2013

VIRGINIA

STATEWIDE COMMUNICATIONS

INTEROPERABILITY PLAN

(SCIP)

Office of the Governor

COMMONWEALTH of VIRGINIA

Terrie L. Suit
Secretary of Veterans Affairs
and Homeland Security

March 5, 2013

Greetings,

I am pleased to present to you the 2013 Commonwealth of Virginia Statewide Communications Interoperability Plan (SCIP). This is the ninth version of the SCIP, it represents the Commonwealth's continued commitment to the public safety practitioner community. The 2013 SCIP marks the next step towards achieving the 2015 Vision for interoperable communications at the local, regional, state, and federal level.

The Office of Veterans Affairs and Homeland Security (OVAHS) and the State Interoperability Executive Committee (SIEC) collaborated to refine and enhance the SCIP, in compliance with Virginia Code Section 2.2-232. This section of Virginia's code requires the annual update and implementation of the SCIP. As a result of the updates for 2013, you will find both new and ongoing interoperability initiatives.

In 2012, the SIEC and additional local, regional, and state practitioners, representing the public safety community, drove the planning process, and played an integral role in the implementation of the initiatives contained in the 2013 SCIP. In 2013, we will continue to work with public safety organizations and state agencies to increase awareness and address interoperability challenges while implementing a clear pathway to achieve interoperable communications by 2015.

As we move towards our goal of interoperability, we must remain dedicated and continue to improve our ability to communicate among disciplines and across jurisdictional boundaries. With help from public safety practitioners statewide, we will work to achieve our 2015 vision and continue to be a model for statewide interoperability.

Sincerely,

Terrie Suit
Secretary of Veterans Affairs and Homeland Security

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1. INTRODUCTION

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

Virginia's SCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. We have taken significant steps towards enhancing interoperable and emergency communications, however, more remains to be done in order to achieve the Commonwealth's vision. It is also important to note that this work is part of a continuous cycle, as we will always need to adapt to evolving technologies, operational tactics, and changes in key individuals. In the next three to five years, we will encounter challenges relating to operability, interoperability, geography, aging equipment/systems, emerging technologies, changing project champions, and sustainable funding.

Achieving sustainable funding in the current fiscal climate is a priority, as State and Federal grant funding diminishes. We must work to identify alternative funding sources to continue improving emergency communications operability and interoperability for both voice and data systems. Key priorities for sustainable funding are:

- To ensure the Statewide Interoperability Coordinator (SWIC) has the resources necessary to continue to be an inter- and intra-State leader for interoperable and emergency communications.

- To ensure full life cycle support of interoperable and emergency communications systems, while continuing upgrades with emerging technologies.

- To maintain current interoperable and emergency communications governance structures.

More information on a typical emergency communications system life cycle, cost planning, and budgeting is available in the U.S. Department of Homeland Security (DHS) Office of Emergency Communications (OEC) System Life Cycle Planning Guide[1].

1.1 The Statewide Planning Life Cycle

Successful planning for statewide interoperable communications initiatives can only be achieved through a stakeholder driven, multi-phased approach, incorporating planning, implementation, and assessment. The statewide planning lifecycle model, illustrated in Figure 1, depicts the phases Virginia utilizes for the successful implementation of our SCIP:

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[1] OEC's System Life Cycle Planning Guide is available here:
http://publicsafetytools.info/oec_guidance/docs/OEC_System_Life_Cycle_Planning_Guide_Final.pdf

- Phase One- Execute Workshop: An annual SCIP workshop is conducted at the beginning of each calendar year, in order to gain input from Virginia's stakeholders on updates to the initiatives and programs outlined in the SCIP.

- Phase Two- Strategic Planning: Utilizing stakeholder guidance, compiled at the annual workshop, updates to communications initiatives and programs are incorporated into the SCIP. Once the revisions have been added, the plan is reviewed by the Statewide Interoperability Executive Committee (SIEC) for additional recommendations.

- Phase Three- Monitor Success and Challenges: In order to assess progress on our strategic goals and initiatives, we utilize a tracking metric, in an effort to identify successful strategies and identify challenges.

- Phase Four- Review and Report Progress: At the end of each calendar year, Virginia completes two reports, one to the General Assembly and one to the Department of Homeland Security (DHS), Office of Emergency Communications (OEC), which we use at the annual workshop to assist in determine updates to the following year's SCIP.
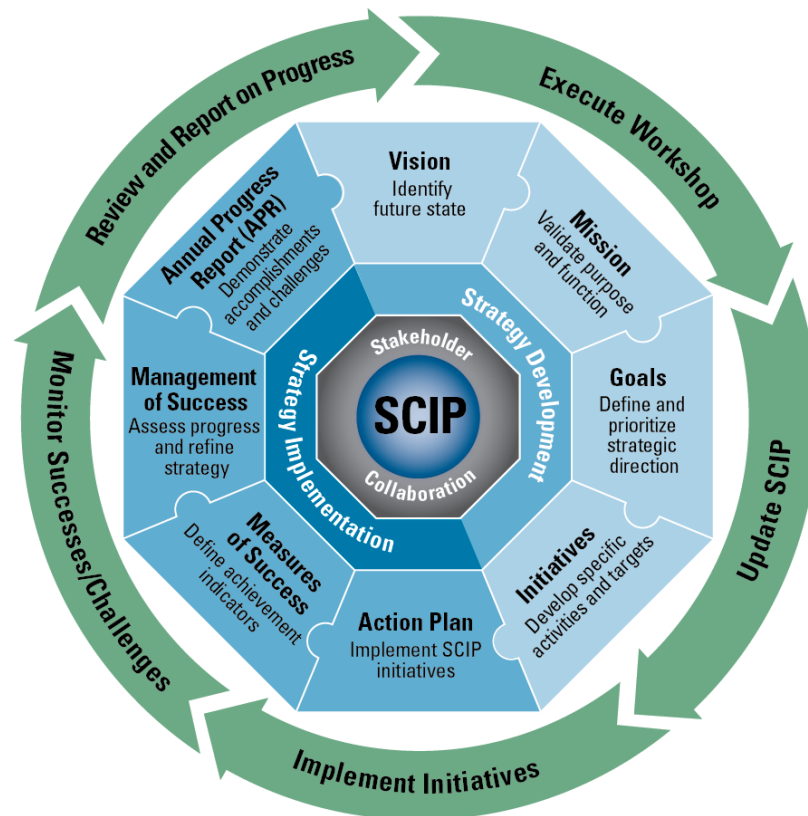

Figure 1: Statewide Planning Life Cycle

2.   VISION STATEMENT AND MISSION STATEMENT

The following are Virginia's Vision and Mission statements, as defined by the Statewide Interoperability Executive Committee (SIEC), for improving emergency communications operability, interoperability, and continuity of communications statewide.

Vision Statement: By 2015, agencies and their representatives at the local, regional, State, and Federal levels will be able to communicate using compatible systems, in real time, across disciplines and jurisdictions, to respond more effectively during day-to-day operations and major emergency situations.

Mission Statement: Provide strategic direction and a unified multi-disciplinary, multi-jurisdictional voice for all hazards communications response that includes governance and outreach; comprehensive communications planning in exercises; integration of existing and emerging technologies with sustainable funding solutions; inclusive and well-managed interoperability infrastructure; and partnerships with government, public and private sector organizations to ensure interoperability among public safety communications personnel throughout the Commonwealth of Virginia by 2015.

3.   VIRGINIA'S INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

The Commonwealth is committed to continuing to work with partners, at the local, regional, state, and Federal levels, as we move toward the 2015 interoperability goal. Among Virginia's partners is SAFECOM, a Federal program managed by DHS. SAFECOM works with Federal partners to provide research, development, testing and evaluation, guidance, tools, and templates on communications-related issues to local, tribal, State, and Federal public safety agencies. Through this partnership, the Commonwealth adopted the SAFECOM practitioner-driven approach to provide a forum for emergency responders to drive statewide planning.

Virginia's Statewide Interoperability Governance structure ensures that the SCIP is stakeholder driven. As reflected in Figure 2, there are seven Regional Preparedness Advisory Committees-Interoperability (RPAC-Is), which serve as the basis from which all ideas, proposals, and guidance flow. The Statewide Interoperability Executive Committee Coordinating Committee (SIEC-CC) receives input from all stakeholders via the SIEC Subcommittees, which include; Policy, Operations, Grants, and the Commonwealth's Link to Interoperable Communications (COMLINC) Advisory Committee.
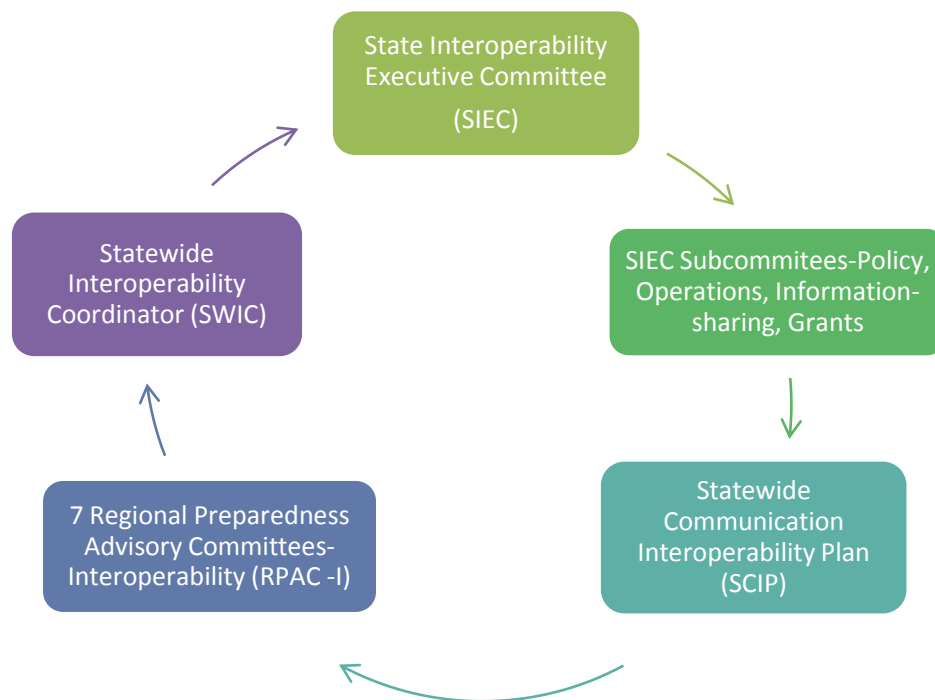
Figure 2: Commonwealth of Virginia Interoperability Communications Governance Structure

4. PURPOSE

The purpose of Virginia's SCIP is to:

- Provide strategic direction and alignment for those responsible for interoperable communications at the State, regional, and local levels.

