

**Commonwealth of Virginia  
Statewide 9-1-1 Comprehensive Plan**



**JULY 2015**



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MCP facilitated a one-day Joint Review Session discussion with a group of community stakeholders selected by VITA. During this session, participants engaged in a series of exercises designed to validate and further define the themes from the town hall meetings. Acknowledgements are provided to the following participants, with thanks:

- |                  |   |
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## BACKGROUND

9-1-1 service is a vital component of Virginia’s emergency response and disaster preparedness capabilities. It serves as the backbone for delivering emergency help as quickly and effectively as possible. Without a shared vision for the future, specific goals for achieving the vision, and the buy-in and support of the entire 9-1-1 community, Virginia risks losing ground in the mission to provide the Commonwealth’s residents with new 9-1-1 technologies and services that improve interoperability and response.

The safety of the Commonwealth’s citizens hinges on the ability of agencies, like the Virginia Information Technologies Agency (VITA), government leaders, and emergency response/public safety partners to work together to design and execute a plan for upgrading the Commonwealth’s 9-1-1 capabilities and reliability. While forward looking, many of Virginia’s public safety answering points (PSAPs) or 9-1-1 centers cannot handle new technologies and struggle with antiquated analog technology, which industry will not support in the future. Many PSAPs also lack interoperability with neighboring jurisdictions, and their counterparts across the Commonwealth.

In 2008, the Commonwealth of Virginia’s E-911 Services Board adopted a 9-1-1 Comprehensive Plan (Plan) that described a strategic vision for the future of 9-1-1, based on the capabilities, technologies, and expectations that existed at that time. The Plan included strategic goals and initiatives that would help stakeholders achieve the strategic vision.

To address the ever-expanding technology that influences how 9-1-1 services can be managed and deployed, VITA engaged Mission Critical Partners, Inc. (MCP) in 2015 to work with stakeholders to renew the Commonwealth’s perspective on the future of 9-1-1. This Plan will help stakeholders set the path for future improvements to 9-1-1 functionality across Virginia, during times of rapid technology advancement.

Through interviews and town hall meetings, 9-1-1 stakeholders worked with the subject matter experts from MCP to develop a Plan that will guide the direction of 9-1-1 in the Commonwealth for years to come. Together, stakeholders from the E-911 Services Board, county and city PSAPs, the geographic information system (GIS) community, and VITA collaborated to identify their vision for the future of 9-1-1, suggested initiatives for the 2015 Plan, and potential roadblocks to achieving the vision, all of which will help meet – or exceed – the public’s high expectations for 9-1-1 emergency services.

Using the data collected during the town hall meetings, MCP completed a capabilities analysis, which identified and documented statewide 9-1-1 baseline capabilities. Next, MCP developed a statewide 9-1-1 requirements report, which captured stakeholder input on statewide 9-1-1 goals and objectives, priorities, funding availability, and procurement.

To ensure that stakeholder input was heard, accurate, and represented the community’s vision and priorities, MCP facilitated a one-day Joint Review Session discussion with a group of community stakeholders selected by VITA. During this session, participants engaged in a series of exercises



designed to validate and further define the themes from the town hall meetings to develop a vision statement, and to shape goals, objectives, and potential initiatives (projects) that take into consideration the integration of Next Generation 9-1-1 (NG9-1-1) components into a statewide 9-1-1 system.

As a result of these efforts, the recommendations in this Plan take a holistic approach to 9-1-1 to help the Commonwealth provide a consistent level of emergency service and contribute to public safety capabilities that maintain secure communities.

### THE PLAN IS...

- A future-looking, holistic Plan that helps communicate a vision and priorities for Virginia's
- 9-1-1 "ecosystem"
- Sets an agenda for progress and develops broad guidelines for 9-1-1
- Provides context and understanding for stakeholders
- Allows a process for stakeholders to share their thoughts/ideas
- A decision-making tool

### THE PLAN ISN'T...

- A feasibility study or a continuation of the study
- An end-point in the planning process
- A static, "check-the-box" document
- A "silver-bullet"
- An operational/tactical plan



This Plan articulates the Commonwealth's 9-1-1 vision, goals, and actionable initiatives. It also aligns with the guiding principles, themes, and several existing resources. The intent is to guide operational, technical, resource, funding, and legislative decisions based on identified needs for advancing 9-1-1 capabilities and services. Included in this Plan is the extension of an invitation to all 9-1-1 stakeholders to take a role in moving Virginia toward its 9-1-1 vision, by actively participating in the goals and initiatives. This Plan also provides stakeholders the ability to measure progress and stay informed about actions being taken to achieve the goals, including initiatives, action plans, and tasks.



## INSIGHTS AND ALIGNMENT

To maintain alignment of priorities between the 9-1-1 stakeholder community and VITA, collaborative partnerships will be required to monitor that initiatives undertaken are consistent with the expressed needs of the 9-1-1 community and the intent of this Plan.

