach to Virginia state- and federally-recognized tribes
2. Refine the RPAC-I purpose and representation structure/process	2.1 Determine the mission of the RPAC-Is
	2.2 Recommend a structure or process for obtaining effective representation from jurisdictions and disciplines within RPAC-Is (e.g., operations and technical subcommittees to mirror the SIEC subcommittees)
	2.3 Develop strategy for RPAC-Is
	2.4 Engage in outreach to Virginia state- and federally-recognized tribes
3. Implement RPAC-I purpose and representation recommendations	3.1 RPAC-Is accept strategy to implement recommendations
	3.2 Establish periodic review process to ensure that the strategy is being followed
4. Alignment of the RPAC-I charters to the SIEC charter	4.1 Review and refresh of current charters
	4.2 Identification of common goals throughout RPAC-Is
	4.3 Continue to evolve governance structure to meet emerging technologies
5. Identify and enable regional memorandum of understanding (MOU) best practices consistent with Virginia law	5.1 Review and share existing best practices and regional MOUs
	5.2 Platform for sharing guidance

6. Ensure all communications grants align with the SCIP	6.1 Conduct review of grant applications
	6.2 Review after action reports (AARs) following the implementation of grant funded requirements
	6.3 Engage other state agencies which manage grants programs
7. Establish public safety emergency alerts system working group	7.1 Investigate the feasibility study to provide notification to public safety jurisdictions of real time public safety related events/information

STANDARD OPERATING PROCEDURES (SOPs)

Frameworks and processes for developing and managing SOPs statewide can be found in this portion of the SCIP. Virginia's SOPs have advanced steadily along the Interoperability Continuum for several years, progressing to the point of regional SOPs and National Incident Management System (NIMS) integrated SOPs. SOPs promote a uniform standard across the Commonwealth and support a robust response to incidents. COMLINC is an example of a project that is implementing an SOP for statewide standardization.

The following table outlines goals and objectives related to SOPs:

Standard Operating Procedures	
Goals	Objectives
1. Deployment and utilization of COMLINC	1.1 Documentation of functionality gaps and best practices
	1.2 Establish communications protocols between levels of government for regional and statewide events
	1.3 Review of support and maintenance
	1.4 Create practices and procedures for patching
2. Develop model policies for the communications eco-system convergence	2.1 Develop non-LMR long-term evolution (LTE) push-to-talk (PTT) resources
	2.2 Management of wireless carrier resources
	2.3 Identify applications and their interoperable capabilities
	2.4 Review AARs

3. Establish alerts and warnings standards	3.1 Standards for cross jurisdictional alerts
4. Guidelines for integration of amateur radio	4.1 Identify amateur radio resources in terms of radio systems and organization
	4.2 Develop notification methods for those resources
	4.3 Identify funding sources for acquisition and installation of amateur radio equipment in PSAPs and EOCs as requested by localities/agencies
5. Identify and enable regional SOP best practices	5.1 Review existing best practices and local and regional SOPs including Local Emergency Operations Plans (LEOP)s
	5.2 Platform for sharing guidance

TECHNOLOGY

To ensure user needs are met, this section of the SCIP outlines the Commonwealth’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.

The following table outlines goals and objectives related to technology:

Technology	
Goals	Objectives
1. Promote interoperability with private and public organizations with public safety partnerships	1.1 Develop a recommendation for interoperability with private and public organizations with public safety partnerships (educational institutions, healthcare, utilities, etc.)
2. SIEC sustainable funding for improvement and maintenance of local and regional interoperable systems	2.1 Identification through fleet mapping, programming
	2.2 Promote reprogramming and interfacing
	2.3 Investigating solutions for support of systems
	2.4 Sustain existing and emerging technologies supporting public safety interoperability
	2.5 Explore requirements for regional interoperable systems and emerging technologies
3. Explore broadband as a solution to bridge interoperable communication gaps	3.1 Explore LMR interconnection
	3.2 Expanding coverage footprints
	3.3 Address COMLINC connectivity
4. Encourage shared regional and state service projects to enhance interoperability and best use of available funds	4.1 Establishment of interoperable technology sharing
	4.2 Sustainment funding for maintenance and upgrading of Virginia Communications Cache (Strategic Technology Reserve)
	4.3 Support agencies and regions who utilize Statewide or regional communication resources.
5. Establish requirements for interoperable data and information technology	5.1 Common file and data sharing platform
	5.2 Identify functionality gaps
	5.3 Review necessary user access
	5.4 Establish best practices and template for data sharing