- Explain to leadership and elected officials the vision for interoperability and emergency communications in the Commonwealth in order to demonstrate the need for funding.

- Provide a roadmap to guide the Commonwealth towards reaching the statewide interoperability strategic goals by 2015. The roadmap follows the Interoperability Continuum and was developed with input from stakeholders across the Commonwealth.

- Describe, for Virginia's General Assembly, the state of emergency communications in the Commonwealth.

- Comply with applicable Virginia code sections, specifically:

  § 2.2-2733. *"By 2015, agencies and their representatives at the local, regional, State, and Federal levels will be able to communicate using compatible systems, in real time, across disciplines and jurisdictions, to respond more effectively during day-to-day operations and major emergency situations."*

§ 2.2-232. "All state agencies and localities shall achieve consistency with and support the goals of the statewide interoperability strategic plan by July 1, 2015, in order to remain eligible to receive state or federal funds for communications programs and systems."

§2.2-232. "Designate a Commonwealth Interoperability Coordinator to review all communications-related grant requests from state agencies and localities to ensure federal grants are used to enhance interoperability and conduct the annual review and update of the statewide interoperability strategic plan as required in."

4.1   Compliance

Compliance with the SCIP is mandatory in order to qualify for and receive State and Federal grant funding. The Grants Working Group (GWG), SIEC, SWIC, and the Senior Leadership Team are the designated authorities for reviewing the Commonwealth's interoperable communications grant funding applications. The SIEC Grants Working Group makes funding recommendations to the SIEC, which then passes its recommendations on to the SWIC. The SWIC also prepares recommendations for the Senior Leadership Team made up of members from both the Virginia Department of Emergency Management (VDEM) and Office of Veterans Affairs and Homeland Security (OVAHS). The review process, by each entity, assists in determining grant eligibility compliance and alignment with the SCIP.

To comply:

1. Grant requests must support and/or align with the 2013 SCIP.[2]

2. Applicants must clearly define how the project improves interoperable communications on a multi-discipline and multi-jurisdictional basis and how the project addresses the Seven Lanes of Interoperability.

3. Applicants must clearly define how the project promotes regional cooperation and addresses mutual aid.

4. Applicants must be National Incident Management System (NIMS) certified and compliant.

5. Equipment purchased must be on the Department of Homeland Security's Grants and Training Authorized Equipment List (AEL), or an exception letter must be on file and approved.

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[2] http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+2.2-232

6. Equipment purchases will be monitored by the SWIC, SIEC, and SIEC Subcommittees in order to support a centralized oversight approach and ensure the solution goals identified in the 2013 SCIP are met and interoperability is achieved or maintained.

7. Subscriber radios purchased must be programmed with mutual aid and the national interoperability channels within that radio's frequency band. Specifically, all State and National interoperability channels, including but not limited to, 700 or 800 Megahertz (MHz), UCALL/UTAC, VCALL/VTAC, Fireground, Emergency Medical Services, and Law Enforcement Channels must be programmed into all radios and must remain in analog mode during use.

8. When procuring equipment for communication system development and expansion, a standards-based approach will be used to begin migration to multi-jurisdictional and multi-disciplinary interoperability. Specifically, all new voice systems will be compatible with applicable Project 25 (P25) standards[4] and the Commonwealth's Link to Interoperable Communications (COMLINC) system.

9. Jurisdictions operating below 512 MHz and not utilizing trunking must retain or have the capability to operate at least one primary Base and/or Repeater in the analog mode within their system. NOTE—Logic Trunked Radio (LTR) trunking does not qualify as trunking.

The development and execution of the SCIP assists Virginia with addressing the results of the National Emergency Communications Plan (NECP) Goals and the Federal government with fulfilling the Presidential Policy Directive (PPD) National Preparedness Goal for Operational Communications[3]. In addition to the SCIP, an Annual Progress Report is submitted to OEC and the General Assembly, in order to highlight recent accomplishments and demonstrate progress toward achieving the goals and initiatives identified in the SCIP. More information on the SCIP Annual Progress Report is available in section 6.4.

5. THE INTEROPERABILITY CONTINUUM

The Interoperability Continuum developed in coordination with SAFECOM, shown in Figure 3, serves as a framework to address current technological and fiscal challenges and serves as guide for the Commonwealth, regions, and localities as we continue to improve emergency communications operability and interoperability. The Interoperability Continuum is designed to

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[4] Backward compatibility to Narrowband analog FM or P25 Phase I; or P25 Phase II spectrum efficiency will be essential benchmarks. Pertinent areas of ANSI/TIA 102 standards also will be considered.

[3] 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 both 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.

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 processes that support interoperability efforts to improve communication, coordination, and cooperation across disciplines and jurisdictions. Governance is the critical foundation of all of Virginia's efforts to address communications interoperability.

- SOPs – Policies, repetitive practices, and procedures that guide emergency responder interactions and the use of interoperable communications solutions.

- Technology – Systems and equipment that enable emergency responders to share voice and data information efficiently, reliably, and securely.

- Training and Exercises – Scenario-based practices used to enhance communications interoperability and familiarize the public safety community with equipment and procedures.

- Usage – Familiarity with interoperable communications technologies, systems, and operating procedures used by first responders to enhance interoperability.
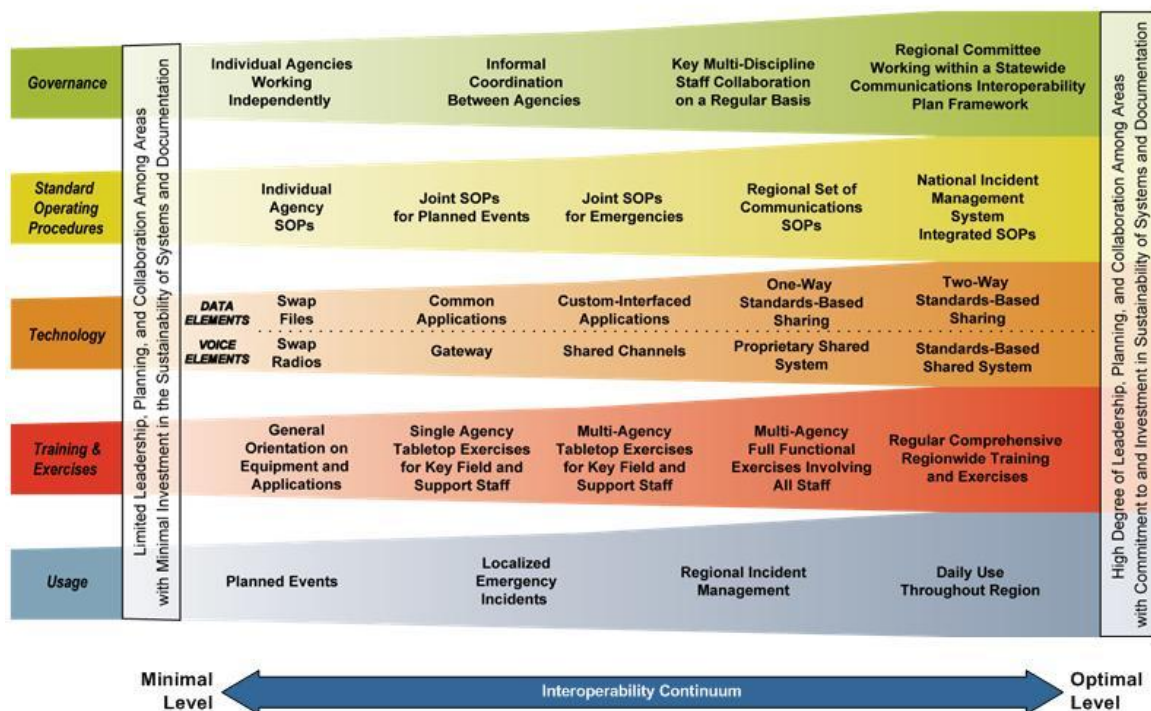

Figure 3: The Interoperability Continuum

The Virginia Office of Interoperability is making use of the SAFECOM Interoperability Continuum to incorporate specific stakeholder-driven objectives and initiatives that align the 2013 SCIP with the Continuum's lanes for interoperability, thereby ensuring a high degree of leadership and collaboration.

