

# Report Title: IT Strategic Plan Summary

Agency: 127 Department of Emergency Management

## Current Operational IT Investments

***In this section, describe the high-level strategy the agency will use to manage existing operational IT investments over the next year to 5 years. This section should align with identified Business Requirements for Existing Technology (BReTs). At minimum, please address the following questions in your description of your agency's strategy for managing existing operational IT investments:***

***Are there existing IT investments that will require additional funding over the next year to 5 years, such as license renewals, re-competition of current IT contracts, or system enhancements required by the Agency Strategic Plan?***

***If there are systems that will no longer support the agency's business needs, either through poor performance or excessive cost, how does IT leadership in the agency plan to address the issues?***

***If the agency does not have the staff or funding to meet increasing demand for IT services, how will IT leadership fulfill the requests?***

The Information Technology (IT) Division at the Virginia Department of Emergency Management consists of eleven (11) staff positions, responsible for planning, administration and first-tier support of the systems and applications supporting the agency's operations at VDEM Headquarters and the Virginia Emergency Operations Center (VEOC). (As of September 2016, two (2) of these positions are vacant but have been approved to fill.) The entire IT Division staff are also members of the Virginia Emergency Support Team (VEST) and augment the VEOC when the Governor declares a State of Emergency. The division also coordinates the provision of IT support for state personnel (including Reservists, temporary employees and contractors) operating in any Joint Field Office (JFO) established by the Commonwealth and the Federal Emergency Management Agency (FEMA) as a result of a natural or man-made disaster. In addition to the sites mentioned above, the division is also responsible for planning Continuity of IT Operations between those sites and Disaster Recovery (DR) at the agency's designated DR site.

VDEM is not responsible for the IT infrastructure (including servers, networks, computers and networked printers) that supports its operations. That responsibility rests with the Commonwealth Information Technology Partnership (ITP) (the Virginia Information Technologies Agency and Northrop Grumman Corp). ITP resources providing end user support, server management and network management services are currently shared with the Virginia State Police and the Virginia Department of Corrections. VDEM has taken first steps towards "Transforming" into the Commonwealth's IT Infrastructure Service Model and the agency is paying a "Legacy" surcharge on top of infrastructure services charges. Activities towards Transformation are ongoing. As of September 2016, VDEM is awaiting delivery of three finalized Transformation Statements of Work (Network Services, Security Services, and Crisis Information Systems) from the ITP.

Significant accomplishments over the past year include:

- Receipt of funding for over \$2.5 million in new IT projects and procurements as part of the Governor's FY17-18 budget.
- Purchase and implementation of 60 new laptops for agency staff.
- Procurement of 60 new computers (laptops and desktops) for use at Virginia Emergency Operations Center, as well as four laptops optimized for GIS processing.
- Implementation of Internet Explorer 11 across all agency computing devices.
- Implementation of Time, Attendance and Leave (TAL).
- Significant upgrades to functionality and workflow of the Request Management processes in WebEOC.
- Continued enhancement of information sharing among multiple WebEOC systems through

## WebFUSION.

- Purchase and implementation of iPhones, iPads and Delorme GIS tracking devices to support the UCI bike race.
- Expansion and enhancement of the Logi Analytics reporting system to provide more powerful analysis capabilities across the agency's many data sets.
- Migration of VDEM email to the COV domain.
- Initiation of two Transformation custom work requests, for Network Services and Security Services.
- Significant progress towards finalization and initialization of Transformation.
- Continued development and refinement of practices to use ArcGIS Online (<https://vdemgis.maps.arcgis.com>) to facilitate online sharing of data, collaboration, and decentralized data editing and management.
- Support of the augmentation of the Virginia Emergency Support Team (VEST) as a result of severe weather related to Hurricane Joaquin (October 2015) and tornadoes (February 2016).
- WebEOC and GIS support through multiple emergency responses that did not require augmentation of the VEST.
- Assisting VDEMs Finance Division with the transition from FMS to Cardinal.

The IT Divisions top priorities include:

- Implementing new technologies authorized in the FY16-18 budget, including Planning Software, Damage Assessment Software, Agency Radio and Telecommunications Integration, Communications Upgrades in the Watch, Computer Aided Dispatch System with WebEOC Integration, and procurement of new Fleetwide Interoperable Radios.
- Procurement of Open-Source Communications Analysis Software.
- Working with agency executive and divisional leadership to ensure that all personnel have adequate technology to perform job duties and agency mission.
- Establish IT strategic plan for all current and legacy systems.
- Establish agency Technology Committee with divisional representatives to assist and strategic planning processes.
- Coordinating with internal and external partners for the establishment of an alternate Emergency Operations Center (EOC)/Operations Division location.
- Investigating alternative technologies including tablet computers
- Implementation of new technologies as they become available through the Commonwealth IT Infrastructure Sourcing project, starting with the transition of VDEMs email from Outlook to Google.
- Coordinating and/or providing support for the agency's mission-critical applications, including but not limited to WebEOC, Geographic Information Systems (GIS), Cardinal and the standard suite of desktop applications (Microsoft Office, Outlook, etc.).
- Coordinating with the Information Technology Partnership (ITP) (VITA/Northrop Grumman) for the provision of the agency's day-to-day operational needs for desktops, servers and network services.
- Compliance with the Commonwealth's information security and risk program.
- Coordinating with the ITP to maintain progress towards Transformation.
- Collaboration with internal and external entities for the implementation of new applications
- Emergency Grant Management System (EGMS) and other grant-related systems (VDEM Recovery & Mitigation, Grants and Finance)
- Response to and support of the activation of the Virginia Emergency Support Team (VEST) and any Joint Field Office requirements
- Identification of administrative solutions to support the agency's "back-office" operations.
- Development of and enhancements to custom Web applications and continued support of legacy custom applications and databases to facilitate the agency's daily operations.