Throughout the Commonwealth, planning and studies that influence and have a direct impact on this Plan exist. In alignment with those plans, stakeholder themes, and the principles outlined below, localities should be able to maintain control of 9-1-1 operations while the Commonwealth provides needed guidance and support. All goals and objectives must be actionable and measurable to ensure accountability and alignment between this Plan and others that may impact 9-1-1, such as:

- Next Generation 9-1-1 Implementation Plan (March 2012)
- Internet Protocol (IP)-based 9-1-1 Network Feasibility Study (January 2015)
- Virginia Geographic Information Network (VGIN) GIS Strategic Plan (2015–2020)
- Commonwealth of Virginia 9-1-1 Comprehensive Plan Capabilities Analysis (May 2015)
- Commonwealth of Virginia 9-1-1 Comprehensive Plan Statewide 9-1-1 Requirements (May 2015)

## THEMES

During the town hall meetings, stakeholders expressed similar desires, concerns, and priorities, which facilitators captured as a set of overarching themes. Feedback received during the Joint Review Session demonstrated alignment with the outcomes from the town hall meetings and the information captured in the *Commonwealth of Virginia 9-1-1 Comprehensive Plan Capabilities Analysis* document. Additional themes identified by MCP were presented to the Joint Review Session participants for consideration. After reviewing both lists of themes along with their own items and VITA staff insights, the Joint Review Session participants developed the consolidated series of themes outlined below. All actions taken to achieve the goals, objectives, and initiatives in the Plan should align with these themes.

Establish standards and a minimum level of service	Ensuring reliable access to public safety services
Leveraging best practices within/outside Virginia	Enhance support and protection of 9-1-1 assets
<b>Funding</b>	<b>Technology implementation</b>
Foster partnerships and collaboration	Improve interoperability
FirstNet impact on funding	<b>Better GIS Integration</b>
Focus on Federal and FCC requirements	Security / Cybersecurity
Provide access to shared resources	<b>Data Replication / Sharing</b>
Training / Certification	Alignment of priorities
Retention / Pay	<b>Improve communications</b>
Classification	Expand public education
Recruiting	



## GUIDING PRINCIPLES

Guiding principles set a benchmark for stakeholders as they consider what actions to take to achieve the goals, objectives, and initiatives in the Plan. To realize the vision for the future of 9-1-1 in Virginia, all actions taken must align with these guiding principles.

- 9-1-1 is an essential, local public safety service.
- The Plan must address ALL of 9-1-1, not just NG9-1-1.
- Full stakeholder engagement is needed.
- Services must not be degraded.
- Regional capabilities / initiatives must be leveraged.

For stakeholder agencies in the Commonwealth, doing nothing is not an option.

## PROPOSED OUTCOMES

This *Statewide 9-1-1 Comprehensive Plan* (Plan), including the associated implementation plan, defines key strategic initiatives for improving 9-1-1 services and functionality across Virginia. The Plan describes a future for 9-1-1 to include NG9-1-1 and will influence Virginia's statewide decisions concerning 9-1-1. The successful achievement of the Plan's initiatives will result in Virginia's ability to continue to meet the public's high expectations for 9-1-1 emergency service, provide a consistent level of emergency service across the Commonwealth, and to contribute to excellent public safety capabilities that maintain secure communities.

The future vision for Virginia will come to fruition through regular involvement from the 9-1-1 community, those who diligently serve the public every day and know the issues at hand. It is up to this community, with the assistance of VITA, to continue to spearhead the improvement efforts needed for Virginia to be a leader in providing services for NG9-1-1 and beyond.