More information on the Interoperability Continuum is available in OEC's Interoperability Continuum brochure.[4]

6. STRATEGIC GOALS

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

- Governance

  o Refine the Statewide Interoperability Executive Committee (SIEC) purpose and membership.

  o Refine the Regional Preparedness Advisory Committees for Interoperability (RPAC-I) purpose and representation structure/ process.

  o Implement RPAC-I purpose and representation recommendations.

- Standard Operating Procedures (SOPs)

  o Implement a standard SOP template statewide through the Local Emergency Operations Plan (LEOP) process.

- Technology

  o Develop a roadmap/ timeline of the current and planned voice and data communications landscape.

  o Conduct vulnerability assessments of critical communications infrastructure.

- Training and Exercises

  o Upfront incorporation of comprehensive communications planning into exercises.

- Usage

  o Document the systematic use of equipment by emergency responders statewide.

- Outreach and Information Sharing

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[4] OEC's Interoperability Continuum is available here:
http://www.safecomprogram.gov/oecguidancedocuments/continuum/Default.aspx

  o Develop an outreach and education plan to support education on initiatives, resources, and technologies.

- Life Cycle Funding

  o Identify the problem, issue, need, and recommendation for sustainable funding of interoperable and emergency communications priorities.

7. SEVEN LANES TO INTEROPERABLE COMMUNICATIONS

Since 9/11, the Commonwealth has worked hard to increase interoperability capabilities. Significant investments have been made in new communication systems and equipment upgrades. However, it is clear that one common vision and pathway is needed to ensure that the Commonwealth can meet the mandated 2015 interoperable communications vision.

Advancing interoperability in the Commonwealth is, and will be, an ongoing process. The Commonwealth's regional approach to improving interoperable communications, along with the specific initiatives outlined in the 2013 SCIP, will help address interoperability issues both in the short- and long-terms.

During 2012, partner stakeholders met to analyze the "Seven Lanes to Interoperability", that were developed in 2011, in order to update the approaches for meeting the 2015 interoperability mandate. The partner stakeholders agreed to remove the Statewide Agencies Radio System (STARS) lane and instead focus on building out regional system-of-systems to improve statewide interoperability. The 2013 SCIP is guided by seven updated Lanes to Interoperability:

Lane # 1 – COMLINC
- COMLINC offers the most cost-effective method for bridging communication barriers by eliminating the incompatibility of existing radio systems through the use of the Statewide Agencies Radio System (STARS) network to interface between local and state agencies and jurisdictions. The COMLINC initiative has grown from its inception in 2005 and now encompasses 113 jurisdictions across the Commonwealth and Virginia's five (5) communication caches The Commonwealth recognizes that COMLINC has limitations but supports the system as the path 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.

Lane # 3 – Planning, SOPs, Training and Exercises
- While the Commonwealth has taken significant strides toward to inclusion of comprehensive planning, development of Standard Operating Procedures (SOPS), and training, more remains to be done. Continued attention needs to be given to these areas in order to ensure proper use of the communications technology in which the state has

invested. The technologies require plans that are efficient, comprehensive, and accessible. Training is needed to improve capabilities and maximize the Commonwealth's resources.

Lane # 4 – Broadband
- Public Safety Broadband provides an unparalleled opportunity for the future of interoperable communications in the Commonwealth. It may result in a secure path for COMLINC, information-sharing initiatives, Public Safety Answering Points (PSAP), and Next Generation 911 (NG911) integration. Broadband will not replace existing Land Mobile Radio (LMR) systems in the foreseeable future, as the cost to implement broadband is extremely high. A cautious approach to this investment is needed. Therefore, robust requirements and innovative business practices are being developed for Broadband initiatives prior to any implementation. In order to maintain pace with the fast moving Broadband legislation, representatives from the SIEC have been brought together to serve as the interim Broadband Governance Committee, until such time as the Governor identifies a permanent governance structure.

Lane # 5 – Information Sharing
- As communication and information sharing opportunities continue to expand (examples of which include GIS, data and voice communications, CAD, NG911, and video-streaming technologies), the Commonwealth has centered information-sharing initiatives on the implementation of a statewide strategy, found in Appendix B, ensuring coordination across all information management plans and projects. In 2013, information sharing governance initiatives have been transferred to the Homeland Security Working Group, which will work in partnership with the SWIC to build on the foundation presented in this document and ensure coordination between the various stakeholder communities.

Lane # 6 – Shared Interoperable Channels and Common Language Protocol
To increase statewide interoperability, it is required that all radios are programmed with national and statewide interoperability channels. These channels have been published in the Virginia Department of Emergency Management's *Commonwealth of Virginia Tactical Interoperable Field Operations Guid*e. All State and National interoperability channels, including but not limited to, 700 and 800 MHz, UCALL/UTAC, VCALL/VTAC, VTAC33-38, Fireground, EMS and Law Enforcement Channels must be programmed into all radios as applicable, and must remain in analog mode during use (e.g. VHF users should program VTAC channels). 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 the interconnection of existing systems through technology programs, the sharing of mutually beneficial infrastructure, and the development or expansion of cooperative governance structures. Examples of this

approach include York County's Radio System and the Central Virginia Regional Radio System.

The partner stakeholders also worked to develop specific goals, initiatives, and measures of success that "operationalize" the Seven Lanes to Interoperability. With support from the SIEC and RPAC-Is, the SWIC continues to work on implementing the initiatives in the SCIP, and to coordinate communications interoperability efforts between localities, regions, and State agencies.

8. STRATEGIC GOALS AND INITIATIVES

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

8.1 Governance

The SWIC works closely with State agencies and organizations that are also committed to improving interoperable communications. This collaboration ensures that planning is coordinated across the Commonwealth, in all disciplines and aspects of preparedness and response. To best align interoperability planning and data collection efforts, senior leaders from these agencies and organizations meet regularly to identify priorities and areas for collaboration.

In addition, the SWIC fosters a strong interoperability governance structure by sustaining and supporting the seven RPAC-Is that were created in 2008. These committees work together at the regional level to identify interoperability project priorities, how to best utilize available grant funds, and address other local level challenges that might benefit from a regional or State perspective. Representatives from each of the seven RPAC-Is serve on the SIEC where they provide regional perspective and input into the statewide decision-making processes.

OVAHS and the SIEC also continue to host SIEC Subcommittee meetings for the four standing subcommittees (Operations, Policy, Grants and the COMLINC Advisory Group). The Subcommittees support the SIEC with planning efforts and the implementation of specific initiatives in the SCIP by conducting research and analysis in order to develop recommendations for consideration.

Each Subcommittee met several times over the course of 2012 to discuss the following items:

- The Operations Subcommittee worked closely with Virginia stakeholders to address initiatives identified in the 2012 SCIP including, researching the validity of transferring locals onto the STARS network, identifying measures for further build-

out of the COMLINC system, and the utilization of the Statewide Interagency Radio System (SIRS).

- The Policy Subcommittee worked closely with the Operations Subcommittee, when needed, to review and provide guidance and input on strategies and documents. The Policy Subcommittee is responsible for reviewing current legislation and making recommendations to OVAHS regarding interoperability policies and procedures. In 2012, the Policy Subcommittee worked with stakeholders to gather input on the 2013 SCIP. The Office of Interoperable Communications and Policy Subcommittee will continue to utilize this approach to "operationalize" the SCIP, moving the Commonwealth along the Interoperability Continuum to achieve the 2015 deadline for interoperable communications.

- Using standardized and established methodology, the Grants Subcommittee met and peer- reviewed State Homeland Security Grants applications that totaled over $3 million dollars in requests.

- The COMLINC Advisory Group Subcommittee was established in order to provide a governance entity for the COMLINC Statewide Program. The committee is comprised of representatives from each of the seven RPAC-Is and Virginia State Police. The Committee is working to implement the COMLINC User Agreement throughout the Commonwealth (Lane #1).

The SIEC helps to define and implement the initiatives outlined in the SCIP. Members of the SIEC draw upon their experience and knowledge of emergency responder needs and capabilities to provide strategic guidance and recommendations to the State Interoperability Executive Committee-Coordinating Committee (SIEC-CC), OVAHS, and ultimately the Governor. Refinement of the SIEC purpose and membership as well as the RPAC-Is purpose and representation structure/ process will facilitate execution of the goals and initiatives in the SCIP.

Table 1 outlines the Commonwealth's goals and initiatives for governance. Planned completion timeframes are defined as: Short-term = one year, Mid-term = 2-3 years, Long-term= 3+years.

Table 1: Governance Goals and Initiatives

Governance Goals and Initiatives			
Goals	Initiatives	Owner	Planned Completion
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	Short-term

Governance Goals and Initiatives			
Goals	Initiatives	Owner	Planned Completion
	1.2 Identify resources required based on challenges, workload, membership, pace, etc.	SIEC	Short-term
	1.3 Present and finalize recommendations for SIEC purpose and membership	SWIC	Short-term
	1.4 Establish process to re-evaluate SIEC purpose and membership	SIEC	Short-term
2. Refine the RPAC-Is purpose and representation structure/ process	2.1 Determine the mission of the RPAC-Is	SIEC	Short-term
	2.2 Recommend a structure or process for obtaining effective representation from jurisdictions and disciplines within RPAC-Is (e.g., operations and technical sub-committee's to mirror the SIEC Sub-committees)	SIEC	Short-term
	2.3 Develop strategy for RPAC-Is	SIEC	Short-term
3. Implement RPAC-I purpose and representation recommendations	3.1 RPAC-Is accept strategy to implement recommendations	RPAC-Is/ SIEC	Mid-term
	3.2 Establish periodic review process to ensure that the strategy is being followed	RPAC-Is/ SIEC	Long-term

8.2 Standard Operating Procedures (SOPs)

Frameworks and processes for developing and managing Standard Operating Procedures (SOPs) statewide are identified 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 NIMS-integrated SOPs. SOPs promote a uniformed standard across the Commonwealth and support a robust response to incidents. Incorporating SOP templates into annually updated Local Emergency Operations Plans (LEOPS) will facilitate the standardization of SOP utilization. COMLINC (Lane #1) is a example of a project that has implemented a SOP for statewide standardization.