## **Factors Impacting the Current IT**

***In this section, the agency will describe the changes in their business environment that will require or mandate changes to the agency's current IT investments. These are requirements and mandates from external sources, such as other agencies or business partners, the agency's customer base, product and service providers, or new federal or state legislation or regulations. The agency must identify the business value of the change, any important deadlines that must be met, and the consequences if the deadlines are not met. In your discussion, be sure to note***

***whether the proposed enhancements are funded or not. If the agency's existing current IT investments will not need enhancement due to requirements or mandates from external sources in the foreseeable future, the agency should enter the following text rather than leave the Factors Impacting the Current IT section blank***

***For each mandated change, summarize your agency's response from your Agency Strategic Plan, and is it the opinion of agency IT leadership that the IT portion of the response is adequately funded?***

***Do the mandated changes effect IT in other Commonwealth agencies, or in other states? If so, how?***

The principle issues impacting VDEM IT include staff augmentation, funding and the relationship with the IT Partnership.

- The agency's operations, especially upon activation of the Virginia Emergency Support Team (VEST) require a higher degree of availability than those of other agencies. Communications, including voice and data, are key to accomplishing the agency's primary mission of coordinating the response to and recovery from natural and man-made disasters. VDEM is totally dependent on the IT Partnership to provide those services, because it possesses no organic resources. We rely on the Partnership to provide onsite end user and other support 24 hours/day-7 days/week during VEST activation and during the operating hours for Joint Field Office (JFO) operations. In addition, we rely on the ITP to provide connectivity to whatever network services FEMA provides for the JFO or alternatives to that connectivity.
- As previously noted, when a State of Emergency is declared, the entire IT Division joins the VEST and deploys to the Virginia Emergency Operations Center (VEOC), bringing routine support and development to a halt. The division is forced to react to unplanned events and rearrange priorities on the fly. Similarly, the division is called upon to react to the initiation of JFO operations with minimal planning.
- VDEM's IT Division is staffed to support specific mission-focused activities, such as WebEOC and special application support, GIS and situational awareness applications, IT Security, etc. However, as has been pointed out to VITA and Northrop Grumman (NG) on numerous occasions, VDEM shares a small handful of NG end user support (EUS) resources (currently, three) with Virginia State Police and the Dept. of Corrections. This low level of support results in VDEM's IT staff regularly being pulled away from our regular duties to perform work that we are currently being charged by VITA for NG to perform. This draw on our resources impacts the VDEM IT staff's efficiency and effectiveness.
- A large proportion of the agency's IT budget, excluding salaries, is dedicated to paying for VITA services and telecommunications costs. Given the agency's mission, these are essentially fixed expenses and cannot be reduced. Because the agency has not been fully "Transformed" into the Commonwealth's Service Model, VDEM is being assessed Legacy charges, in addition to the charges assessed for services received. Though those Legacy charges will disappear once the agency is fully Transformed, it is expected that process will take at least one more year, to be concluded in FY 2017. The exact financial impacts of Transformation (both one-time costs and changes to monthly service charges) are as yet unknown, though VITA/NG has provided some rough order of magnitude estimates. VITA's Transformation process does not allow for the preparation of detailed estimates or schedules until a solution is developed and approved by the agency. We have not yet gotten to that point in the Transformation process, though we are nearing it.
- As a result of being dependent on external entities for its infrastructure support, VDEM is subject to the actions and initiatives of the IT Partnership, and spends an inordinate amount of time reacting and responding to circumstances not of its making and out of its control.
- It should also be noted that a significant portion of the agency's operations and maintenance costs are funded from federal sources.
- Given the turmoil in the federal budget, there is concern that those sources may not be available to the extent that they have been historically provided. Of particular concern, with respect to grant funding is the continuation of that support for the agency's two GIS analysts. In addition, reliance on federal funding carries with it significant requirements and restrictions on how those funds can be spent, specifically with respect to hardware. To mitigate these impacts, VDEM's Plans Division has hired three GIS analysts who primarily work in the Virginia Fusion Center. We will be working with the Plans Division to develop a staff augmentation schedule with those personnel.