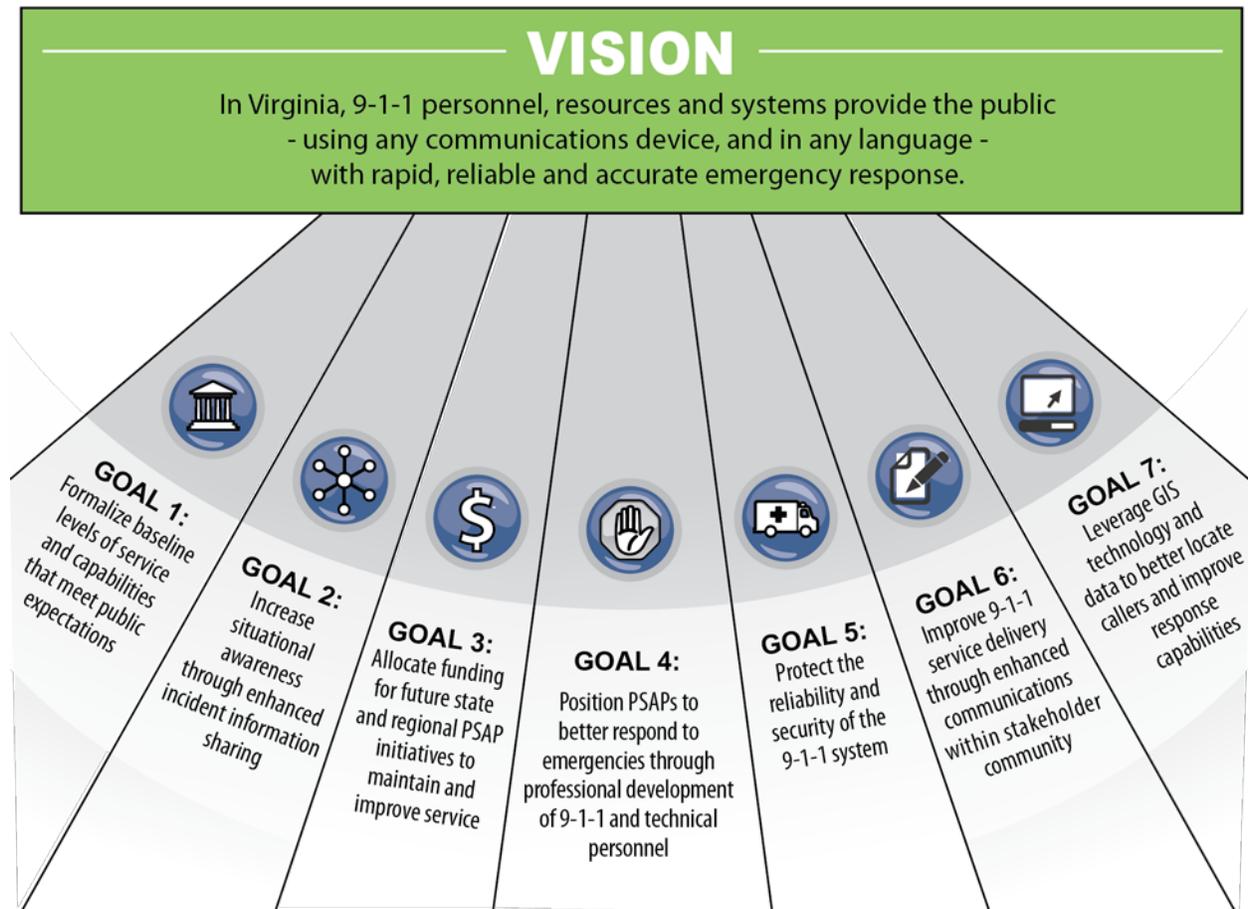
## STRATEGY

### THE VISION

In Virginia, 9-1-1 personnel, resources and systems provide the public — using any communications device, and in any language — with rapid, reliable and accurate emergency response.

Developed in concert with Virginia’s local, regional, and state-level 9-1-1 stakeholders, this vision represents the ideal operational picture for 9-1-1 emergency response functioning at an optimal level of service and capability.

In a proactive approach to the planning process, the vision has evolved because of emerging technologies, continued evolution of the 9-1-1 ecosystem, and takes a holistic approach to 9-1-1.





## GOALS

The strategic goals represent overarching, long-term targets that will help Virginia move toward its vision for 9-1-1, and represent the prioritized requirements identified by participants in the town hall meetings and the Joint Review Session.



### GOAL 1:

Formalize baseline levels of service and capabilities that meet public expectations



### GOAL 2:

Increase situational awareness through enhanced incident information sharing



### GOAL 3:

Allocate funding for future state and regional PSAP initiatives to maintain and improve service



### GOAL 4:

Position PSAPs to better respond to emergencies through professional development of 9-1-1 and technical personnel



### GOAL 5:

Protect the reliability and security of the 9-1-1 system



### GOAL 6:

Improve 9-1-1 service delivery through enhanced communications within stakeholder community



### GOAL 7:

Leverage GIS technology and data to better locate callers and improve response capabilities



Until there is a baseline level of service and/or set of capabilities recommended for PSAPs to achieve, there is no consistency in level of service across the Commonwealth.

Additionally, without an established understanding of the expectation and a target, PSAPs cannot aim to deliver a minimum level of service on par with neighboring jurisdictions or the Commonwealth's expectations.

## **GOAL 1: FORMALIZE BASELINE LEVELS OF SERVICE AND CAPABILITIES THAT MEET PUBLIC EXPECTATIONS**

### **INITIATIVE(S)**

- Identify, specify, and adopt a standard or set of standards for a baseline level of 9-1-1 service and capabilities

### **OUTCOMES**

- Implement baseline standards so that 9-1-1 professionals can process and locate emergency service requests
- Provide consistent 9-1-1 services to first responders and the public throughout the Commonwealth
- Eliminate single points of failure
- Establish the ability for stakeholders to monitor, forecast, and proactively address evolutions in the 9-1-1 public safety environment

### **PERFORMANCE**

The Commonwealth will achieve this goal once it has adopted and implemented baseline operational and technology standards, best practices and guidelines that local PSAPs and 9-1-1 professionals can apply to provide consistent, essential 9-1-1 services throughout the Commonwealth.

All PSAPs should have a formalized implementation plan for achieving the baseline, and have achieved the baseline capabilities.



Emerging technology such as the NPSBN, NG9-1-1, Text-to-9-1-1, and CAD-to-CAD are opening floodgates for new sources of information to flow into PSAPs. Without standards and best practices for information sharing and implementation in place, situational awareness information will be inconsistent throughout the Commonwealth and have serious implications during mutual aid incidents.

Without a consistent planning methodology, stakeholders run the risk of inadequately assessing what is needed, researching providers, and determining what “incident management” problems the information provided by the new system will solve.

Information sharing is not possible without implementation of advanced technology to overcome challenges of connecting disparate systems.

## **GOAL 2: INCREASE SITUATIONAL AWARENESS THROUGH ENHANCED INCIDENT INFORMATION SHARING**

### **INITIATIVE(S)**

- Implement statewide standards and best practices to enhance incident information sharing
- Identify and adopt a planning methodology that enhances technology implementation coordination throughout a project life cycle and improves change management
- Employ technology that allows for seamless automatic bi-directional communication of incident information between PSAPs

### **OUTCOMES**

- Maintain a proactive approach for replacing antiquated analog technology, exploring emerging technologies and assessing public expectations
- Establish processes for sharing information between disparate systems
- Establish policies for sharing data

### **PERFORMANCE**

The Commonwealth will achieve this goal once it has implemented statewide standards and best practices to achieve interoperability, and adopted a planning methodology that enhances technology implementation coordination throughout a project life cycle and improves change management.