The SIEC's Information Sharing Working Group Subcommittee has been transitioned to a subcommittee of the Homeland Security Working Group, Crisis and Situational Awareness Working Group (CASAWG). CASAWG is developing standard operating procedures for information sharing initiatives (Lane # 5) in the Commonwealth.

Table 2 outlines the Commonwealth's goals and initiatives for SOPs.

Table 2: Standard Operating Procedures Goals and Initiatives

Standard Operating Procedures Goals and Initiatives			
Goals	Initiatives	Owner	Planned Completion
4. Implement a standard SOP template statewide through the LEOP process	4.1 Gain acceptance from VDEM to include SOP template	SWIC	Short-term
	4.2 Develop the template SOP, including piloting the template in several localities	SIEC	Mid-term
	4.3 Conduct outreach to spread awareness of the template	SIEC	Mid-term
	4.4 Analyze results of SOPs developed by localities to ensure sustainability of plans	SIEC	Long-term (ongoing)
	4.5 Develop other complementary products (e.g., inventories of SOPs)	SIEC	Long-term (ongoing)
5. Address Radio Interoperability with Schools	5.1 Develop a recommendation for radio interoperability between schools and law enforcement agencies	SIEC	Long-term

8.3 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. Key components of the Commonwealth's technology strategy include:

- Lane #1: COMLINC is an integral part of the Commonwealth's strategy for establishing interoperable communications.

- Lane #3: The Commonwealth Strategic Reserve program (Communication Caches) will be supported and sustained by the State.

- Lane #4: All Broadband initiatives will be based on robust regional requirements. Prior to any implementation, business and funding process must be fully developed.

- Lane #5: Information-sharing initiatives are centered on a developed statewide strategy to ensure coordination across all information management plans and projects.

- Lane #6: Shared Interoperable Channels and Common Language Protocol will focus on accurately assessing the Commonwealth's existing mutual aid radio assets, identifying gaps in coverage, and developing a plan to mitigate gaps and to ensure existing and future infrastructure can be connected through COMLINC.

- Lane #7: The Regional Systems-of-Systems approach incorporates targeting investments in order to allow jurisdictions to partner together, in a cooperative manner, to create regional communications capabilities that maximize existing investments and expand communications footprints.

Table 3 outlines the Commonwealth's goals and initiatives for technology.

Table 3: Technology Goals and Initiatives

Technology Goals and Initiatives			
Goals	Initiatives	Owner	Planned Completion
6. Develop a roadmap/ timeline for the current and planned voice and data communications landscape	6.1 Engage vendors to identify current, emerging, and sun-setting technologies	SIEC	Short-term
	6.2 Engage users of systems to validate information collected from vendors	SIEC	Mid-term
	6.3 Cross-reference identification with Federal requirements (e.g., First Responder Network Authority [FirstNet])	SIEC	Mid-term
	6.4 Explore and document opportunities for coordination/ partnerships among jurisdictions	Localities	Mid-term
	6.5 Develop a statewide future-state roadmap	SIEC	Long-term
	6.6 Establish a process to store and refine the roadmap regularly	SIEC	Short-term
7. Conduct vulnerability assessments of critical communications infrastructure	7.1 Gather data collected in the Threat and Hazard Identification and Risk Assessment (THIRA)	SWIC	Short-term
	7.2 Leveraging efforts by the	SWIC	Mid-term

Technology Goals and Initiatives			
		FEMA, perform a data analysis to assess vulnerabilities in the communications sector		
	7.3	Based on analysis, develop sector-specific plan	Secure Common wealth Panel (SCP)	Mid-term
	7.4	Develop a plan for providing a statewide interoperable overlay for resources engaging in regional responses (a component of COMLINC)	SIEC	Mid-term

8.4 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. Our approach encompasses leveraging training plans throughout the Commonwealth, in order to improve capabilities and maximize the Commonwealth's resources. The training and exercise initiatives and tasks, outlined below, can be utilized to focus on making interoperability a key part of statewide exercises.

Each year, Virginia conducts a State-level exercise known as VERTEX: the Virginia Emergency Response Team Exercise. VERTEX is a statewide exercise designed to prepare response agencies and local government representatives for their role in an emergency response. Beyond this State-level exercise, the five Communications Cache Teams throughout the Commonwealth regularly participate in training and exercises to practice with their equipment.

In general, training is an ongoing challenge in Virginia. Regional workshops, sponsored by OEC, were held to assess training and exercise needs in order to develop a robust statewide communications training and exercise program for interoperable communications initiatives. In addition, OVAHS is working with VDEM to establish a statewide communications training and exercise plan that will focus on interoperable communications among agencies and jurisdictions. Programs are underway to support the training of COMLINC operators, COMLs, and COMTs. Going forward, more emphasis should be placed on capitalizing on planned events to identify lessons learned and incorporating those lessons into incident response.

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

Table 4: Training and Exercises Goals and Initiatives

Training and Exercises Goals and Initiatives			
Goals	Initiatives	Owner	Planned Completion
8. Incorporate comprehensive communications planning "up-front" into exercises	8.1 Develop a policy on incorporating communications into exercises in the State Training Office at VDEM	SIEC	Short-term
	8.2 Implement the policy through the State Training Office	VDEM Office of Training and Exercises (OT&E)	Mid-term
	8.3 Develop case studies exercises facilitators	SIEC	Short-term

8.5 Usage

Steps, plans, and policies will be leveraged to ensure responders adopt, utilize, and become familiar with interoperable and emergency communications technologies, systems, and operating procedures in an effort to guarantee the establishment and maintenance of interoperability in case of an incident. The Statewide COMLINC Program, is a prominent example of the Commonwealth's usage model. In an effort to ensure the utilization of COMLINC equipment, on a day-to-day basis and in the event of an emergency situation, regional roll calls have been implemented incorporating local Public Safety Answering Point (PSAP) personnel and Virginia State Police.

On an annual basis, Virginia's public safety and first responder community gather for the Virginia Association of Public Safety Communications Officials (APCO)/National Emergency Number Association (NENA)/Interoperability Communications Conference. The conference is an opportunity for the public safety community to promote and evaluate different interoperability solutions. Additionally, Virginia's Communications Caches are on hand to demonstrate technology capabilities and provide educational opportunities for how to request and use a Cache during an incident. The conference incorporates a specific interoperability track to provide attendees with an opportunity to discuss policy issues ranging from D-Block and Narrowbanding to COMT training and discussions regarding the Statewide Communications Interoperability Plan.

Table 5 outlines the Commonwealth's goals and initiatives for usage.

Table 5: Usage Goals and Initiatives

Usage Goals and Initiatives			
Goals	Initiatives	Owner	Planned Completion
9. Document the systematic use of equipment by emergency responders statewide	9.1 Determine what equipment and resources will be required to be used regularly	SIEC	Short-term
	9.2 Develop a schedule for testing/use of equipment	SIEC	Short-term
	9.3 Determine the feasibility for requiring documentation for executing the schedule	SIEC	Mid-term
	9.4 Define measures to demonstrate the impact of monitoring systematic use of equipment and resources	SIEC	Mid-term

8.6 Outreach and Information Sharing (Lane #5)

Outreach and Information Sharing strategies are fundamental facets for building a statewide coalition of individuals and emergency response organizations to support the SCIP vision and promote 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.

Table 6 outlines the Commonwealth'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			
Goals	Initiatives	Owner	Planned Completion
10. Develop an outreach and education plan to support education on initiatives, resources, and technologies	10.1 Define requirements, needs, and topics for outreach and education	SIEC	Mid-term
	10.2 Develop outreach and education plans, including identifying existing channels that can be leveraged for engagement	SIEC	Mid-term
	10.3 Identify funding for executing plans	SIEC	Mid-term
	10.4 Develop messaging according to plans (e.g., RPAC-I, General Counsel,	SIEC	Mid-term

Outreach and Information Sharing Goals and Initiatives			
	Governor's Office, system of systems, levels of governments)		

8.7 Life Cycle Funding

The Commonwealth's plan to fund existing and future interoperable and emergency communications priorities are outlined in this section. With an overall investment of $650 million, a national economy that is struggling, and with the elimination or significant reduction in programs supported by DHS during the current economic downturn, identifying ongoing funding to support the statewide interoperability efforts will continue to be a priority.

In 2013, the SWIC will continue to work with VDEM (the State Administering Agency (SAA)), to provide grant funds 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. This funding will only be awarded to jurisdictions that can demonstrate they are meeting or exceeding the measurements and compliance requirements listed above.

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 State's interoperability investments.