## **Proposed IT Solutions**

***In this section, describe the high-level strategy the agency will use to initiate new IT investments over the next year to 5 years in support of the agency strategic objectives documented in your Agency Strategic Plan. The agency does not need to consider specific technologies at this time, however, the strategy should identify how the IT implementation will provide business value to the organization. This section should align with identified Business Requirements for New Technology (BRnTs). At minimum, please address the following questions in your description of your agency's strategy for initiating new IT investments:***

***What are the most important solutions, based on the priority assigned to the requirements by the business sponsors in your agency, and what is the approach to achieving these priority solutions?***

***If any new IT initiatives will be started in the upcoming budget biennium, is it the opinion of agency IT leadership that it is adequately funded?***

***Does the agency's current IT staff have the appropriate skill set needed to support future agency technologies? If not, what skill sets need to be acquired?***

***If the agency will be engaged in multiple new IT initiatives, how will agency IT staff and agency subject matter experts be used across the initiatives?***

The agency anticipates continued planning for Transformation, culminating in the initiation of Transformation activities in FY 2016, and completion of those activities in FY 2017. The applications and application services that the agency employs will continue in an operations and maintenance mode throughout the biennium. VDEM intends to study the potential for enterprise solutions for Financial Management, Budget, and Human Resources, if they make business sense to the agency, as they become available. In addition, VDEM is interested in continuing investigations into hardware alternatives, specifically tablet computers. Interoperability, communications, continuity of operations and disaster recovery are all critical to the success of the agency's missions and will be the foci of studies and planning, as well.

VDEM also continues to make progress in improving its IT Security program. In July 2016, VDEM hired the services of Assura, an Information Technology Governance, Risk and Compliance vendor, to review our current IT Security environment and make recommendations to bring it into alignment with Commonwealth requirements. Once that project is complete, VDEM will identify a path forward with regard to establishing appropriate security and auditing services depending on Assura's final findings and recommendations.

At this time, VDEM has no plans to increase our Internet use. However, as we move further into cloud services (with the first step being the transition to Google for email, collaborative services, and other areas), that could change over the coming biennium. Likewise, now that cloud hosting services are allowed by Commonwealth Security, VDEM will explore those options.

VDEM continues to work with the ITP to move forward with Transformation, which we consider to be a mandatory project and upon completion will put us on the right path towards transitioning to new Infrastructure as the Commonwealth disentangles.

# Report Title: Strategic Plan

Agency: Department of Emergency Management

## Current IT Services

Category	Costs Year 1		Costs Year 2	
	GF	NGF	GF	NGF
Projected Service Fees	\$1,517,532	\$1,609,944	\$1,551,914	\$1,609,944
VITA Infrastructure Changes	\$0	\$0	\$0	\$0
Estimated VITA Infrastructure	\$1,517,532	\$1,609,944	\$1,551,914	\$1,609,944
Specialized Infrastructure	\$0	\$78,050	\$0	\$78,050
Agency IT Staff	\$429,970	\$618,574	\$429,970	\$618,574
Non-agency IT Staff	\$0	\$0	\$0	\$0
Cloud Computing Service	\$0	\$0	\$0	\$0
Other Application Costs	\$0	\$203,500	\$0	\$203,500
<b>Total</b>	<b>\$1,947,502</b>	<b>\$2,510,068</b>	<b>\$1,981,884</b>	<b>\$2,510,068</b>

## Proposed IT Investments

Category	Costs Year 1		Costs Year 2	
	GF	NGF	GF	NGF
Major IT Projects	\$0	\$0	\$0	\$0
Non-Major IT Projects	\$0	\$0	\$0	\$0
Agency-Level IT Projects	\$225,000	\$225,000	\$0	\$0
Major Stand Alone IT Procurements	\$0	\$0	\$0	\$0
Non-Major Stand Alone IT Procurements	\$0	\$0	\$0	\$0
Agency-Level Stand Alone IT Procurements	\$685,000	\$0	\$200,000	\$0
Procurement Adjustment for Staffing	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$910,000</b>	<b>\$225,000</b>	<b>\$200,000</b>	<b>\$0</b>

## Projected Total IT Budget

Category	Costs Year 1		Costs Year 2		Total Costs
	GF	NGF	GF	NGF	
Current IT Services	\$1,947,502	\$2,510,068	\$1,981,884	\$2,510,068	\$8,949,523
Proposed IT Investments	\$910,000	\$225,000	\$200,000	\$0	\$1,335,000
<b>Total</b>	<b>\$2,857,502</b>	<b>\$2,735,068</b>	<b>\$2,181,884</b>	<b>\$2,510,068</b>	<b>\$10,284,523</b>



**Report Title: Business Requirements For Technology****Agency:** Department of Emergency Management (VDEM)**127 VDEM BRt Cloud Readiness Assessment 2018****BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 10/16/2018**Mandate:** Yes**Mission Critical:** Yes**Description:**

Governor Ralph Northam's "Executive Order 19: Cloud Service Utilization and Readiness" requires agencies to take specific actions starting this month and continuing through fall 2019.

The order requires VITA to adopt a model for evaluating and incorporating cloud services into the commonwealth's information technology (IT) strategy and services. VITA has:

- Started the process of creating a cloud services model
- Begun obtaining information about agency systems that can be migrated to a cloud environment
- Provided an overview of the process at the recent agency information technology resources (AITR) meeting
- Planned additional announcements to AITRs regarding remaining steps
- Included cloud-related services and migration to the new data center in the recently awarded infrastructure contracts

Additionally, VITA and all systems must move from the Commonwealth Enterprise Solutions Center (CESC) in Chester by December of 2021. One related strategy is to reduce the number of physical servicers at CESC to prepare for the move. This means migration to the cloud must be completed by that time. It is imperative to start planning now.