Without a long-term funding strategy and procurement guidelines, localities run the risk of not being prepared for the costs of replacing technology that is no longer supported by industry and failing to implement technology that could improve location accuracy, call processing and set up times.

Absence of a holistic strategy for all of 9-1-1, not just Eg-1-1 or NG9-1-1, increases the possibility of procuring services or equipment that cannot be sustained or that do not capitalize on the power of purchasing as a region.

### **GOAL 3: ALLOCATE FUNDING FOR FUTURE STATE AND REGIONAL PSAP INITIATIVES TO MAINTAIN AND IMPROVE SERVICE**

#### **INITIATIVE(S)**

- Maintain stable and sustainable funding for the overall 9-1-1 system(s) in the Commonwealth
- Establish a strategy for funding the statewide deployment of NG9-1-1
- Adopt statewide procurement guidelines

#### **OUTCOMES**

- Support PSAPs in their efforts to achieve and maintain the established baseline level of 9-1-1 service through a holistic statewide 9-1-1 funding strategy, avoiding unfunded mandates
- Ascertain potential costs of statewide NG9-1-1 deployment, and sustainment and develop an NG9-1-1 funding strategy that aligns with the statewide 9-1-1 funding strategy
- Improve the ability of PSAPs to identify and validate vendors' qualifications and capabilities through a set of statewide procurement and vendor qualification guidelines

#### **PERFORMANCE**

The Commonwealth will achieve this goal once it has adopted a stable and sustainable funding strategy for supporting the baseline level of 9-1-1 service throughout the Commonwealth, established a strategy for funding the statewide deployment of NG9-1-1, and adopted statewide procurement guidelines.



Until there are minimum criteria for training and certification for 9-1-1 and technical personnel within the PSAP community, it is more likely that PSAPs will deliver inconsistent levels of service across the Commonwealth.

When requirements are clear and training is improved, employee retention is higher, reducing high turnover rates and improving levels of service to the community.

## **GOAL 4: POSITION PSAPS TO BETTER RESPOND TO EMERGENCIES THROUGH PROFESSIONAL DEVELOPMENT OF 9-1-1 AND TECHNICAL PERSONNEL**

### **INITIATIVE(S)**

- Identify PSAP and technical staffing needs
- Identify and adopt minimum criteria for training, certification and retention programs to support 9-1-1 professional and technical support personnel

### **OUTCOMES**

- Develop a strategy that provides actionable guidance and best practices for training
- Improve recruitment, training and retention
- Provide actionable state certification for 9-1-1 professional and technical support personnel
- Increase understanding and awareness of PSAP and Information Technology (IT) key skills requirements and staffing needs

### **PERFORMANCE**

The Commonwealth will achieve this goal once it has identified PSAP staffing needs and adopted and implemented a multi-faceted personnel engagement and development program for 9-1-1 and technical personnel.



If PSAP infrastructure is at risk, the reliability of 9-1-1 services is also at risk. Standard recommendations for software, hardware, and scalable solutions provide cost savings and improve the chances of responding to an emergency.

Further, without a continuity of operations plan (COOP), PSAPs run the risk of losing their ability to provide reliable and secure communications and response during an incident where their PSAP goes down.

A COOP helps protect PSAP operations in the event that communications infrastructure falters.

## GOAL 5: PROTECT THE RELIABILITY AND SECURITY OF THE 9-1-1 SYSTEM

### INITIATIVE(S)

- Identify PSAP assets and communications infrastructure attributes
- Support 9-1-1 center staff in formalizing COOPs for their respective PSAP
- Adopt a quality assurance/quality improvement (QA/QI) and monitoring program to document and report the effectiveness of baseline level service and capabilities criteria

### OUTCOMES

- Improve standardization of software, hardware and data through the implementation of scalable solutions that improve efficiency, reduce equipment failures, improve user functionality, improve disaster response and recovery activities, and provide cost savings
- Improve implementation of technology through project and change management processes coordinated through all levels
- Enhance support and protection of PSAP assets and communications infrastructure by developing reliable, secure, interoperable, and scalable solutions
- Sustain, monitor, forecast, and proactively mitigate evolutions in the public safety ecosystem

### PERFORMANCE

The Commonwealth will achieve this goal when each PSAP has identified the attributes of its assets and communications infrastructure, and has formalized a COOP. In addition, the Commonwealth must implement a change management process for coordinating projects that may impact the reliability of 9-1-1 services (legacy and next generation), as well as a QA/QI program to monitor service and capabilities.



Communication is often the simplest, but most frequently overlooked component of success in any campaign, transition, or endeavor.

Frequent, clear and useful communication between VITA, the E-911 Services Board, and the PSAP, GIS, and public safety communities is the surest guarantee of success.

Understanding goals, objectives, and initiatives is imperative to the adoption or acceptance of new practices.

Until stakeholders understand the “why” behind a request, change in protocol, or new process, they may struggle to get behind the “what.”