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

Table 7: Life Cycle Funding Goals and Initiatives

Life Cycle Funding Goals and Initiatives			
Goals	Initiatives	Owner	Planned Completion
11. Identify the problem, issue, need, and recommendation for sustainable funding of interoperable and emergency communications priorities	10.1 Develop a series of decision briefs that incorporate problem analyses associated with life cycle funding	SIEC	Short-term
	10.2 Analyze funding requirements and funding justifications	SIEC	Mid-term
	10.3 Establish an understanding of revenue generating models for potential consideration	SIEC	Mid-term
	10.4 Identify and execute on low or no cost solutions	SIEC	Short-term (ongoing)

9. Implementation

9.1 Action Plan

In order to execute the initiatives outlined in this year's SCIP, the processes that will be utilized have to be clearly defined and managed. The Action Plan process will begin with the development of a project plan, in the form of a Gantt Chart or Integrated Master Schedule. This plan will be shared with the members of the SIEC, which includes the owners of the initiatives. The SCIP will also be sent to the members of the SIEC for review and finalization.

9.2 Measures of Success

Measures of Success will be utilized to monitor progress and are indicative of Virginia's accomplishments that will lead the Commonwealth along the path towards achieving the vision for interoperable and emergency communications.

Table 8 outlines these measures for the Commonwealth.

Table 8: SCIP Measures of Success

Measures of Success					
ID	Strategic Goal Supported	Baseline	Data Collected	Target	Owner or Source
1	Refine the SIEC purpose and membership	Ad-hoc purpose and membership Currently voice-heavy	Policy recommendation	Written policy recommendation 100% complete	SWIC
2	RPAC-I	Ad-hoc purpose and membership Currently voice-heavy	Policy recommendation	Written policy recommendation 100% complete	SWIC
3	Implement RPAC-I purpose and representation recommendations	Ad-hoc purpose and membership Currently voice-heavy	Percentage of RPAC-Is with the strategy implemented	50% in 24 months (Dec 2014)	RPAC-Is
4	Implement a standard SOP template statewide through the LEOP process	Do not have a communication SOP component in LEOP	Percentage of localities that submitted LEOPs with a communications SOP	100%	Locality Emergency Managers/ VDEM

Measures of Success

ID	Strategic Goal Supported	Baseline	Data Collected	Target	Owner or Source
5	Develop a roadmap/ timeline of the current and planned voice and data communications landscape	Lack of knowledge about current state of system life cycles	Information provided by users, vendors, etc. to develop a roadmap/ timeline	100% completion of roadmap/ timeline	SWIC
6	Conduct vulnerability assessments of critical communications infrastructure	Incomplete sector-specific plan	Jurisdictions, State agencies, THIRA, etc. provide inputs to sector-specific plan	100% completion of sector-specific plan	SCP
7	Incorporate "up-front" comprehensive communications planning into exercises	Communications is not integrated up-front	Percentage of exercises that include a communication component (Homeland Security Exercise and Evaluation Program [HSEEP])	100%	SWIC and VDEM OT&E
8	Document the systematic use of equipment by emergency responders statewide	Lack knowledge of level of use of equipment (e.g., cache, COMLINC)	Percentage of roll-call participation	100%	SIEC/ RPAC-Is
9	Develop an outreach and education plan on initiatives, resources, and technologies that support education	No current approach/ structure for outreach	Identification of stakeholders and delivery of corresponding communications	Written outreach and education plan 100% complete	SWIC

Measures of Success					
ID	Strategic Goal Supported	Baseline	Data Collected	Target	Owner or Source
10	Identify problems, issues, needs, and recommendations for sustainable funding of interoperable and emergency communications priorities	Lack comprehensive understanding of funding needs and solutions	Recommendations to obtain funding	Delivery of recommendations to decision makers	SWIC

9.3 Strategic Plan Review

The goals, initiatives, and measures of success are used to populate three annual reports compiled by the SWIC:

- OECs SCIP Implementation Report (Annual Progress Report)

- Governor/General Assembly Report

- Region III Regional Emergency Communications Coordination Working Group (RECCWG) Annual Report

The SWIC and the SIEC, annually review the SCIP components and incorporate changes to the Commonwealth's strategy for interoperable communications. The development of the project plan identified in section 9.1 will facilitate the identification of changes to next year's SCIP. Each year, the SCIP will serve as a bridge for planning efforts that will take place the following year in order to demonstrate an evolution of the Commonwealth's strategy.

Appendix A: List of Acronyms

AEL	Authorized Equipment List
COML	Communications Unit Leader
COMLINC	Commonwealth's Link to Interoperable Communications
DHS	U.S. Department of Homeland Security
FEMA	Federal Emergency Management Agency
FirstNet	First Responder Network Authority
FOG	Field Operations Guide
GWG	Grants Working Group
HSEEP	Homeland Security Exercise and Evaluation Program
ISP	Integrated Service Program
MHz	Megahertz
LEOP	Local Emergency Operations Plans
LMR	Land Mobile Radio
LTR	Logic Trunked Radio
NECP	National Emergency Communications Plan
NG911	Next Generation 911
NIMS	National Incident Management System
NPSBN	Nationwide Public Safety Broadband Network
OEC	Office of Emergency Communications
OT&E	Office of Training and Exercises
OVAHS	Office of Veterans Affairs and Homeland Security (OVAHS)
P25	Project 25
PPD	Presidential Policy Directive
PSAP	Public Safety Answering Point
PSC	Public Safety Communications
RECCWG	Regional Emergency Communications Coordination Working Group
RPAC-I	Regional Preparedness Advisory Committees for Interoperability
SAA	State Administering Agency
SCIP	Statewide Communication Interoperability Plan
SCP	Secure Commonwealth Panel
SIEC	Statewide Interoperability Executive Committee

SIEC-CC	State Interoperability Executive Committee-Coordinating Committee
SOP	Standard Operating Procedure
STARS	Statewide Agencies Radio System
SWIC	Statewide Interoperability Coordinator
THIRA	Threat and Hazard Identification and Risk Assessment
VDEM	Virginia Department of Emergency Management
VERTEX	Virginia Emergency Response Team Exercise
VGIN	Virginia Geographic Information Network
VITA	Virginia Information Technologies Agency
VSP	Virginia State Police

APPENDIX B: VIRGINIA STATEWIDE COMMUNICATIONS INTEROPERABILITY PLAN
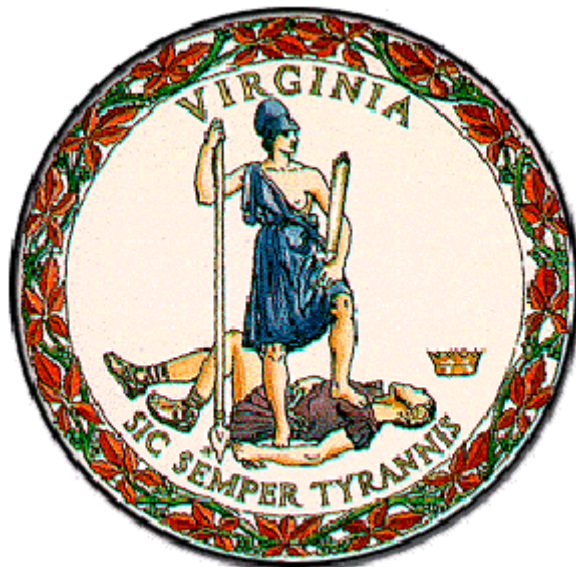
2012

THE VIRGINIA STATEWIDE COMMUNICATIONS INTEROPERABILITY PLAN

For Public Safety Information Sharing

Table of Contents

1. EXECUTIVE SUMMARY

Government agencies, at all levels are increasingly dependent upon having reliable and timely information to make informed decisions. Having thorough information is a critical factor in governments' ability to provide effective and efficient services to the public. It is also an important ingredient to building a trusted relationship with citizens. Nowhere is this more important than in the public safety arena where having timely and trusted information is necessary for protecting and preserving the lives, property and environment of the citizens of the Commonwealth.

The inability to access crucial information in a timely fashion was highlighted by the 911 Commission[5], as one of the contributing factors that led to the successful terrorist attacks of September 11, 2011. Often, the information needed by decision makers exists in multiple locations and is not accessible to them in an efficient or effective manner. As a result, the need for interoperable information sharing was identified as a critical public safety need, and a national priority. Subsequently, that need has been reinforced in the aftermath of every significant catastrophic event. Given the dramatic increase in the frequency of major natural disasters over the last ten years – from 45 in 2001 to 98 in 2011 – the need for information sharing to help prepare for and respond to events, has taken on a new urgency.

There are numerous impediments to information sharing including proprietary technologies which often prevent systems from "talking" to one another, as well as the lack of clear and uniform standards, policies and procedures. In order to overcome these impediments, and ensure that stakeholders across the Commonwealth have the information they need, when they need it, and in the form they need it, the Commonwealth has developed this plan which provides actions that need to be taken over the next 12 months to begin to achieve seamless information sharing in Virginia. The Statewide Communications Interoperability Plan (SCIP) incorporates seven lanes for achieving interoperable communications. Among the lanes delineated in the SCIP, information sharing is highlighted as an instrumental element for interoperable communications capabilities. Virginia's Information Sharing Plan is a facet of information sharing which is covered by the Virginia code § 2.2-232 directed at achieving interoperability by July 1, 2015.

The actions and recommendations outlined in this Plan were developed under the guidance of the Statewide Interoperability Executive Committee's Information Sharing Working Group (SIEC ISWG) with input provided by numerous representatives of state and local public safety agencies and jurisdictions during four (4) Town Hall meetings held in Southwest, Southeast, Central and Northern Virginia during the first half of 2012.