Agencies' IT staff members have been asked to complete cloud assessments and should be using the results to identify resource requirements. VITA encourages agencies to evaluate their resources and discuss resource planning with the appropriate financial staff to ensure work can begin as required. Resource needs should be included requests in the upcoming budget cycle. enabled, VITA will

To identify which existing solutions can be migrated to the cloud and ensure all new IT solutions proposed be cloud- issue a hosting standard in the coming weeks. This standard will define terminology and identify requirements agencies must consider when implementing cloud-based IT solutions.

**127 VDEM IT Sourcing BRt****BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 9/27/2016**Mandate:** No**Mission Critical:****Description:**

Note that VDEM is not currently Transformed to the COV domain (other than Messaging). Thus, the BRt's listed below are based on a pre-Transformed state and do not take into account final Transformation statements of work, which have yet to be provided to VDEM.

**Messaging BRt:**

VITA is initiating disentanglement from NG messaging services in 2016. Messaging Services for email, enterprise collaboration services, and mobile device management are required for approximately 150 users at VDEM. Additionally, approximately 50-75 shared mailboxes will need to be converted over to the

new Messaging Services platform.

Server/storage (including housing of equipment) BReT:

VITA is initiating disentanglement from NG servers and storage. VDEM is not yet Transformed and currently has 0 servers at the CESC. Post-Transformation, it is estimated that VDEM will have up to 40 servers which will need to be migrated and tested during this transition; however, some of those servers may be virtual servers that are shared with other agencies. We are awaiting the final statement of work for network Transformation and do not currently have those specifications. At least 30 will be affected by this move and will need to be tested, though that number will depend on how "applications" is defined (server-hosted Web applications? Microsoft Access applications? Etc.).

End user computing BReT :

VDEM has approximately 30 desktops and 316 laptops and 39 network printers which will need to be migrated. Note that those numbers are approximate and fluctuate as VDEM hires staff.

Data networks BReT :

VDEM has two networks that are not mpls which will need to be migrated.

Security Services BReT:

To meet Commonwealth Security requirements, VDEM will engage VITA's Shared Security Services utilizing DPB funds once those services are fully available. Until then, we are using an external vendor.

#### **BReT End of Life 2008 Server VDEM**

<b>BRT Type:</b>	Business Requirement for Existing Technology
<b>Date Submitted:</b>	8/30/2017
<b>Mandate:</b>	
<b>Mission Critical:</b>	

**Description:**

Agency will create a mitigation plan to address End of Life 2008 Servers.

#### **BReT Grants Management Systems Support and Hosting**

<b>BRT Type:</b>	Business Requirement for Existing Technology
<b>Date Submitted:</b>	10/9/2014
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes

**Description:**

VDEM uses three externally hosted Grants Management Systems. Two of these manage Public Assistance and Mitigation grants, which are coordinated through FEMA programs. Together, support and hosting for those two systems costs \$45,000/year and is handled through the vendor, MB3, Inc. The third system, whose vendor is TetraTech, Inc., manages our other Grants and costs \$18,400/year.

#### **BReT Internal HR and Learning Management System**

<b>BRT Type:</b>	Business Requirement for Existing Technology
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<b>Date Submitted:</b>	7/17/2017
<b>Mandate:</b>	No
<b>Mission Critical:</b>	No
<b>Description:</b>	
<p>The Virginia Department of Emergency Management (VDEM) is making an investment in fostering the long-term professional success of a critical Commonwealth asset, emergency management professionals representing every corner of the state. The Virginia Department of Emergency Management is seeking to acquire a comprehensive, robust, and adaptable learning management system (LMS) to support a wide-variety of learning experiences. These learning experiences are essential to providing emergency management and public safety professionals with the knowledge, skills, and abilities needed to anticipate, respond, and recovery from disaster. The learning management system must be able to support instructor-led training as well as other program delivery formats and learning experiences (e.g., virtual, Classroom). System's capabilities should include: admissions, enrollment, and registration functions; course catalog and curricula development and management; student records, learning plans, skills/competency management, and certification management; program and course resource requirements and tracking; content management; learner collaboration; e-commerce; survey and assessment tools; and tracking, reporting, and analytics. The system should support workflow management and communications capabilities from start to end, from idea to outcomes. Further, the system should support the Agency's human resource management functions to include performance management, competency and goal attainment, performance and development planning, performance reviews, performance calibration, pay for performance, and workflow management and communications. VDEM currently uses the Commonwealth of Virginia Learning Center (COVLC). However, this system does not include the full range of capabilities required and, therefore, leaves the Agency and its constituents in the wobble with many unmet specialized needs. VDEM plans to release an RFP seeking an LMS solution and provider that specializes in the public safety space. VDEM seeks a cloud-hosted COTS solution that will be fully supported by the vendor. VDEM is conducting RFIs to inform a competitive procurement via this RFP. As part of the RFI, the Agency will collaborate with other state agencies to identify any potential solutions that can leverage existing GSA contracts. The agency is fully aware of the ECOS approval process and has previously completed this process with the Planning Software Project.</p>	
<b>BReT Support/Maintenance Contract Renewals</b>	
<b>BRT Type:</b>	Business Requirement for Existing Technology
<b>Date Submitted:</b>	9/10/2014
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes
<b>Description:</b>	
<p>VDEM requires the renewal of multiple support and maintenance contracts for software and hardware technologies that are required for business operations and agency mission completion. These include: WebEOC, WebFUSION, WebEOC Mapper, ArcGIS, FMS, Ipswitch, CA Arcserve, Kiwi CatTools, What'sUp Gold, Enterasys, Logi Analytics, and Entrust SSL certificates.</p>	
<b>BReT Transformation ORI</b>	
<b>BRT Type:</b>	Business Requirement for Existing Technology
<b>Date Submitted:</b>	9/26/2014
<b>Mandate:</b>	