Technology	
Goals	Objectives
6. Continued support of COMLINC	6.1 Refresh system
	6.2 Retrain users
	6.3 Fully distribute to each entity and locality originally intended
	6.4 Sustainment of technology and behavior
7. Continued support and enhancement of STARS	7.1 Identification of coverage gaps
	7.2 Development of future state for portable radio usage
8. Foster support the evolution and standardization of data sharing technologies	8.1 Development of a working group
	8.2 To include CAD to CAD, Records Management System (RMS), connection to clearinghouse models/fusion centers
9. Support implementation of Virginia's NG9-1-1 plan	9.1 Seek and offer interconnection opportunities
	9.2 Leveraging broadband investments
	9.3 Collaborate with Virginia stakeholders to leverage broadband investments
	9.4 Promote interoperability with crisis call centers and other non-911 public safety call centers
10. Support encryption	10.1 Develop working group for best practices

TRAINING AND EXERCISES

In an effort to ensure emergency responders are prepared for responding to real-world events and remain familiar with interoperable and emergency communications equipment and procedures, a continued focus on training and exercises is needed. Virginia's approach encompasses leveraging training plans throughout the Commonwealth, in order to improve capabilities and maximize statewide resources. The training and exercise initiatives and tasks outlined below can be utilized to make interoperability a key part of local, regional and statewide exercises.

The following table outlines goals and objectives related to training and exercises:

Training and Exercises	
Goals	Objectives
1. Develop and deliver training, exercise and evaluation programs that target gaps in all available emergency communications technologies and plans	1.1 Create training focused on alternate means of communication scenarios
	1.2 Review locality and state agency Continuity of Operations (COOP) plans
	1.3 Establish AAR (and associated improvement plan) collection process
	1.4 Developing exercises that help to achieve Homeland Security Exercise and Evaluation Program (HSEEP) standards
	1.5 Identify and leverage existing training and exercise entities
2. Establish statewide training and exercise program	2.1 NIMS/ Incident Command System (ICS) integrated communications training program
	2.2 SIEC annual training and exercise review and recommendations
	2.3 Establish training and exercise annual rhythm, guided by SIEC/RPAC-Is, implemented by SWIC and stakeholders, with training in all COMU positions
	2.4 Sustained funding solution
	2.5 Establish a cadre of COMU trainers
	2.6 Establish COMLINC training program
	2.7 Establish credentialing program

USAGE

Progress in other lanes, along with application of training, skills, and planning, drives usage in the Interoperability Continuum. For example, building Virginia’s training and credentialing program will create more opportunities for practitioners within the communications community to apply skills in real-world events. Operationalizing the Statewide COMLINC Program and Virginia Communications Cache, are also examples of the Commonwealth’s usage model.

The following table outlines goals and objectives related to usage:

Usage	
Goals	Objectives
1. Increase the usage of existing systems and investments across the current footprint	1.1 Facilitate monthly usage (COMLINC, Overlay Regional Interoperability Network (ORION), etc.)
	1.2 Regions explore and identify use cases across planned events
	1.3 Address vulnerabilities
2. Ensure completion of AAR compilation for information sharing between agencies	2.1 Collect usage data
3. Establish and support statewide communications guidance for regional and statewide events	3.1 Use statewide and federal interoperability channels
	3.2 Review of the Interoperability Field Operations Guide (IFOG)
	3.3 Utilize plain language
	3.4 Establish Project 25 (P25) identification plan
4. Promote and support NIMS/ICS configurations	4.1 Inform command staff of communications limitations
	4.2 Develop an Information Technology Service Unit Leader (ITSL) core
	4.3 Use in planned and unplanned events
	4.4 Explore alternative NIMS/ICS configurations
	4.5 Continue outreach and training
5. Promoting and enhancing the use of the Virginia IFOG as a strategic resource	5.1 Explore necessary data points for emergency communications
	5.2 Update and solidify IFOG content

	5.3 Establish availability to public safety
	5.4 Sustainment of 24-hour point of contact listing or portal

OUTREACH AND INFORMATION SHARING

Outreach and information sharing strategies are fundamental to building a statewide coalition supporting the SCIP and promoting common emergency communications initiatives. Outreach efforts bring interoperability information to Virginia’s public safety community, elected officials, and stakeholders such as private-sector and non-profit partners.