The SAFECOM Interoperability Continuum provides a framework for achieving voice and data interoperability, and was used as the organizing principle for collecting stakeholder input during the Town Hall Meetings.   Town Hall participants provided their current assessment and future recommendations by discussing information sharing in the context to the following categories: governance; standard operating procedures (SOPs); technology; training and exercises; and usage.   In

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[5] National Commission on Terrorist Attacks Upon the United States. (2004). *The 9/11 commission report.* New York, New York: W.W. Norton & Company, Inc.

addition, meeting participants identified the impediments to achieving information sharing as well as actions that could be taken in the next 12 months to begin to overcome the impediments. Below is a brief summary of results.

Current State

There are many proprietary information systems that are operating throughout the Commonwealth. Most systems have been specifically configured to meet the immediate agency needs. However, there are jurisdictional/region systems that are not compatible with other operational systems nor meant for information sharing on a broader scale.

There was broad agreement that there is little in the way of governance or standard operating procedures (SOPs) regarding information sharing across the Commonwealth. While there are some excellent regional technical initiatives to achieve data interoperability, the lack of governance and SOP's have, in effect, contributed to silos of public safety information sharing.

The same can be said for training and exercises, where information sharing is not emphasized nor focused on. Without this type of education to end-users, information sharing technologies are not fully developed or utilized during day-to-day operations. In general, when information sharing does occur, it is usually ad hoc, and there is little in the way of policies, procedures, planning or standards to support a seamless and institutionalized approach.

The financial implications associated with current information sharing technologies are burdensome for localities, working to maintain and sustain existing systems with funding streams that are continuing to dwindle.

Future State

The critical importance of information sharing for day-to-day activities, as well as to respond to significant incidents, is well-known and accepted. The future state of information sharing would be based on having standardized, but flexible governance agreements, to account for specific regional needs. Similarly, SOPs should be developed to include information sharing as an important element. The SOPs would be standardized, flexible and enforceable. There would be standards for public safety technology procurements and subject matter experts would be available to guide procurements, rather than vendors. The private sector would be appropriately engaged in order to make certain that end user requirements drive the technologies and not the reverse. Training and exercises would not only have key components dealing with information sharing, but lessons learned would be codified to improve practices. This would lead to making information sharing a day-to-day occurrence and not just something done under special circumstances.

Impediments/Barriers

There were several cross cutting impediments to information sharing that were mentioned and relevant to all lanes of the Continuum:

1. The lack of executive level of understanding commitment at all levels of government (local, state, and federal). This was seen as a major barrier. Without that commitment, agencies and jurisdictions simply do not focus nor make a priority information sharing initiatives/practices;

2. The insufficient dedicated resources to facilitate and coordinate information sharing activities. This includes dedicated personnel and funding to improve the technical and organizational capacity;

3. A cultural dilemma whereby data owners/providers are hesitant to engage in information sharing arrangements. Overtime, once individuals learn the importance of sharing information, they are more willing to provide data to agencies and localities. Generally speaking, due to the lack of policies and procedures, as well as training and exercises, information sharing processes have become dependent upon personal relationships that change as people cycle in and out of positions.

In addition, the sheer magnitude of investments in proprietary technologies and systems across the Commonwealth make information sharing very challenging, if not impossible. This is further exacerbated when there are no models for governance agreements and standard operating procedures available, and no common repository where people can share best practices and lessons learned.

The lack of realistic, comprehensive and frequent training and exercises, with no inclusion of more specific information sharing goals/metrics, was identified as an impediment for beginning to address the information sharing challenge. When information sharing issues are identified, the results are not codified into SOPs and corrective actions are generally not taken.

Last, there are many questions concerning the legal framework for information sharing regarding how laws such as Freedom of Information Act (FOIA) may or may not apply and as a result a culture of no-sharing is reinforced.

Actions

Underlying all the recommended actions is the establishment of executive level "buy-in," and dedicated operational support from the state level, specifically providing regionally based assistance to help integrate information sharing as a core function of daily activities. In that capacity, the state should establish common definitions of what is meant and required by information sharing and data interoperability, improve awareness and garner support from executives to focus on the issue and to develop models for governance and SOPs.

In addition, there should be support to help localities and state agencies with technology procurements by identifying best practices as well as "getting ahead" of the technology curve. There should be a holistic look at training and a focus on real-time training by using "synthetic training" approaches. Finally there should be a statewide repository to help localities with best practices on all aspects of information sharing.

In conclusion, the need for seamless information sharing is well recognized by public safety practitioners across the Commonwealth. A Strategic Plan that is based on the reality of the current situation which lays out a series of aggressive but achievable actions is the first step in that a process to make

improvements towards seamless information sharing. The OVAHS is committed to working in partnership with jurisdictions across the Commonwealth to continue to evolve and implement this Plan.

2. PLAN OVERVIEW

This document outlines information sharing policies, plans and procedures that agencies and jurisdictions must implement in order to be in compliance with Virginia's Statewide Communications Plan (SCIP).

As is the case of the Statewide Communications Interoperability Plan the policies, procedures and standards in this document are incorporated in the Virginia Code § 2.2-232 and must be adhered to in order for jurisdictions and agencies to maintain eligibility to receive state or federal funds that may be applied to the procurement of public safety communications or information sharing systems.

1. BACKGROUND

Over the last ten years, the number of declared natural disasters in the United States has increased steadily from 45 in 2001 to 98 in 2011. Not only has there been a significant increase in the number of disasters but the monetary impact of the disasters has also dramatically increased with 2011 experiencing 1 incident at a cost of over $1billion nearly every month of the year. Alarmingly, the Commonwealth averages over 45 major events a year – 10 over the national average. And the forecast for 2012 is for these numbers to increase.

While there is little that can be done to affect the occurrence of natural disasters, improvements can be made in our preparation, response, recovery and mitigation to those events. A critical element for success of information sharing efforts is for planners, operators and those involved in preparedness, response, recovery and mitigation all hazards environments to have the information they need, in the form they need it, and when they need it in order to improve planning processes and enhance decision making capabilities.

2. TERMS AND DEFINITIONS

Note, the terms and definitions enumerated below are a starting point. A key action over the course of the next year will be to fine tune and standardize these definitions. The Information Sharing Strategic Plan should be continually refined to incorporate additional definitions.

Information Sharing

The following is an adaption of a definition of information sharing used by the Department of Defense: Making information available to appropriate participants (people, processes, or systems). Information sharing includes the cultural, managerial, and technical behaviors by which one participant leverages information held or created by another participant. Information, in this context, means any information that can be exchanged in a digital format whether it is data, images, video, geographic information services etc.

Data Interoperability

Given the prevalence of computer and web based information systems successful information sharing requires achieving data interoperability. For the purposes of this plan, we are using the definition of data interoperability as the capability of government agencies and jurisdictions, the first responder community (e.g., law enforcement, fire services, EMS, and the related communications centers) to exchange digital information, in many different formats, using well-defined, highly repeatable business processes.

Kinds of Data

In order to share information, it is important to identify the kinds of data that need to be shared for public safety usage. This generally takes two forms. First is the identification of the categories of information that are needed to create a complete picture to help decision makers. Second is to identify the different levels of availability of that data. What follows is a brief description.

Categories of Information

1. **Reference Data:** This generally relates to data that serves as a backdrop to the issue being examined. This may include base layer maps and plans and policies such as evacuation plans.
2. **Static Data:** This refers to data that rarely changes but that you need to create a complete picture. Examples of this are fire hydrants, Critical Infrastructure and Key Resource Sites and available resources (i.e. State radio caches).
3. **Dynamic Data:** This includes real time information that tends to change over time. Examples include road conditions, incidents and shelter status.

Availability of Information

1. **Public**: This relates to data that is readily available to the public.
2. **Public with Permission (PwP):** This relates to data that while not sensitive, it requires some kind of permission to access. This data usually resides behind a "firewall" and may reside in a government or private sector information system.
3. **Sensitive**: This relates to data defined as sensitive but unclassified (SBU), secret, Special Compartmentalized Information (SCI). This data needs different levels of security permissions to access.

The data being addressed in this Plan involves Public or Public with Permission. Sensitive data issues will be addressed in a future iteration of the plan.

3. GUIDELINES

The guidelines for developing the 2012 Virginia Statewide Information Sharing Plan involve:

1. Adhering to the Interoperability Continuum- As is the case in establishing voice and data based communications interoperability, the Department of Homeland Security's Interoperability Continuum was used as the organizing principle to develop the plan;

2. Involving Stakeholders throughout the process - The Plan was developed with input from state and local government stakeholders. The Statewide Interoperability Executive Committee's Information Sharing Working Group (ISWG) was the vehicle by which this took place. The ISWG has been involved in the development of this plan;

3. Being Purpose Driven - There is no intent to drive information sharing just for the sake of information sharing. The purpose and vision was determined by stakeholder needs and validated with the ISWG;

4. Establishes Measurable and Realistic Actions - The Plan has specific, realistic and measurable goals/actions;

5. Adhering to Privacy and Civil Liberties – The Plan maintains the privacy and civil liberties of the citizens of the Commonwealth; and

6. Transparency - The Plan incorporates mechanisms and methods to enhance accessibility, accountability and oversight.

4. METHODOLOGY

The Office of Veterans Affairs and Homeland Security (OVAHS), working through the Statewide Interoperability Coordinator (SWIC) funded a pilot project in Charlottesville, Virginia to serve as the initiation point and test bed for developing the draft Plan. The SWIC tasked the Information Sharing Working Group (ISWG) of the Statewide Interoperability Executive Committee (SIEC) to work with the Charlottesville pilot team to oversee the drafting of the Plan.

