2024 - 2026 IT Strategic Plan

Agency:	218 Virginia School for the Deaf & Blind Staunton
Date:	12/27/2023

Current IT State

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 agencys 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 agencys 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 Virginia School for the Deaf and the Blind (VSDB) is a facility comprised of experts, educating students in Virginia who are on the continuum of hard of hearing to deafness, low vision to blind, deafblind, or deaf or blind with other disabilities. VSDB's unique educational mission provides opportunities for its students to learn in an environment tailored to their needs. Students are provided a rich educational experience with educators and staff that are specially trained to provide services in alignment with VSDB's mission, and who are passionate about helping each student to achieve their full potential to reach their life goals after graduation.

Unlike many K-12 organizations, VSDB provides educational services to both day and residential students. The school provides unique opportunities for students, to preparing e them for independent living, such as the on-campus independent living apartments; Achieve, the VSDB work experience program, and the CROPS Program, Virginia's largest educational urban farm. VSDB also offers a fully accessible sports program for students with disabilities. The school is a recognized leader in this area, and has developed a blind soccer team as well as other sports for students with disabilities. As an agency of the Commonwealth of Virginia, all services to students and families are provided at no cost.

Information technology is a critical factor in the delivery of these services. VSDB operates two different network environments (i.e., School Network and Agency Network). The core IT network is the School Network and it has several hundred users and endpoints and is maintained by the VSDB IT Department (currently 1 person). While VITA provides numerous services to various state agencies, they unfortunately cannot support this environment due to the unique accessibility needs of students and staff.

The second network is the Agency network. This network is primarily used for back-office operations and is roughly 10 users and supported by VITA. Additionally, VSDB procures all internet services utilizing VITA contracts. Unlike other schools, VSDB does not have local funding to pull from to support IT operations. It relies completely 100% on the General Fund budget. The majority of IT funding is allocated to the School Network, its systems, and support that directly supports student outcomes.

The school has not had a significant increase in IT funding for over 10 years to keep up with technology advancement. VSDB is currently working to address this technical backlog. Over the next 5 years, VSDB will invest in increasing network performance and bandwidth so that students can complete their work and access online resources in a timely manner. The school will fully transition to utilizing Microsoft cloud services and various Software-as-a-Service applications that are easily accessible by students, staff, and families. The school will

continue to improve its cybersecurity capabilities to not only meet the information security requirement of the Commonwealth of Virginia, but to also protect its student population.

Several VSDB systems have been identified as end-of-support and will be replaced over the next several years. Preference for system solutions will be given to cloud services that adhere to the requirements of the Commonwealth's Enterprise Cloud Oversight Services (ECOS).

VSDB will continue to improve its technical capabilities and deliver an IT computing environment that improves educational outcomes for its students, meets the requirements of the Commonwealth, and sets up its students for lifelong success.

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 agencys current IT investments. These are requirements and mandates from external sources, such as other agencies or business partners, the agencys 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 agencys 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 agencys 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 Virginia School for the Deaf and the Blind (VSDB) has not received the necessary resources and funding, to ensure that the delivery of information technology services remains aligned with the needs of the school, as it works to achieve its critical mission of serving students who are deaf/hard of hearing, blind/vision impaired, or deafblind. As a result, the school has accumulated a significant amount of technical debt that has severely impacted the delivery of education to the Agency's unique student population that require updated and responsive technology capabilities for instruction.

Over the years, the school has attempted to address its critical technology needs with limited funding such as small supplemental awards from the Virginia Department of Education as well as a one-time allocation of funding in FY2023. While the school did receive an ongoing base budget increase for information technology in FY2023; unfortunately, these funds were quickly exhausted with server and infrastructure replacement (for many items that were identified by VITA as non-compliant), transfer of on-prem data storage and network infrastructure to the cloud, and initial technical information security transformation to improve compliance with Commonwealth of Virginia information security requirements. It is expected that this ongoing funding will continually be used to offset increases for basic IT services. While these efforts improved VSDB's ability provide instruction (virtually and on-prem), it only provided a portion of the technical foundation needed to bring the school current with industry technology and support practices. Additional funding and positions are needed to fully modernize VSDB's environment and ensure that it has the necessary information technology staff to support its needs.

There are numerous factors impacting VSDB's School Network that require additional funding and support such as:
• Inadequate internet bandwidth resulting in network slowdowns and inability of student to use cloud adaptive technologies to improve their educational outcomes.
• Outdated fiber optic infrastructure that cannot handle modern or necessary network speeds and result in frequent and prolonged outages affecting instruction.
• Utilization of Chromebooks that result in the degradation of application performance because they were not designed to run in this environment.
• Outdated Apple iPads that are used for instruction to all students and which cannot run new educational applications or crash due to system resource constraints and outdated operating systems.
• Inadequate or lack of wireless coverage for key parts of the campus such as classrooms and student dormitories. Current wireless hardware does not fully comply with Commonwealth requirements.