The following table outlines goals and objectives related to outreach and information sharing:

Outreach and Information Sharing	
Goals	Objectives
1. Develop an outreach and education plan to support education on initiatives, resources, and technologies	1.1 Define requirements, needs, and topics for outreach and education
	1.2 Develop outreach and education plans, including identifying existing channels that can be leveraged for engagement
	1.3 Identify funding for executing plans
	1.4 Develop messaging according to plans (e.g., RPAC-I, General Counsel, Governor’s Office, system of systems, levels of governments)

LIFECYCLE FUNDING

Funding for equipment and system procurement and sustainment remain challenging in Virginia. The SWIC will continue to work with VDEM, the State Administering Agency (SAA), and other partners to support grant and sustainment funding for interoperability projects. These grants will help support local planning projects and the governance structures that bind them, equipment purchases and upgrades, training and exercises, as well as the communications caches. Collaboration on regional projects can maximize funding efficiency, but consideration must be given to timelines and the tension between the desire to collaborate and readiness to execute.

A cautious and prudent approach to the use of public money is critical. With the development of the state interoperability roadmap and the Seven Lanes to Interoperability, coordinated funding requests will ensure a strong return on the Commonwealth’s interoperability investments.

The following table outlines goals and objectives related to lifecycle funding:

Lifecycle Funding	
Goals	Objectives
1. Identify the problem, issue, need, and recommendation for sustainable funding of interoperable and emergency communications priorities	1.1 Develop a series of decision briefs that incorporate problem analyses associate with lifecycle funding and periodicity
	1.2 Analyze funding requirements and funding justifications
	1.3 Establish an understanding of revenue generating models for potential consideration
	1.4 Identify and execute on low or no cost solutions

IMPLEMENTATION PLAN

The SWIC serves as the central point of coordination for the SCIP in coordination with the SIEC. The SCIP goals and objectives will be added as formal agenda items and reviewed during regular SIEC meetings. Additionally, the following table will be updated on a biennial basis with the results of that year's progress. ECD has a catalog of technical assistance service offerings available to assist in implementation of the SCIP. Requests for assistance are coordinated through the SWIC.

Goals	Objectives	Owners	Completion Date
1. Refine the SIEC purpose and membership	1.1 Based on recommendations from SIEC and Governor's Office, identify challenges the SIEC will focus on (e.g., technological, financial, political, etc.)	SIEC, SWIC	Annually
	1.2 Identify resources required based on challenges, workload, membership, pace, etc.		
	1.3 Present and finalize recommendations for SIEC purpose and membership		
	1.4 Establish process to reevaluate SIEC purpose and membership		
2. Refine the RPAC-I purpose and representation structure/process	2.1 Determine the mission of the RPAC-Is	SIEC	Annually
	2.2 Recommend a structure or process for obtaining effective representation from jurisdictions and disciplines within RPAC-Is (e.g., operations and technical subcommittees to mirror the SIEC subcommittees)		
	2.3 Develop strategy for RPAC-Is		
3. Implement RPAC-I purpose and representation recommendations	3.1 RPAC-Is accept strategy to implement recommendations	SIEC/RPAC-Is	Ongoing, with annual review and report
	3.2 Establish periodic review process to ensure that the strategy is being followed		
4. Alignment of the RPAC-I charters to the SIEC charter	4.1 Review and refresh of current charters	RPAC-I Chairs, SIEC, SWIC	2QCY22
	4.2 Identification of common goals throughout RPAC-Is		

	4.3 Continue to evolve governance structure to meet emerging technologies		
5. Identify and enable regional memorandum of understanding (MOU) best practices consistent with Virginia law	5.1 Review and share existing best practices and regional MOUs	SWIC	Annually
	5.2 Platform for sharing guidance		
6. Ensure all communications grants align with the SCIP	6.1 Conduct review of grant applications	SIEC	Ongoing, with annual review and report
	6.2 Review after action reports (AARs) following the implementation of grant funded requirements		
	6.3 Engage other state agencies which manage grants programs		
7. Establish public safety emergency alerts system working group	7.1 Investigate the feasibility to provide notification to public safety jurisdictions of real-time public safety related events/information	SIEC/SWIC	4QCY21
8. Deployment and utilization of COMLINC	8.1 Documentation of functionality gaps and best practices	VSP, SIEC, SPSHS, SWIC	CY21-CY22
	8.2 Establish communications protocols between levels of government for regional and statewide events		
	8.3 Review of support and maintenance		
	8.4 Create practices and procedures for patching		
9. Develop model policies for the communications ecosystem convergence	9.1 Develop non-LMR long-term evolution (LTE) push-to-talk (PTT) resources	SIEC	Annually
	9.2 Management of wireless carrier resources		
	9.3 Identify applications and their interoperable capabilities		
	9.4 Review AARs		
10. Establish alerts and warnings standards	10.1 Standards for cross jurisdictional alerts	VDEM	April 2022