The following steps were taken to develop the Plan:

1. Research was conducted on existing national or statewide information sharing business models/plans. The Charlottesville pilot project team found no current examples of a Federal or Statewide Information Sharing Plan addressing public or public with permissions data. And while the federal government adopted a National Strategy for Information Sharing in October 2007 as part of a larger federal government initiative to create a National Information Sharing Environment, this was largely focused on sharing information in order to produce more effective intelligence as it relates to terrorism. In this case, the information being shared is often in the realm of sensitive but unclassified information (SBU), secret or Special Compartmentalized Information (SCI).

2. A vision statement and outline was developed for the Plan. The team worked with the ISWG to draft the following vision statement:

   "The ability to seamlessly exchange information for the safety and well-being of those who live in, work in, and visit the Commonwealth."

3. Developed a comprehensive approach to engage stakeholders across the Commonwealth to receive input into the Plan. The approach involved conducting four (4) Town Hall meetings

across the State in Southwest, Southeast, Central and Northern Virginia. A broad list of stakeholders was invited to the Town Hall meetings by the SWIC and the ISWG to ensure as much participation as possible. Disciplines that were represented included emergency managers, law enforcement, fire services, emergency medical services, transportation, GIS and information specialists and the private sector.

4. Developed a plan for continued engagement. In order to continue to engage stakeholders the SWIC established a SIEC-Information Sharing Community of Practice (COP) on the Department of Homeland Security First Responder Community of Practice website. This COP enables stakeholders, whether or not they had previously participated in a Town Hall meeting, to review documents and continue to provide input.

5. Developed the draft Plan based on input provided during the Town Hall meetings. The resulting Plan was then published for public comment on the FRCOP website and reviewed by the ISWG. A final draft Plan was developed and reviewed by the ISWG and SWIC following the review of those comments before being approved by the Secretary of the Office of Veterans Affairs and Homeland Security.

In addition to drafting the Plan, the pilot project involved taking a bottoms-up approach in Charlottesville – Albemarle County by helping to facilitate and build local and regional information sharing capabilities [6] that could serve as models for other localities and regions across the Commonwealth.

The pilot project used an inclement weather event in the UVA-Charlottesville-Albemarle County community to provide the context and framework for defining the initial information requirements for a Charlottesville Albemarle County Viewer (CAVS). Situations in which information sharing is important range from helping an agency have a complete "picture" in assessing their day to day operational needs, to preparing for and managing a local, regional or statewide event (e.g., Inclement Weather) or another significant incident. Often times, the information an analyst or decision maker needs is held by multiple sources. Accessing that information is critical to having a better understanding of the particular situation they face.

CAVS is the beta situational awareness viewer and was configured using freely available and a ready-to-deploy viewer application powered by the Esri ArcGIS Viewer for Flex. This application is easily configurable, so the system owner (the Charlottesville Fire Department-CFD) can add tools and data content without costly programming. The CAVs is a GIS-based platform that enables CFD and the Albemarle community and the City of Charlottesville to have a spatially-based User Defined Operating Picture of the information they need to prepare for and manage day-to-day activities as well as during an emergency event. The CAVs has the capability of consuming and publishing static and dynamic data and is interoperable with other information platforms throughout the Albemarle County region.

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[6] Information Sharing capabilities facilitated and built during the project include the Charlottesville Albemarle County Viewer (CAVS).

Another aspect to the project involved developing an operational prototype for a Virginia Information Interoperability Sharing Environment (VIISE). The vision for the VIISE is an environment that can combine policies, procedures, and technologies linking resources (e.g., people, systems, databases, and information) to more effectively facilitate information sharing, access, and collaboration both within and across local and state organizations. The operational prototype for the VIISE consists of a collection of web tools, which are designed to technically facilitate the creation, viewing and managing of mission-specific web and geospatial data and services, or Awareness Packages. (Note: The specific mission being used as the organizing principle for this project is an Inclement Weather Event in the Charlottesville Albemarle County region.)

In order to facilitate real time information sharing, the Commonwealth is committed to creating a robust information sharing environment. The first step in accomplishing that is the creation of this Plan.

5. TOWN HALL MEETING THEMES

During each of the four Town Hall meetings, attendees were asked to provide input on the current and future (ideal) state of information sharing across the State in each lane of the Interoperability Continuum – Governance, Standard Operating Procedures, Technology, Training and Exercises and Usage. Once this input was received, attendees were asked to identify the impediments to reaching the future state that was identified. Finally, attendees were asked to identify realistic actions that could be taken by the SWIC during the next twelve months in order to overcome the impediments and begin laying the groundwork to achieve the goal of seamless information sharing. This section provides an overview of the input that was received during those meetings.

GOVERNANCE

Governance Current State

1. **Agreements:** There are few agreements that specifically address information sharing. While there appear to be some state to state, state to local and regional agreements, these tend to be inconsistent with one another and at times impede information sharing. For example, the agreement between the Virginian Department of Emergency Management and the Virginia Department of Transportation prohibits providing the information they share to local jurisdictions. Most often information sharing occurs based on handshake agreements and/or personal relationships.

2. **Funding/Resources**: There are limited resources devoted on the state or local level to information sharing activities. Generally, people are not assigned to fulfill this task, nor are there resources devoted to producing data in a standard format so it can be shared. Resources that are expended tend to be project-specific and not region-specific, creating "interoperability silos" throughout the Commonwealth.

3. **Governing Bodies:** No one "owns" this issue at the local and regional levels. There are no formal governing bodies focused on information sharing. Some regions hold regional meetings (e.g., Northern Virginia, Richmond, etc) that try to address these issues, but they are purely voluntary and attendance and membership is inconsistent. While information sharing is desirable and should be a requirement there is no system in place to enable or enforce it.

4. **Legal Framework:** The lack of clarity of the impact and application of laws and regulations such as the Freedom of Information Act (FOIA) and HIPPA often make people hesitant to share information.

5. **Examples:** There are some regional agreements that are beginning to address information sharing. Among the projects cited were several GIS interoperability projects such as Mountain Empire Regional Geospatial Exchange (MERGE) project and the National Capital Region's Geospatial Data Exchange (GDX). Other projects include the CAD to CAD and regional WebEOC projects in Northern Virginia. Although limited in scope to these specific projects, once they mature, they could serve as models for a more statewide, regionally based approach.

Governance Future State

1. **Agreements:** Statewide information sharing agreements should be created and used as models for regionally based agreements in order to ensure consistency.

2. **Funding/Resources:** Interoperable data and data sharing repositories should be established, an example of this, which should be leveraged, is the VGIN's Geospatial Data Clearinghouse.

3. **Governing Bodies**: To ensure statewide information sharing, regionally based information sharing governance structures with regionally based coordinators should be established. The private sector should be involved.

4. **Legal Framework**: Governance and standards should be codified in law.

Governance Barriers

1. **Agreements**: Agreements are fragmented and not enforceable.

2. **Funding/Resources**: There is little dedicated funding and few human resources.

3. **Governing Bodies**: Have conflicting interests and often resist change.

4. **Legal Framework**: The lack of clarity contributes to lack of information sharing

STANDARD OPERATING PROCEDURES

SOPs Current State

1. **Adoption:** There are few, if any, templates for SOP's relating to information sharing. There is no repository to share the ones that exist.

2. **Comprehensive**: Existing SOP's do not include information sharing. They tend to be functionally defined and do not include work processes.

3. **Consistent/Interoperability**: SOP's' are fragmented and can contradict one another.

4. **Codification**: Lessons learned from exercises are not codified as SOP.s

5. **Examples**: Information sharing projects such as the Geospatial Data Exchange, CAD-CAD and WebEOC projects in Northern Virginia and the MERGE project in Region 4 are developing SOP's, but they have not yet been codified.

SOPs Future State

1. **Adoption**: Resource should be dedicated to information sharing. There should be standardization of templates and guidelines which are flexible enough to take into account regional criteria and local resources. A repository should be created to share models. There should be some form of accountability in order to enforce adoption with people dedicated to oversight Information sharing should be integral to response and preparedness SOP's.

2. **Comprehensive:** SOP's should include information sharing. The private sector should participate.

3. **Consistent/Interoperability**: Existing SOP's should be identified and aligned for statewide consistency. There should be statewide standardization of data formats, data sets, content and security.

4. **Codification**: Codifying lessons learned from training and exercises should be integrated into the training/exercise lifecycle.

SOPs Barriers

1. **Adoption**: There is little dedicated funding or resources and no one responsible for oversight. There is little direction provided and little knowledge of what already exists and no place to go to find out. There are no standard templates. There is lack of realistic training around SOP's.

2. **Comprehensive**: Information sharing is not considered in SOP's.

3. **Consistent/Interoperability**: There are conflicts within organizations and plans "run into each other."

4. **Codification**: There is lack of review processes following training and no focus on integrating lessons learned.

TECHNOLOGY

Technology Current State

1. **Localized Solutions**: There is fragmentation with systems focused on addressing individualized needs as opposed to taking multi -disciplinary/multi-jurisdictional needs into account. There is limited ability for systems to work with one another. Systems are not developed to scale.

2. **Infrastructure**: There is a lack of statewide coverage and planning for redundancy to account of failovers.

3. **Standards**: Systems tend to be proprietary and closed. There are no standardized for information sharing interoperability.

4. **Sustainability**: There is little long term planning for scalability sustainability. Fragmentation makes operations and maintenance costly and difficult to sustain.

5. **Roadmap**: Always behind the technology curve due to lack of knowledge of what is going on in the field and lack of long term planning.