## **GOAL 6: IMPROVE 9-1-1 SERVICE DELIVERY THROUGH ENHANCED COMMUNICATIONS WITHIN STAKEHOLDER COMMUNITY**

### **INITIATIVE(S)**

- Develop a communications plan for internal and external 9-1-1 stakeholders
- Develop guidelines for an effective stakeholder education and outreach program, to include legislators

### **OUTCOMES**

- Improve communications among stakeholders to overcome conflict, align priorities, share information, and increase stakeholder engagement
- Communicate progress of the Plan’s goals and initiatives to stakeholders
- Communicate effectively to increase awareness of 9-1-1 capabilities and processes to the public

### **PERFORMANCE**

The Commonwealth will achieve this goal once it has adopted and implemented a 9-1-1 stakeholder communications plan, and adopted and implemented state-supported public education programs.



Without integration between PSAP and GIS domains, gaps in addressing and location accuracy will grow and opportunities for litigation resulting from not being able to locate callers in distress will increase.

GIS is the foundation of an ESInet and accuracy is imperative to not only locating incidents, but also for the routing of calls, and providing backup capabilities to neighboring jurisdictions.

## **GOAL 7: LEVERAGE GIS TECHNOLOGY AND DATA TO BETTER LOCATE CALLERS AND IMPROVE RESPONSE CAPABILITIES**

### **INITIATIVE(S)**

- Support coordination and collaboration of 9-1-1 between the Public Safety Communications (PSC) Coordinator and VGIN
- Validate and improve GIS data quality and integration for public safety purposes

### **OUTCOMES**

- Achieve comprehensive understanding of the role of geospatial data in public safety software solutions and the impacts this has upon local GIS resources
- Increase integration between PSAP and GIS domains
- Improve call processing location accuracy and workflow
- Establish relationships to improve 9-1-1's ability to leverage GIS capabilities

### **PERFORMANCE**

The Commonwealth will achieve this goal once it has established a policy for supporting 9-1-1-specific initiatives identified in the *VGIN GIS Strategic Plan (2015–2020)*, conducted a GIS database review, and developed user requirements for using GIS information in public safety software solutions.



## CALL TO ACTION

To inspire critical buy-in and alignment within the community and with stakeholders, all statewide initiatives (strategies, best practices, etc.) should be:

- Developed jointly between stakeholders and subject matter experts
- Vetted by stakeholders and subject matter experts through the Regional Advisory Council
- Adopted by the E-911 Services Board

This means that the success of advancing toward the Commonwealth's 9-1-1 vision is dependent upon partnerships and commitment between the E-911 Services Board, 9-1-1, GIS, public safety stakeholders, and VITA. As the Commonwealth establishes short-, mid-, and long-term timelines for each goal, stakeholders must actively participate and work together.

To demonstrate commitment and proactively address legislative and other needs that could create roadblocks to success, VITA is committed to reporting to the stakeholders, on a regular basis, the progress made toward achieving the goals and initiatives identified in this Plan.



## APPENDIX A – RECOMMENDED INITIATIVE TASKS

Although it is ultimately up to the stakeholders to design the path forward and determine what steps they need to take to achieve each goal, this appendix outlines practical tasks that can be implemented to that end.

Each recommended task is representative of the prioritized requirements as shaped by the stakeholders through the development of this Plan.

For each initiative, the PSC Coordinator should require:

- Project plans complementary to the complexity of an initiative be developed and approved by the oversight and collaborative partners prior to beginning work on the initiative
- Dates established for completion of initiative tasks to serve as performance benchmarks for measuring and reporting progress



**Goal 1: Formalize baseline levels of service and capabilities that meet public expectations**

**Initiative:** Identify, specify, and adopt a standard or set of standards for a baseline level of 9-1-1 service and capabilities

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create baseline level of service and capabilities document	
2	Develop PSAP baseline capabilities implementation plans	
3	Document, report and communicate progress	



**Goal 2: Increase situational awareness through enhanced incident information sharing**

**Initiative: Implement statewide standards and best practices to enhance incident information sharing**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create statewide incident information sharing standards	
2	Document, report, and communicate progress	

**Initiative: Identify and adopt a planning methodology that enhances technology implementation coordination throughout a project life cycle and improves change management**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create an incident information sharing planning policy	
2	Document, report, and communicate progress	

**Initiative: Employ technology that allows for seamless automatic bi-directional communication of incident information between PSAPs**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Monitor industry and assess emerging technologies	
2	Champion emerging technology projects	
3	Document, report, and communicate progress	



<b>Goal 3: Allocate funding for future state and regional PSAP initiatives to maintain and improve service</b>		
<b><u>Initiative:</u> Maintain stable and sustainable funding for the overall 9-1-1 system(s) in the Commonwealth</b>		
	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Develop PSAP baseline level of service and capabilities budgets	
2	Create a holistic statewide 9-1-1 funding strategy	
3	Document, report, and communicate progress	
<b><u>Initiative:</u> Establish a strategy for funding the statewide deployment of NG9-1-1</b>		
	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create NG9-1-1 deployment and sustainment funding strategy that aligns with the statewide 9-1-1 funding strategy, taking into consideration potential technology such as text-to-9-1-1, implementation of an i3-capable Emergency Services Internet Protocol (IP) network (ESInet), regional NG9-1-1 pilots, and GIS database development	
2	Document, report, and communicate progress	
<b><u>Initiative:</u> Adopt statewide procurement guidelines</b>		
	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create statewide procurement and vendor qualification	



	guidelines	
2	Document, report, and communicate progress	



**Goal 4: Position PSAPs to better respond to emergencies through professional development of 9-1-1 and technical personnel**