11. Guidelines for integration of amateur radio	11.1 Identify amateur radio resources in terms of radio systems and organization	Localities, SIEC, SWIC, Virginia Section of ARRL, VDEM	CY21
	11.2 Develop notification methods for those resources		
12. Identify and enable regional SOP best practices	12.1 Review existing best practices and local and regional SOPs including Local Emergency Operations Plans (LEOP)s	SIEC	CY22
	12.2 Platform for sharing guidance		
13. Promote interoperability with private and public organizations with public safety partnerships	13.1 Develop a recommendation for interoperability with private and public organizations with public safety partnerships (educational institutions, healthcare, utilities, etc.)	SIEC	Ongoing, with annual review and report
14. SIEC sustainable funding for improvement and maintenance of local and regional interoperable systems	14.1 Identification through fleet mapping, programming	SIEC, SWIC	Ongoing, with annual review and report
	14.2 Promote reprogramming and interfacing		
	14.3 Investigating solutions for support of systems		
	14.4 Sustain existing and emerging technologies supporting public safety interoperability		
	14.5 Explore requirements for regional interoperable systems and emerging technologies		
	14.6 Support, maintenance, and sustainment of Statewide Radio ID System		
15. Explore broadband as a solution to bridge interoperable communication gaps	15.1 Explore LMR interconnection	SIEC, SWIC	Ongoing, with annual review and report
	15.2 Expand coverage footprints		
	15.3 Address COMLINC connectivity		
16. Encourage shared regional and state service projects to enhance interoperability and best use of available funds	16.1 Establishment of interoperable technology sharing	Localities, RPAC-Is SPSHS/VDEM	Ongoing, with annual review and report
	16.2 Sustainment funding for maintenance and upgrading of Virginia Communications Cache (Strategic Technology Reserve)		
	16.3 Support agencies and regions who utilize statewide or regional communication resources		

17. Establish requirements for interoperable data and information technology	17.1 Common file and data sharing platform	VITA, VDEM, SWIC, SIEC	Ongoing, with annual review and report
	17.2 Identify functionality gaps		
	17.3 Review necessary user access		
	17.4 Establish best practices and template for data sharing		
18. Continued support of COMLINC	18.1 Refresh system	VSP, SIEC, SWIC	December 2022
	18.2 Retrain users		
	18.3 Fully distribute to each entity and locality originally intended		
	18.4 Sustainment of technology and behavior		
19. Continued support and enhancement of STARS	19.1 Identification of coverage gaps	VSP	December 2024; ongoing
	19.2 Development of future state for portable radio usage		
20. Foster support the evolution and standardization of data sharing technologies	20.1 Development of a working group	SIEC, RPAC-IS	Ongoing, with annual review and report
	20.2 To include CAD to CAD, RMS, connection to clearinghouse models/fusion centers		
21. Support implementation of Virginia's NG911 plan	21.1 Seek and offer interconnection opportunities	SIEC, VDEM NGS	Ongoing, with annual review and report
	21.2 Leveraging broadband investments		
	21.3 Collaborate with Virginia stakeholders to leverage broadband investments		
	21.4 Promote interoperability with crisis call centers and other non-911 public safety call centers		
22. Support encryption	22.1 Develop working group for best practices	SIEC	Ongoing, with annual review and report
	22.2 Investigate encryption key assignment by locality		
23. Develop and deliver training, exercise and evaluation programs that target gaps in all available	23.1 Create training focused on alternate means of communication scenarios	SWIC, SIEC, VDEM, Localities, State Training and Exercise Entities	Ongoing, with annual review and report
	23.2 Review locality and state agency Continuity of Operations (COOP) plans		

emergency communications technologies and plans	23.3 Establish AAR (and associated improvement plan) collection process		
	23.4 Developing exercises that help to achieve Homeland Security Exercise and Evaluation Program (HSEEP) standards		
	23.5 Identify and leverage existing training and exercise entities		
24. Establish statewide training and exercise program	24.1 NIMS/ Incident Command System (ICS) integrated communications training program	SWIC, VDEM, SIEC	Ongoing, with annual review and report
	24.2 SIEC annual training and exercise review and recommendations		
	24.3 Establish training and exercise annual rhythm, guided by SIEC/RPAC-Is, implemented by SWIC and stakeholders, with training in all COMU positions		
	24.4 Sustained funding solution		
	24.5 Establish a cadre of Virginia COMU trainers		
	24.6 Establish COMLINC training program		
	24.7 Establish a credentialing program		
25. Increase the usage of existing systems and investments across the current footprint	25.1 Facilitate monthly usage (COMLINC, etc.)	COMLINC system owners	Ongoing, with annual review and report
	25.2 Regions explore and identify use cases across planned events		
	25.3 Address vulnerabilities		
26. Ensure completion of AAR compilation for information	26.1 Collect usage data	SWIC and stakeholders	Ongoing, with annual review and report