<b>Mission Critical:</b>	
<b>Description:</b>	
<p>VDEM provided Notice to Proceed for two custom Transformation Work Requests on June 27, 2017. Those are 1891 (Network Services) and 1893 (Security Services). Northrop Grumman has begun ordering equipment, and the first equipment is expected to arrive in mid-September. VDEM is pleased with the progress.</p>	
<b>BReT VDEM 2016 Overall Audit Program ORI</b>	
<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	9/25/2017
<b>Mandate:</b>	
<b>Mission Critical:</b>	
<b>Description:</b>	
<p>VDEM has hired Assura to assist us in analyzing our IT Security Program and to develop a Compliance Action Plan. Based on their recommendations, VDEM plans on developing a three-year audit plan and hiring a third-party auditing firm to implement the audits.</p>	
<b>BReT VDEM 2016 Overall Risk Program ORI</b>	
<b>BRT Type:</b>	Business Requirement for Existing Technology
<b>Date Submitted:</b>	9/25/2017
<b>Mandate:</b>	
<b>Mission Critical:</b>	
<b>Description:</b>	
<p>VDEM has hired Assura to assist us in analyzing our IT Security Program and to develop a Compliance Action Plan. Based on their recommendations, VDEM plans on engaging a third-party contractor for future risk program activities as needed, though the hope is that we will be able to support these activities internally.</p>	
<b>BReT VDEM Website and App Hostng and Maintenance</b>	
<b>BRT Type:</b>	Business Requirement for Existing Technology
<b>Date Submitted:</b>	10/9/2014
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes
<b>Description:</b>	
<p>VDEM's website, <a href="http://www.vaemergency.gov">www.vaemergency.gov</a>, is hosted by AIS Network. Annual hosting and maintenance costs \$28,500 per year. Note that it is expected that the VDEM website will undergo a complete redesign in 2016. This is expected to cost approximatly \$130,000. VDEM also has a mobile app for Ready Virginia. The vendor is VERT Mobile. Development costs for the past year were \$20,000, but will vary from year to year based on development needs.</p>	

<b>BRnT Agency Radio and Telecommunications Integration</b>	
<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	2/20/2016
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes
<b>Description:</b>	
<p>This project will provide a continuity of operations solution that will enable remote access to our radio consoles, creating a virtual state warning point from anywhere. The project does not require a phone upgrade; costs are related costs of the server, telecommunications infrastructure integration at the server location, and associated licensing and implementation services. Our main contact number, instaphones, medevac, and STARS capability would be integrated into one screen. This project would provide dispatch-style software for COOP operations that would be capable of monitoring all existing pathways into the VEOC (phones, NPS nuclear instaphones, VAWAS, NAWAS, WAWAS, Medflight channels, and STARS) from desk phones located at the Trade Court Facility, which functions as our alternate emergency operations center.</p>	
<b>BRnT Budget System and Cardinal Interface</b>	
<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	9/25/2017
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes
<b>Description:</b>	
<p>A key aspect of the agency's financial strategy is the setting of financial risk. Risks are embedded in the optimism of revenue forecasts and the size of contingencies. Budget risk should be aligned with the agency's tolerance for risk, the current financial condition of the agency, and the apparent stability of the financial environment. VDEM has a very complex budget, with the majority of our funding being federal formula grants received each year, with multiyear period of performance. VDEM currently does not have a budget system that does enough to make budget risk evident. Currently, the budget is not being built from a budget projection (five years in the future is normal these days) that allows the testing of assumptions about the impact of new policies and changes in the financial environment (decrease of federal funding). VDEM has conducted an analysis of Cardinal's budget tool and has determined that it does not fit the needs of the agency. Where there are budget controls in Cardinal, these are not effective tools to manage the agency's budget (\$30m) and pass through funding (\$85m). Finally, once implemented VDEM will be able to sustain, this is a one-time request.</p>	
<b>BRnT Communications Upgrades in the State Warning Point (Watch)</b>	
<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	2/20/2016
<b>Mandate:</b>	
<b>Mission Critical:</b>	
<b>Description:</b>	