**Initiative: Identify PSAP and technical staffing needs**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Conduct staffing analyses	
2	Document, report, and communicate progress	

**Initiative: Identify and adopt minimum criteria for training, certification and retention programs to support 9-1-1 professional and technical support personnel**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create baseline PSAP and support staff engagement and development criteria	
2	Document, report, and communicate progress	



**Goal 5: Protect the reliability and security of the 9-1-1 system**

**Initiative: Identify PSAP assets and communications infrastructure attributes**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Gather and assemble attributes for existing PSAP assets and infrastructure	
2	Document, report, and communicate progress	

**Initiative: Support 9-1-1 center staff in formalizing COOPs for their respective PSAP**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Confirm that each PSAP has a formalized COOP that includes technology continuity management for disaster response, and recovery activities for PSAP assets and communications infrastructure	
2	Document, report, and communicate progress	

**Initiative: Adopt a QA/QI and monitoring program to document and report the effectiveness of baseline level service and capabilities criteria**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create QA/QI guidelines	



2	Document, report, and communicate progress	
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**Goal 6: Improve 9-1-1 service delivery through enhanced communications within stakeholder community**

**Initiative: Develop a communications plan for internal and external 9-1-1 stakeholders**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create a 9-1-1 stakeholder communications plan	
2	Document, report, and communicate progress	

**Initiative: Develop guidelines for an effective stakeholder education and outreach program, to include legislators**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Develop 9-1-1 public education guidelines	
2	Document, report, and communicate progress	



**Goal 7: Leverage GIS technology and data to better locate callers and improve response capabilities**

**Initiative: Support coordination and collaboration of 9-1-1 between the PSC Coordinator and VGIN**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Create a policy for supporting 9-1-1 specific initiatives identified in the VGIN GIS Strategic Plan	
2	Document, report, and communicate progress	

**Initiative: Validate and improve GIS data quality and integration for public safety purposes**

	<i>Recommended Tasks</i>	<i>Recommended Actions</i>
1	Conduct GIS database review	
2	Develop user requirements for using GIS information in public safety software solutions	
3	Document, report, and communicate progress	



**APPENDIX B – 9-1-1 COMPREHENSIVE PLAN CROSSWALK**

<p><b>Vision</b></p>	<p><i>In Virginia, the 9-1-1 system provides the public — using any communications device, and in any language — with reliable and accurate emergency communications.</i></p>		
<p><b>Guiding Principles</b></p>	<ul style="list-style-type: none"> <li>▪ 9-1-1 is an essential, local public safety service</li> <li>▪ Must address ALL of 9-1-1 not just NG9-1-1</li> <li>▪ Full stakeholder engagement is needed</li> <li>▪ Services must be not be degraded</li> <li>▪ Economies need to be leveraged</li> </ul>		
<p><b>Goals/Initiatives</b></p>	<p><b>Initiative Outcomes</b></p>	<p><b>Tasks</b></p>	<p><b>Strategic Alignment – Guiding Principles, Stakeholder Themes (Needs) and Existing Plans</b></p>
<p><b>Goal #1:</b> Formalize baseline levels of service and capabilities that meet public expectations</p> <p><b>Initiatives:</b> Identify, specify, and adopt a standard or set of standards for a baseline level of 9-1-1 service and capabilities</p>	<p>Implement baseline standards so that 9-1-1 professionals can process and locate emergency service requests</p> <p>Provide consistent 9-1-1 services to first responders and the public throughout the Commonwealth</p> <p>Eliminate single points of failure</p> <p>Establish the ability for stakeholders to monitor, forecast, and proactively address evolutions in the 9-1-1 public safety environment</p>		<p>Guiding Principles</p> <ul style="list-style-type: none"> <li>▪ 9-1-1 is an essential, local public safety service</li> <li>▪ Must address ALL of 9-1-1 not just NG9-1-1</li> <li>▪ Full stakeholder engagement is needed</li> <li>▪ Services must be not be degraded</li> <li>▪ Economies need to be leveraged</li> </ul> <p>Stakeholder Themes (Needs)</p> <ul style="list-style-type: none"> <li>▪ Establish Standards / Minimum Level of Service</li> <li>▪ Leveraging best practices within/outside Virginia</li> </ul> <p>Existing Plans</p>