• Lack of full visibility into various technical cybersecurity threats without fully implemented secure desktop computing protocols.
• Increased need for threat detection and response services that provide full log collection, correlation, investigation, response, and threat intelligence that is specifically tailored for this unique user and computing environment.
• Lack of a document sharing solution that provides ease of use for the disabled, while fully adhering to Commonwealth information security requirements.
• Lack of adherence to SEC502 in the timely performance of sensitive system security audits.
• Outdated ticketing system that does not permit ease of use by students, faculty, and staff. Current solution does not permit submission of requests via forms, and lacks the ability to develop custom process handling of help desk tickets. This delays the time-to-resolution of support cases, which can delay instruction and the ability of students to complete assignments.

In September 2023, VSDB completed analysis and developed the information technology requirements needed for the next several years. This information has been reflected in this ITSP.

Overall, the consequence of not appropriately resourcing VSDB's IT needs will be felt most acutely by the children with disabilities who rely on the school's critical services. Students currently experience significant network performance and bandwidth issues when accessing internal and external technologies. They are hindered by using end-user devices that are not made with the adaptive technologies they require in a learning environment. Faculty and staff must perform functions manually that could be automated and delivered more efficiently and securely thus preventing thus them spending the greatest amount of time available supporting students.

Specifically, VSDB will experience the following impacts without approval of initial and ongoing funding of these technology initiatives:
• Continued chronic and pervasive network and infrastructure outages that impact on-prem and remote learning.
• Chronic delays in response to IT service requests, performance of required IT management and compliance functions, proper technology evaluation and implementation, and appropriate 3rd party vendor oversight.
• Inhibited performance of applications that are utilized on end-user computing devices for which they were not created.
• Outdated technology that will quickly be unable to support the basic computing needs of instructional technology for the disabled.
• Termination of newly outsourced services, previously funded with one-time FY23 money, due to lack of ongoing funding.

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 agencys 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 agencys 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 main focus of VSDB's IT investments over the next 5 years, is to fully utilize:
• Modern adaptive instructional technologies for our students that are delivered in a robust computing environment with minimal downtime.
• Strategically outsource certain network and cybersecurity functions that can be performed more efficiently and effectively, freeing staff to focus on information technology administration and management functions that are

unique to the school. Focused VSDB staff will further the achievement of VSDB's information technology goals and overall security and compliance posture.
• Expand the current information technology team to focus on IT management, Commonwealth IT compliance to various regulations, application administration and management, and third-party vendor oversight.
• Refresh outdated technology and implement a proactive refresh schedule for all devices on the School and Agency networks. Currently, the only refresh schedule is for Agency network devices.

While all IT investments are important, the following is a prioritized list of IT strategic initiatives based on the following factors: existing outages and environment failures, technical dependencies, and required procurement activities (even when utilizing existing VITA contracts) that can delay the start and/or completion of the activity.

Priority IT Initiative
1   Increase Internet Bandwidth
2   Upper Campus Fiber Optic Cabling Replacement
3   Transition from Chromebooks to Windows Laptops
4   Refresh of Apple iPads for Instruction
5   Wireless Network Coverage Improvements
6   Secure Desktop Computing Service
7   Managed Threat Detection, Investigation, and Response
8   Document Sharing Solution
9   New Helpdesk Ticketing System
10   Sensitive System Security Audits

* VSDB has submitted a biennium budget increase request for 2024-2026 to cover these initiatives.

Business Requirements For Technology

Agency:	218 Virginia School for the Deaf and the Blind - S
Date:	12/20/2023

BReT - Transition from Chromebooks to Windows Lapt

BRT Type:	Business Requirement for Existing Technology
Requested Start:	11/29/2023
Mandate:	Yes
Mission Critical:	Yes
Description:	

Out of Scope Network Solution: Transition students and teachers to Dell Laptops. Current instructional software utilized by students, staff, and teachers to not function fully on the Chromebooks or experience significant issues impacting instruction.

BReT Apple iPad Replacement for Instruction

BRT Type:	Business Requirement for Existing Technology
Requested Start:	11/29/2023
Mandate:	Yes
Mission Critical:	Yes
Description:	

Out of Scope Network Solution: Students and teachers rely on this technology for instruction throughout the child's time at VSDB. Students start out on iPads and transition to laptops as they progress through their studies.

BReT Increase Internet Bandwidth

BRT Type:	Business Requirement for Existing Technology
Requested Start:	11/30/2023
Mandate:	
Mission Critical:	Yes
Description:	

Out of Scope Network Solution: Adaptive technology for visual and hearing impaired students requires more bandwidth than normal K-12 schools. Many of the services utilized for instruction are Internet based. The current 1 Gb/s Internet access speed is 1/10th the size needed by the school. This also makes adoption of cloud services for primary workloads viable, which aligns with the Governor's order to agencies to adopt cloud services.