- Upgrading cooling, cable management, lighting and ergonomics in the VEOC Watch Center. \$80,000.00. Purpose-built dispatch furniture to update the Watch Center. The original furniture was designed to meet the needs of the Watch Center at that time but did not allow for much expansion or modification. Over time, additional functionality and responsibilities have required the addition of new systems in the Watch, but the current furniture has presented ergonomic and spatial challenges. This upgrade also introduces industry-standard component cooling, cable management, lighting, and ergonomics.
- Implementing remote talk/listen access to radio systems in Hampton Roads and Northern Virginia. \$55,000.00. This gives us the capability to monitor first responder networks in Hampton Roads and Northern Virginia. This product integrates directly into our existing interoperability platform, allowing VDEM personnel to talk on a local jurisdiction's radio system, not only via STARS but from a smart-phone or tablet. Capability to remotely control the radio to the correct talkgroup is included.
- Evaluating a three-in-one portable radio to become the fleet-wide standard. \$12,000.00. This request is for a radio and vehicle adapter for the purposes of evaluating a three-in-one radio as a potential fleet-wide standard. This portable radio eliminates the need for field personnel to carry multiple radio devices in their vehicles. Inserting the radio into a vehicle adapter eliminates the need for a duplicated mobile radio in the vehicle. This is one full-featured radio (encryption, P25, trunking, conventional) that takes the place of three mobiles and three portables. As a reference point, our current STARS portables are \$5,500 for just one radio in one band. Buying one for each public safety band (VHF, UHF, 800) would cost us \$16,500, not including the vehicle adapter.
- Upgrading the monitors and other A/V equipment in the VEOC Watch Center to improve monitoring capabilities. \$30,000.00. Allows for six monitors at each station, doubling the current configuration. This procurement will allow the addition of two static monitors at each workstation to provide dedicated monitoring access to products such as WebEOC and Mapper, as well as a third display agile to the users' needs at the time. The remaining three monitors would remain the same as the current configuration. All monitors will have sound cards built in to eliminate desktop computer speakers, keeping the work space are less cluttered.
- Transitioning from leased lines to control stations for operating the medflight program. \$18,000.00. Our leased lines to operate the medflight program cost the agency roughly \$2,100 per month. Eliminating the leased lines and procuring control stations to communicate with our partners would take approximately nine months for the ROI.
- Backup Medflight alerting capability. \$12,000.00. VDEM receives calls from localities and dispatches the Virginia State Police medevac helicopter from the Chesterfield County airport. We average roughly 600 medevac missions per year. Currently, VDEM's only way of alerting Medflight to calls is via telephone. From time to time, telephone service in that area goes down, and we have to rely on calling the duty crews' personal cell phones. The requested funds would be used to develop a paging system for the alerting first responders to missions. Adding the capability to do this via radio also adds a primary means to make notifications, meaning that the unreliable phone method would become the backup method.

**BRnT Computer Aided Dispatch (CAD) System with Integration to WebEOC**

<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	2/20/2016
<b>Mandate:</b>	
<b>Mission Critical:</b>	

**Description:**  
VDEM will use the requested funds (\$503,000) to develop Computer Aided Dispatch (CAD) system with integration to WebEOC. We will use the system to track VDEM field units and state-managed local assets, such as radio caches, regional hazmat teams, swift-water rescue teams, and search and rescue teams. This system will provide the capability to track and map assets in real-time. The integration with WebEOC will enable emergency management staff to view those assets in relation to situational awareness and mission tracking data that is managed by the WebEOC system.

<b>BRnT Damage Assessment</b>	
<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	6/2/2016
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes
<b>Description:</b>	
<p>VDEM seeks to purchase software would provide near real-time transfer of damage assessment data, including attribute, photographic and geospatial data, By leveraging mobile technologies (smartphones, tablets, etc.) and interfacing with VDEM's existing GIS environment collection of damage assessment information will be more efficient and accurate, allowing the Commonwealth and citizens to gain access to State and Federal assistance programs sooner than has been the norm.</p> <p>Damage assessment software procured by VDEM will need to interface with the agency's existing ArcGIS platform, and will require technical oversight by the agency's IT/GIS staff. There may be on-premises server and data storage requirements by a product selected by this project, but an increasing number of these systems are cloud-based solutions.</p>	
<b>BRnT Fleet Management Software</b>	
<b>BRT Type:</b>	Business Requirement for Existing Technology
<b>Date Submitted:</b>	9/18/2017
<b>Mandate:</b>	No
<b>Mission Critical:</b>	No
<b>Description:</b>	
<p>VDEM has requested an analysis of its Fleet Management operations and recommendations to improve efficiency in tracking relevant information and improve collaboration by a analytics contractor.</p>	
<b>BRnT Fleetwide Interoperable Radios</b>	
<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	2/20/2016
<b>Mandate:</b>	
<b>Mission Critical:</b>	
<b>Description:</b>	
<p>VDEM will use the requested funds to procure 25 radios, to be distributed among hazardous materials officers, disaster response and recovery officers, the regional support east and west directors, communications specialists, and will leave a spare or two for future personnel or deployment. This portable radio eliminates the need for field personnel to carry multiple radio devices in their vehicles. Inserting the radio into a vehicle adapter eliminates the need for a duplicated mobile radio in the vehicle. This is one full-featured radio (encryption, P25, trunking, conventional) that takes the place of three mobiles and three portables.</p> <p>VDEM's radios are reaching the end of their service life. This initiative will replace three different radios with a single multi-band radio, compared to our current system, which requires three mobiles and three portables per regional vehicle. The cost of three current STARS portables alone is \$16,000, not including</p>	

the vehicle adapter. Moving to this three-in-one solution expands VDEM's capabilities to support local emergency managers and citizens across the commonwealth, and does so in a fiscally responsible manner.