<b>Oversight:</b>			
<b>Coordinating Partnerships:</b>			
<b>Performance Statement:</b>	<p>The Commonwealth will achieve this goal once it has adopted and implemented baseline operational and technology standards, best practices and guidelines that local PSAPs and 9-1-1 professionals can apply to provide consistent, essential 9-1-1 services throughout the Commonwealth.</p> <p>All PSAPs should have a formalized implementation plan for achieving the baseline, and have achieved the baseline capabilities by [target date].</p>		
<b>Performance Milestones Reporting:</b>			
<b>Goals/Initiatives</b>	<b>Initiative Outcomes</b>	<b>Tasks</b>	<b>Strategic Alignment – Guiding Principles, Stakeholder Themes (Needs) and Existing Plans</b>
<p><b>Goal #2:</b> Increase situational awareness through enhanced incident information sharing</p> <p><b>Initiatives:</b> Implement statewide standards and best practices to enhance incident information sharing Identify and adopt a planning methodology that enhances technology</p>	<p>Maintain a proactive approach for replacing antiquated analog technology, exploring emerging technologies and assessing public expectations</p> <p>Establish processes for sharing information between disparate systems</p> <p>Establish policies for sharing data</p>		<p>Guiding Principles</p> <p>Stakeholder Themes (Needs)</p> <ul style="list-style-type: none"> <li>■ Provide access to shared resources</li> <li>■ Foster partnerships and collaboration</li> <li>■ Technology implementation</li> <li>■ Improve interoperability</li> </ul> <p>Existing Plans</p>



<p>implementation coordination throughout a project life cycle and improves change management</p> <p>Employ technology that allows for a seamless automatic bi-directional communication of incident information between PSAPs</p>			
<p><b>Oversight:</b></p>			
<p><b>Coordinating Partnerships:</b></p>			
<p><b>Performance Statement:</b></p>	<p>The Commonwealth will achieve this goal once it has implemented statewide standards and best practices to achieve interoperability, and adopted a planning methodology that enhances technology implementation coordination throughout a project life cycle and improves change management by [target date].</p>		
<p><b>Performance Milestones Reporting:</b></p>			
<p><b>Goals/Initiatives</b></p>	<p><b>Initiative Outcomes</b></p>	<p><b>Tasks</b></p>	<p><b>Strategic Alignment – Guiding Principles, Stakeholder Themes (Needs) and Existing Plans</b></p>
<p><b>Goal #3:</b></p> <p>Allocate funding for future state and regional PSAP initiatives to maintain and improve service</p>	<p>Support PSAPs in their efforts to achieve and maintain the established baseline level of 9-1-1 service through a holistic statewide 9-1-1 funding strategy, avoiding</p>		<p>Guiding Principles</p> <p>Stakeholder Themes (Needs)</p> <ul style="list-style-type: none"> <li>■ Funding</li> <li>■ Foster partnerships / collaboration</li> </ul>



<p><b>Initiatives:</b></p> <p>Maintain stable and sustainable funding for the overall 9-1-1 system(s) in the Commonwealth</p> <p>Establish a strategy for funding the statewide deployment of NG9-1-1</p> <p>Adopt statewide procurement guidelines</p>	<p>unfunded mandates</p> <p>Ascertain potential costs of statewide NG9-1-1 deployment, and sustainment and develop an NG9-1-1 funding strategy that aligns with the statewide 9-1-1 funding strategy</p> <p>Improve the ability of PSAPs to identify and validate vendors' qualifications and capabilities through a set of statewide procurement and vendor qualification guidelines</p>		<ul style="list-style-type: none"> <li>■ FirstNet impact on funding</li> <li>■ Focus on Fed / FCC requirements</li> <li>■ Provide access to shared resources</li> </ul> <p>Existing Plans</p>
<p><b>Oversight:</b></p>			
<p><b>Coordinating Partnerships:</b></p>			
<p><b>Performance Statement:</b></p>	<p>The Commonwealth will achieve this goal once it has adopted a stable and sustainable funding strategy for supporting the baseline level of 9-1-1 service throughout the Commonwealth, established a strategy for funding the statewide deployment of NG9-1-1, and adopted statewide procurement guidelines by [target date].</p>		
<p><b>Performance Milestones Reporting:</b></p>			
<p><b>Goals/Initiatives</b></p>	<p><b>Initiative Outcomes</b></p>	<p><b>Tasks</b></p>	<p><b>Strategic Alignment – Guiding Principles, Stakeholder Themes (Needs) and Existing Plans</b></p>



<p><b>Goal #4:</b> Position PSAPs to better respond to emergencies through professional development of 9-1-1 and technical personnel</p> <p><b>Initiatives:</b> Identify PSAP and technical staffing needs Identify and adopt minimum criteria for training, certification and retention programs to support 9-1-1 professional and technical support personnel</p>	<p>Develop a strategy that provides actionable guidance and best practices for training</p> <p>Improve recruitment, training and retention</p> <p>Provide actionable state certification for 9-1-1 professional and technical support personnel</p> <p>Increase understanding and awareness of PSAP and IT key skills requirements and staffing needs</p>		<p>Guiding Principles</p> <p>Stakeholder Themes (Needs)</p> <ul style="list-style-type: none"> <li>■ Training / Certification</li> <li>■ Retention / Pay</li> <li>■ Classification</li> <li>■ Recruiting</li> </ul> <p>Existing Plans</p>
<p><b>Oversight:</b></p>			
<p><b>Coordinating Partnerships:</b></p>			
<p><b>Performance Statement:</b></p>	<p>The Commonwealth will achieve this goal once it has identified PSAP staffing needs and adopted and implemented a multi-faceted personnel engagement and development program for 9-1-1 and technical personnel by [target date].</p>		
<p><b>Performance Milestones Reporting:</b></p>			
<p><b>Goals/Initiatives</b></p>	<p><b>Initiative Outcomes</b></p>	<p><b>Tasks</b></p>	<p><b>Strategic Alignment – Guiding Principles, Stakeholder Themes (Needs) and Existing Plans</b></p>
<p><b>Goal #5:</b></p>	<p>Improve standardization</p>		<p><b>Guiding Principles</b></p>