BReT Upper Campus Fiber Replacement

BRT Type:	Business Requirement for Existing Technology
Requested Start:	12/20/2023
Mandate:	Yes
Mission Critical:	Yes

Description:

Out of Scope Network Solution: The current fiber optic cabling is outdated and cannot handle modern network speeds. In addition, it was run in a manner that exposed it to the elements and it has deteriorated, which slows network performance to a crawl and causes intermittent outages to students, faculty, and staff.

BRnT - VSDB - Outside Audit/Risk Assessment

BRT Type:	Business Requirement for New Technology
Requested Start:	12/20/2023
Mandate:	
Mission Critical:	

Description:

VSDB is among the small agencies that find themselves in need for specialist help in fulfilling the Audit, Risk Assessment, BIA requirements of the IT Security Standard. VSDB recognizes the importance of meeting the requirement and takes the matter very seriously. However, VSDB requires outside assistance in completing this requirement. Given that VSDB seeks to have a complete Audit, RA, and BIA conducted by an external firm.

BRnT Helpdesk Ticketing Software

BRT Type:	Business Requirement for New Technology
Requested Start:	12/20/2023
Mandate:	Yes
Mission Critical:	Yes

Description:

Out of Scope Network Solution: Streamlined and secure handling and process automation of IT helpdesk tickets with functionality to allow for utilize by the deaf and the blind.

BRT Document Sharing Solution

BRT Type:	Business Requirement for New Technology
Requested Start:	11/29/2023
Mandate:	
Mission Critical:	Yes
Description:	

Out of Scope Network Solution: VSDB needs a secure and easy to use file sharing system that will allow the organization to share data with students, parents, faculty, staff, external agencies, and other stakeholders.

Sensitive System Audits

BRT Type:	Business Requirement for Existing Technology
Requested Start:	12/20/2023
Mandate:	Yes
Mission Critical:	Yes
Description:	

Perform sensitive system audits.

VSDB SD-WAN Upgrade

BRT Type:	Business Requirement for Existing Technology
Requested Start:	3/1/2023
Mandate:	Yes
Mission Critical:	Yes
Description:	

Configure existing routers to support SD-WAN capability across all agency locations. This approach prepares agency location(s) with the ability to add additional network capabilities (multiprotocol label switching (MPLS), broadband, wireless (i.e., Cradlepoint)) to take advantage of application -aware routing over private and public networks.

Three step process:

Remote internetwork operating system (IOS) software upgrade on the router.

Remote SD-WAN deployment

Circuit deployment as needed

VSDB Website Modernization

BRT Type:	Business Requirement for New Technology
Requested Start:	6/19/2023
Mandate:	
Mission Critical:	Yes

Description:

The primary objective of the COV Website Modernization and the CMS Virginia.gov projects are to ensure all state sites are on a single common platform and are following required VITA, COV and 508 standards

IT Strategic Plan Budget Tables

Agency:	218 Virginia School for the Deaf & Blind Staunton
Date:	12/20/2023

Current IT Services				
	Costs Year 1		**Costs Year 2**	
Category	**GF**	**NGF**	**GF**	**NGF**
Projected Service Fees	$109,678.10		$112,968.44	
VITA Infrastructure Changes	$122,054.00		$122,054.00	
Estimated VITA Infrastructure	$231,732.10	$0.00	$235,022.44	$0.00
Specialized Infrastructure				
Agency IT Staff	$233,000.00		$233,000.00	
Non-agency IT Staff	$100,000.00	$100,000.00	$100,000.00	$100,000.00
Cloud Computing Service	$123,558.00		$123,558.00	
Other Application Costs	$201,594.00		$201,594.00	
Total:	$889,884.10	$100,000.00	$893,174.44	$100,000.00

Proposed IT Investments				
	Costs Year 1		**Costs Year 2**	
Category	**GF**	**NGF**	**GF**	**NGF**
Major IT Projects:				
Non-Major IT Projects:	$791,551.00		$50,000.00	
Agency-Level IT Projects:	$197,934.00		$197,934.00	

Major Stand Alone IT Procurements:				
Non-Major Stand Alone IT Procurements:	$173,000.00		$173,000.00	
Agency-Level Stand Alone IT Procurements:	$288,861.00		$288,861.00	
Procurement Adjustment for Staffing:	($58,000.00)		($58,000.00)	
Total:	$1,393,346.00	$0.00	$651,795.00	$0.00

		Projected Total IT Budget			
		Costs Year 1		Costs Year 2	
Category		GF	NGF	GF	NGF
Current IT Services		$889,884.10	$100,000.00	$893,174.44	$100,000.00
Proposed IT Investments		$1,393,346.00	$0.00	$651,795.00	$0.00
Total		$2,283,230.10	$100,000.00	$1,544,969.44	$100,000.00

Commonwealth Projects >= $250,000.00

There are no projects for this agency.

Commonwealth Procurements >= $250,000.00

There are no stand alone procurements for this agency.