**BRnT Open Source Communications Analysis Platform**

<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	7/24/2015
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes

**Description:**

VDEM requires one or more social media monitoring software products to assist with numerous functions, including homeland security intelligence gathering and monitoring (Virginia Fusion Center), situational awareness and "heads up" notifications (VEST, Planning and VEOC Watch Center), and rumor control (Joint Information Center and External Affairs).

Some functional requirements identified include the ability to:

- Monitor multiple social media channels
- Add new or emerging social media platforms
- Save and share profiles/views
- Monitor geo-located data, non-geo-located data, or both
- Easily save multiple searches, export/save search results and share search results
- Easily generate geospatial data feeds and mapping layers, to automate such processes, and ingest them into multiple, interoperable systems
- Enable tracking social media at both the macro level of trending topics and widely followed users and the micro level of specific subjects

VDEM expects that no single social media monitoring tool will meet all of these requirements and that more than one software-as-a-service solution will be needed to meet these needs.

**BRnT Planning Software**

<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	5/7/2015
<b>Mandate:</b>	Yes
<b>Mission Critical:</b>	Yes

**Description:**

VDEM requires a collaborative platform for state and local planners to create and maintain any type of emergency plan, including emergency operations plans, continuity plans, and supporting procedural documents. The solution presented to VITA will be in the form of Software as a Service (SaaS).

The proposed collaborative planning software is mission critical and will enable VDEM to achieve "whole community" planning and greater collaboration on state, local, and regional disaster plans. Whole community planning is recommended by FEMA (Comprehensive Preparedness Guide 101 Version 2.0, pages 1-1 to 1-2) and required under both the Homeland Security Grant Program (Fiscal Year 2015 Homeland Security Grant Program - Notice of Funding Opportunity, page 12 and Appendix B) and the Emergency Management Performance Grant Program (Fiscal Year 2015 Emergency Management

Performance Grant Program – Notice of Funding Opportunity, page 17). The Commonwealth is an annual recipient of state and local funds through these grant programs.

VDEM is currently tasked with several requirements to collaborate on disaster planning at the state and local level. These include:

Code of Virginia §44-146.18:

B. The State Department of Emergency Management shall in the administration of emergency services and disaster preparedness programs:

1. In coordination with political subdivisions and state agencies, ensure that the Commonwealth has up-to-date assessments and preparedness plans to prevent, respond to and recover from all disasters including acts of terrorism;
2. Conduct a statewide emergency management assessment in cooperation with political subdivisions, private industry and other public and private entities deemed vital to preparedness, public safety and security. The assessment shall include a review of emergency response plans, which include the variety of hazards, natural and man-made. The assessment shall be updated annually;
3. Submit to the Governor and to the General Assembly, no later than the first day of each regular session of the General Assembly, an annual executive summary and report on the status of emergency management response plans throughout the Commonwealth and other measures taken or recommended to prevent, respond to and recover from disasters, including acts of terrorism. This report shall be made available to the Division of Legislative Automated Systems for the processing of legislative documents and reports. Information submitted in accordance with the procedures set forth in subdivision 4 of § 2.2-3705.2 shall not be disclosed unless (specific requirements are not applicable and have been omitted)
4. Promulgate plans and programs that are conducive to adequate disaster mitigation preparedness, response and recovery programs;
5. Prepare and maintain a State Emergency Operations Plan for disaster response and recovery operations that assigns primary and support responsibilities for basic emergency services functions to state agencies, organizations and personnel as appropriate;
6. Coordinate and administer disaster mitigation, preparedness, response and recovery plans and programs with the proponent federal, state and local government agencies and related groups;
7. Provide guidance and assistance to state agencies and units of local government in developing and maintaining emergency management and continuity of operations (COOP) programs, plans and systems;

Governor's Executive Order #41 (2011)

#### Assessing Continuity of Operations Plans

The process of creating or updating continuity of operations plans shall be completed by each agency including institutions of higher education by April 1st of each year, with an electronic copy sent to the Virginia Department of Emergency Management. The Secretary of Veterans Affairs and Homeland Security (now the Secretary of Public Safety and Homeland Security), in consultation with the Virginia Department of Emergency Management, is authorized to review executive branch agencies' including institutions of higher education's continuity of operations plans by October 31st each year. A report on the status of the Commonwealth's executive branch agency's continuity of operations plans, prepared by the Secretary of Veterans Affairs and Homeland Security in collaboration with the Virginia Department of Emergency Management, will be due to me annually by no later than December 31st of each year.

To meet these requirements, VDEM collaborates with 59 state agencies and private-sector partners on the Commonwealth of Virginia Emergency Operations Plan (COVEOP). This collaboration is primarily achieved through email, is extremely labor intensive, and creates difficulties in managing version control. The proposed software would improve the efficiency of this process and enable VDEM to collaboratively plan with additional local and regional stakeholders recommended by FEMA. In addition, this software would facilitate the annual submission and VDEM review of continuity plans from 160 state agencies and colleges/universities.