sharing between agencies			
27. Establish and support statewide communications guidance for regional and statewide events	27.1 Use statewide and federal interoperability channels	SWIC, SIEC	Ongoing, with annual review and report
	27.2 Review of the Interoperability Field Operations Guide (IFOG)		
	27.3 Utilize plain language		
	27.4 Establish Project 25 (P25) identification plan		
28. Promote and support NIMS/ICS configurations	28.1 Inform command staff of communications limitations	SWIC, SIEC, RPAC-I Chairs, VDEM	Ongoing, with annual review and report
	28.2 Develop an Information Technology Service Unit Leader (ITSL) core		
	28.3 Use in planned and unplanned events		
	28.4 Explore alternative NIMS/ICS configurations		
	28.5 Continue outreach and training		
29. Promoting and enhancing the use of the Virginia IFOG as a strategic resource	29.1 Explore necessary data points for emergency communications	SWIC, SIEC	Ongoing, with annual review and report
	29.2 Update and solidify IFOG content		
	29.3 Establish availability to public safety		
	29.4 Sustainment of 24-hour point of contact listing or portal		
30. Develop an outreach and education plan to support education on initiatives, resources, and technologies	30.1 Define requirements, needs, and topics for outreach and education	SIEC	Ongoing, with annual review and report
	30.2 Develop outreach and education plans, including identifying existing channels that can be leveraged for engagement		
	30.3 Identify funding for executing plans		
	30.4 Develop messaging according to plans (e.g., RPAC-I, General Counsel, Governor's		

	Office, system of systems, levels of governments)		
31. Identify the problem, issue, need, and recommendation for sustainable funding of interoperable and emergency communications priorities	31.1 Develop a series of decision briefs that incorporate problem analyses associate with lifecycle funding and periodicity	SIEC	Ongoing, with annual review and report
	31.2 Analyze funding requirements and funding justifications		
	31.3 Establish an understanding of revenue generating models for potential consideration		
	31.4 Identify and execute on low or no cost solutions		

APPENDIX A: LIST OF ACRONYMS

AAR	After-Action Report
CAD	Computer Aided Dispatch
CISA	Cybersecurity and Infrastructure Security Agency
COML	Communications Unit Leader
COMLINC	Commonwealth Link to Interoperable Communications
COMT	Communications Unit Technician
COOP	Continuity of Operations
DHS	United States Department of Homeland Security
EAS	Emergency Alert System
ECD	Emergency Communications Division
ECC	Emergency Communications Center
EMS	Emergency Medical Services
FirstNet	First Responder Network Authority
GIS	Geographic Information System
HSEEP	Homeland Security Exercise and Evaluation Program
ICS	Incident Command System
IFOG	Interoperability Field Operations Guide
IoT	Internet of Things
IP	Internet Protocol
ITSL	Information Technology Service Unit Leader
LMR	Land Mobile Radio
LTE	Long-Term Evolution
MHz	Megahertz
MOU	Memorandum of understanding
NCR	National Capital Region
NECP	National Emergency Communications Plan
NG9-1-1	Next Generation 9-1-1
NIMS	National Incident Management System
NPSBN	National Public Safety Broadband Network
ORION	Overlay Regional Interoperability Network
P25	APCO Project 25
PDC	Planning District Commission
PSAP	Public Safety Answering Point
RCR	Richmond Capital Region
RMS	Records Management System
RPAC-I	Regional Preparedness Advisory Committees for Interoperability
SAA	State Administering Agency
SCIP	Statewide Communication Interoperability Plan
SIEC	State Interoperability Executive Committee
SIRS	Statewide Interdepartmental Radio System
SOPs	Standard Operating Procedures
SPSHS	Secretary of Public Safety and Homeland Security
STARS	Statewide Agencies Radio System
SWIC	Statewide Interoperability Coordinator
TICFOG	Tactical Interoperable Field Operations Guide
VDEM	Virginia Department of Emergency Management
VDH	Virginia Department of Health
VDOT	Virginia Department of Transportation
VHF	Very High Frequency
VITA	Virginia Information Technologies Agency
VML	Virginia Municipal League

VSP

Virginia State Police