6. **Examples**: Projects such as MERGE, GDX, etc., are a step in the right direction but represent interoperability challenges and there are questions about scalability and need mature business models.

Technology Future State

1. **Localized Solutions**: There needs to be standardized approaches to procurements with a focus on supporting interoperable, non-proprietary systems. There needs to be a trusted knowledge repository to help support technology decisions.

2. **Infrastructure**: There needs to be secure and reliable comprehensive infrastructure in place (inclusive of coverage for rural areas) to support emergency services. There needs to be a distributed statewide technology framework.

3. **Standards**: There needs to be common data architecture and usage standards that are integrated into SOP's and training and exercises. Data models and templates should exist. Non-interoperable, proprietary systems should not be supported.

4. **Sustainability**: Funding needs to exist for operations and maintenance costs. Planning should statewide.

5. **Roadmap**: The private sector should be more integrated so that their solutions better match and anticipate requirements and future needs. A trusted knowledge repository should be created to help drive procurement decisions. Requests for Information should be used to get a better sense of what exists and is being planned.

Technology Barriers

1. **Localized Solutions**: No systems approach to interoperability results in procurement of proprietary and fragmented systems.

2. **Infrastructure**: No approach to building comprehensive statewide infrastructure.

3. **Standards**: Lack of up front standardization.

4. **Sustainability**: Insufficient funding for operations and maintenance. Lack of expertise and capacity to use technology.

5. **Roadmap**: Lack of understanding of technology. No means to stay current or "get ahead of technology. Technology is driving requirements.

Training and Exercises

Training and Exercises Current State

1. **Consistency**: No consistent approach to training. Training occurs infrequently. Lack of resources hinders regular training.

2. **Approach**: Interdisciplinary training is rare. Limited operationally based training. Private sector not integrated. Information sharing not a focus of training.

3. **Lifecycle Management**: Results of training not incorporated into SOP's. Training not realistic; just "checking the box."

4. **Assessment**: No systematic approach to assessing results.

5. **Examples**: There is some regular training. Region 3 has localized regular training on health issues. Blacksburg does tabletops 3 times a year. Roanoke City and County cross train in each other facilities once a month. There is no focus on information sharing and results not incorporated into SOP's.

Training and Exercises Future State

1. **Consistency**: Training needs to be available on a regular, frequent basis. Integrated into day-to-day operations. Needs "anyplace, any time" training.

2. **Approach**: Executive awareness and support for realistic training is critical. Information sharing needs to be a focus of training. Has to be cross discipline/cross jurisdiction training with involvement of the private sector. Should use "synthetic training" taking advantage of simulation and virtual technologies.

3. **Lifecycle Management**: Training cycle needs to be adhered to. Lessons learned need to be captured and changes made in SOP's as appropriate.

4. **Assessment**: Needs to be a system for accurate and effective feedback.

Training and Exercises Barriers

1. **Consistency**: Lack of funding and resources to plan and participate. Lack of "ownership" and executive level "buy-in."

2. **Approach**: Not enough knowledgeable people involved in planning and participation. Lack of willingness – due to lack of executive "buy-in" to do realistic training – not interdisciplinary, doesn't involve private sector. c. Only "checking the box.

3. **Lifecycle Management**: Lack of "ownership" results in failure to follow through on results. Training lifecycle is "broken."

4. **Assessment**: No effective results reporting tool.

Usage

Usage Current State

1. **Frequency**: Information sharing ad hoc. Entities are doing their own thing and not sharing lessons learned. Agreements are fragmented. Not a daily activity.

2. **Culture:** Information sharing is based on handshake agreements. Generally doesn't involve private sector.

3. **Resources**: Limited resources including part time staff. No one responsible.

4. **Standards:** No common exchange formats or standardized data layers.

5. **Awareness**: No way to share lessons learned or models. Lack of awareness of what data is available.

6. **Examples**: There are some regional examples such as GDX, the National Capital Region WebEOC project.

Usage Future State

1. **Frequency**: Must be incorporated into daily operations. Needs to be consistency in information sharing tools.

2. **Culture**: Standardized processes need to be created to enable information sharing. Needs to be incentives to participate. Preplanning and ongoing feedback should occur.

3. **Resources**: Need common repository of lessons learned, model practices and data sources.

4. **Standards**: Needs to be a discoverable information framework.

5. **Awareness**: Need to increase awareness of all aspects including points of contract, governance approaches, data availability, how to use data, and information sharing technologies.

Usage Barriers

1. **Frequency**: Overly complex and fragmented systems. Organizational complexity. Conflicting SOP's.

2. **Culture**: Lack of a sharing culture. No buy-in from organization as a whole. No one designated as responsible. Private sector not incorporated.

3. **Resources**: Lack of a knowledge repository. No designated and consistent resources.

4. **Standards**: No common exchange formats. No standards on interoperable systems

5. **Awareness**: Lack of awareness of available tools and technologies, what data is available, how to share data, how to use data effectively, etc).

3. THE VIRGINIA STATEWIDE INFORMATION SHARING PLAN

The Virginia Statewide Information Sharing plan is designed to create the capability to enable agencies to seamlessly share information at the local, state and federal levels. To achieve that goal, the Office of Veteran Affairs and Homeland Security (OVAHS) working with other state agencies including the Virginia Information Technology Agency (VITA) and in partnership with local agencies across the State identified a series of priority actions that will be implemented over the coming years.

The first series of actions are defined below. These actions, which follow along the lanes of the Interoperability Continuum, were developed through the previously identified process and are designed to lay the critical stepping stones that the Plan will build upon as we move forward.

6. GOVERNANCE ACTIONS AND METRICS

1. Provide a working definition of information sharing that includes beginning to establish a common vocabulary.

2. Define legal framework for Information Sharing.

3. Develop and support a regionally based governance structure to work with the Statewide Interoperability Coordinator (SWIC) to facilitate and coordinate information sharing at the local, regional and state level. This may include, but not be limited to using existing resources and structures including the Regional Preparedness Advisory Committee – Interoperability (RPAC-I) or other existing regional structures.

4. Establish and maintain a technical assistance team to work with the SWIC to provide support to local, regional and state agencies in information sharing activities.

5. Working to support the regional representatives to establish regionally based policies and procedures, technical advice, and technical support.

6. Educate the local, regional and state executive leadership on benefits of information sharing through regional meetings, regular webinars and participation in conferences.

7. Begin to build a statewide "knowledge repository" that catalogues best practices, model agreements and technical information. This will include identifying, evaluating and publicizing current information sharing initiatives to demonstrate what is already working and gaps in existing activities.

8. Review existing legislation and make recommendations to modify or create new legislation to enable and incentivize information sharing.

9. Develop standardized governance templates such as Memoranda of Understanding that will be used as models for intrastate agreements.

7. STANDARD OPERATING PROCEDURES ACTIONS AND METRICS

1. Provide guidance for creating information sharing Standard Operating Procedures (SOP's) that can be input into other existing SOP's (such as Mutual Aid agreements etc.) This may be in the form of a template to ensure comprehensive and consistence format and content that can be adapted for local, regional and state use.

2. Identify and standardize existing SOP's to ensure interoperability across the state based on a scenario based approach.

3. Establish processes to regularly review and update SOP's to ensure they meet the most current needs and requirements.

8. TECHNOLOGY ACTIONS AND METRICS

1. Conduct a "current state" inventory to determine what information sharing technology is being currently deployed across the state to provide a baseline for future improvements as well as providing examples of best practices.

2. Develop a "to be" future state definition of technology supporting information sharing. This should include identification of the gaps between the current state and the future state.

3. Establish standards for use in the next 1-5 years that includes standardizing data and file formats and an overarching architectural framework that will facilitate information sharing.

4. Evaluate near and mid-term technology trends that can facilitate information sharing. This may include, but not be limited to, evaluating the role of cloud computing, emerging Computer Aided Dispatch technologies, mobile technologies and Next Generation 911.

9. TRAINING AND EXERCISES ACTIONS AND METRICS

1. Provide education and training on information sharing best practices through workshops, seminars, webinars and conferences. This should include national and statewide best practices and models.

2. Review existing training and exercise activities to determine the best means of inserting a focus on information sharing.

3. Obtain support for realistic training from executives at the local, regional and state levels by incentivizing information sharing activities.

4. Establish regionally based training coordinators.

5. Work with local, regional and state leaders to ensure that training across disciplinary and cross jurisdiction.

6. Improving the training lifecycle to ensure that the training is realistic and that lessons learned from exercises are inserted into ongoing training and SOP's.

7. Examine new ways to provide "on demand' training including using e-training platforms and looking at the use of "synthetic" training to include the use of simulation and other technologies being developed across the Commonwealth. . Pilot the use of these tools to demonstrate their effectiveness.

10. USAGE – ACTIONS AND METRICS

1. Encourage information sharing through education and increasing awareness of the benefits as well as reducing concerns through emphasis of the establishment or clear policies and procedures.

2. Identify and recommend changes to existing policies that inhibit information sharing.

3. Develop a plan to promote model information sharing practices through webinars and other means.

4. Develop a plan to incentivize good information sharing practices.

11. SUMMARY

The actions in this Plan are the first phase in a multi-year effort to achieve the goal of seamless information sharing across the Commonwealth. OVAHS, in partnership with other state agencies and jurisdictions across the Commonwealth is dedicated to carrying out the actions outlined in this plan. Progress on this project will be reported on an annual basis in the legislatively mandated SCIP implementation report.