In 2014, VDEM was tasked with additional requirements related to disaster planning. It is anticipated that the program to support these additional requirements will be implemented in the fall of 2015. The program will be difficult to implement without the proposed collaborative planning software. These new

requirements are:

Code of Virginia §2.2-222.1

E. The Secretary (Public Safety and Homeland Security) shall ensure that state agencies develop and maintain rigorously developed response plans in support of the Commonwealth of Virginia Emergency Management Plan (COVEOP). The Secretary shall designate VDEM as the primary agent to ensure that state agencies are compliant with the COVEOP. The Secretary shall further require that VDEM ensure the development of state agency and local disaster response plans and procedures, and monitor the status and quality of those plans on a cyclical basis to establish they are feasible, suitable, and can be implemented with available resources. This system will enable agencies to electronically submit their COVEOP support plans to VDEM, and facilitate the review performed by VDEM.

Collaborative planning software will enhance VDEMs ability to coordinate with stakeholders on existing plan submission and review requirements, and enable VDEM to effectively comply with new plan submission and review requirements in 2015. Collaborative planning software will undoubtedly improve disaster planning and preparedness within the Commonwealth of Virginia.

#### **BRnT VEOC Technology Assessment**

<b>BRT Type:</b>	Business Requirement for New Technology
<b>Date Submitted:</b>	9/25/2017
<b>Mandate:</b>	No
<b>Mission Critical:</b>	Yes

#### **Description:**

The current Virginia Emergency Operations Center (VEOC) has been in operation for over a decade. During that time, the operational scope of the Virginia Emergency Support Team (VEST) has broadened, with the VEST leaning forward to better anticipate the needs of those stakeholders who we support and an increased presence at the VEOC during declared and non-declared emergency incidents as a result. During this time, also, technology has advanced greatly, with technology products such as Geospatial Information System playing an ever-increasing role in providing situational awareness and facilitating operational decision-making. At the same time, the technology infrastructure – servers, network, security, audio-visual capabilities, etc. – has not been systematically assessed or refreshed. With VDEM now actively working with the Information Technology Partnership (ITP) to Transform to the shared COV domain, now is an opportune time to perform such an assessment to holistically identify gaps in technological capabilities and opportunities to improve the technology infrastructure underpinning the VEOC. We request these funds in FY2020 in order to assure that all technology improvements that are in-scope to Transformation have been completed and that we are working from a solid baseline.



Report Title: Appendix A 16 - 18 Report

Agency: Department of Emergency Management (VDEM)

Agency Head Approval: No

<b>Budget Category: Non-Major Projects</b>				
CAD System Project				
<b>Appropriation Act/Funding Status</b>			<b>Project Initiation Approval -</b>	
This project will provide for the acquisition and implementation of a computer-aided dispatch (CAD)-like system to manage specialized response teams and field-deployed assets in the event of specific emergency incidents. The system will integrate information into the Crisis Information Management system to allow emergency management personnel the capability of viewing assets in relation to situational awareness across the Commonwealth.				
Planned project start date:	4/25/2018	Planned project end date:	6/30/2019	
PPEA Involvement:				
<b>Estimated Costs:</b>	<b>Total</b>	<b>General Fund</b>	<b>Nongeneral Fund</b>	
Project Cost (estimate at completion):	\$376,997	\$950,000	\$0	
Estimated project expenditures first year of biennium:	\$0	\$0	\$0	
Estimated project expenditures second year of biennium:	\$950,000	\$950,000	\$0	
<b>Service Area</b>			<b>Weight</b>	
127 VDEM 77601 Emergency Response and Recovery Services			Primary	
127 VDEM 77801 Virginia Emergency Operations Center (VEOC) and Communications			Secondary	
<b>Project Related Procurements</b>				
CAD System Procurement				
Procurement Description:	This procurement supports the project that will provide for the acquisition and implementation of a computer aided dispatch system to manage specialized response teams and field-deployed assets in the event of specific emergency incidents. The system will integrate information into the WebEOC emergency incident response management system to allow emergency management personnel the capability of viewing assets in relation to overall situational awareness..			
Planned Delivery Date:	9/11/2017			

Report Title: Appendix A 16 - 18 Report

Agency: Department of Emergency Management (VDEM)

Agency Head Approval: No

### Stand Alone Non-Major Procurements

<b>Procurement Name:</b>	<b>Fleet Wide Interoperable Radios</b>		
Procurement Description:	These multiband portables will be deployed to regional staff in support of radio communications with local jurisdictions. The need for a singular platform is needed to ensure our staff can travel anywhere in the state and their radio will be compatible with the locality they are supporting without having to carry multiple radios. Additionally, procuring one "three in one" radio per staff member at a slightly higher market price than a single band radio means we do not have to procure three radios nearly tripling the cost of this project. Motorola radios were specifically chosen due to their compatibility with the STARS network maintained by the Virginia State Police, as well as their backwards compatibility with some older radio systems that still exist in the Commonwealth.		
Procurement Planned Start Date		Procurement Planned Completion Date	1/6/2017
		Appropriation Act Status	
<b>Service Area</b>			<b>Weight</b>
There are no service areas for this project.			