<p>Protect the reliability and security of the 9-1-1 system</p> <p><b>Initiatives:</b></p> <p>Identify PSAP assets and communications infrastructure attributes</p> <p>Support 9-1-1 center staff in formalizing COOPs for their respective PSAP</p> <p>Adopt a QA/QI and monitoring program to document and report the effectiveness of baseline level service and capabilities criteria</p>	<p>of software, hardware and data through the implementation of scalable solutions that improve efficiency, reduce equipment failures, improve user functionality, improve disaster response and recovery activities, and provide cost savings</p> <p>Improve implementation of technology through project and change management processes coordinated through all levels</p> <p>Enhance support and protection of PSAP assets and communications infrastructure by developing reliable, secure, interoperable, and scalable solutions</p> <p>Sustain, monitor, forecast, and proactively mitigate evolutions in the public safety ecosystem</p>		<p><b>Stakeholder Themes (Needs)</b></p> <ul style="list-style-type: none"> <li>▪ Ensuring reliable access to public safety services</li> <li>▪ Enhance support and protection of 9-1-1 assets</li> <li>▪ Technology Implementation</li> <li>▪ Improve Interoperability</li> <li>▪ Better GIS Integration</li> <li>▪ Security / Cybersecurity</li> <li>▪ Data Replication / Sharing</li> </ul> <p><b>Existing Plans</b></p>
<p><b>Oversight:</b></p>			
<p><b>Coordinating Partnerships:</b></p>			



<p><b>Performance Statement:</b></p>	<p>The Commonwealth will achieve this goal when each PSAP has identified the attributes of its assets and communications infrastructure, and formalized a COOP. In addition, the Commonwealth must implement a change management process for coordinating projects that may impact the reliability of 9-1-1 services (legacy and next generation), as well as a QA/QI program to monitor service and capabilities by [target date].</p>		
<p><b>Performance Milestones Reporting:</b></p>			
<p><b>Goals/Initiatives</b></p>	<p><b>Initiative Outcomes</b></p>	<p><b>Tasks</b></p>	<p><b>Strategic Alignment – Guiding Principles, Stakeholder Themes (Needs) and Existing Plans</b></p>
<p><b>Goal #6:</b>          Improve 9-1-1 service delivery through enhanced communications within stakeholder community</p> <p><b>Initiatives:</b>          Develop a communications plan for internal and external 9-1-1 stakeholders          Develop guidelines for an effective stakeholder education and outreach program, to include legislators</p>	<p>Improve communications among stakeholders to overcome conflict, align priorities, share information, and increase stakeholder engagement</p> <p>Communicate progress of the Plan’s goals and initiatives to stakeholders</p> <p>Communicate effectively to increase awareness of 9-1-1 capabilities and processes to the public</p>		<p>Guiding Principles</p> <p>Stakeholder Themes (Needs)</p> <ul style="list-style-type: none"> <li>■ Alignment of Priorities</li> <li>■ Improve Communications</li> <li>■ Expanding public education</li> </ul> <p>Existing Plans</p>
<p><b>Oversight:</b></p>			



<b>Coordinating Partnerships:</b>			
<b>Performance Statement:</b>	The Commonwealth will achieve this goal once it has adopted and implemented a 9-1-1 stakeholder communications plan, and adopted and implemented state-supported public education programs by [target date].		
<b>Performance Milestones Reporting:</b>			
<b>Goals/Initiatives</b>	<b>Initiative Outcomes</b>	<b>Tasks</b>	<b>Strategic Alignment – Guiding Principles, Stakeholder Themes (Needs) and Existing Plans</b>
<p><b>Goal #7:</b> Leverage GIS technology and data to better locate callers and improve response capabilities</p> <p><b>Initiatives:</b> Support coordination and collaboration of 9-1-1 between the PSC Coordinator and VGIN Validate and improve GIS data quality and integration for public safety purposes</p>	<p>Achieve comprehensive understanding of the role of geospatial data in public safety software solutions and the impacts this has upon local GIS resources</p> <p>Increase integration between PSAP and GIS domains</p> <p>Improve call processing location accuracy and workflow</p> <p>Establish relationships to improve 9-1-1's ability to leverage GIS capabilities</p>		<p>Guiding Principles</p> <p>Stakeholder Themes (Needs)</p> <ul style="list-style-type: none"> <li>▪ Leveraging best practices within/outside Virginia</li> <li>▪ Foster partnerships and collaboration</li> <li>▪ Provide access to shared resources</li> <li>▪ Technology implementation</li> <li>▪ Improve interoperability</li> <li>▪ Better GIS Integration</li> <li>▪ Data Replication / Sharing</li> </ul> <p>Existing Plans</p>
<b>Oversight:</b>			
<b>Coordinating</b>			



Partnerships:	
<b>Performance Statement:</b>	The Commonwealth will achieve this goal once it has established a policy for supporting 9-1-1-specific initiatives identified in the <i>VGIN GIS Strategic Plan (2015–2020)</i> , conducted a GIS database review, and developed user requirements for using GIS information in public safety software solutions by [target date].
<b>Performance Milestones Reporting:</b>	