2022 - 2024 IT Strategic Plan

Agency:	942 Virginia Museum of Natural History (VMNH)
Date:	3/7/2023

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 Museum of Natural History (VMNH) is a 87,000 square foot facility located in Southwest Virginia, responsible for preserving and protecting Virginia's natural history. VMNH houses more than 10 million specimens and artifacts serving as the Commonwealth's centralized repository for natural history collections and continues to grow with the work of our scientists. VMNH was built to fill a gap in service to document our culture and natural heritage as well as coordinate an efficient network in Virginia where researchers and the public can readily use the natural history material from VMNH, its affiliates, Virginia's institutions of higher education and other museums to fulfill our "Museum without Walls" approach. To date, VMNH remains the state's only collections-based science institution, and excels in collections-based research, inquiry based science education, science teacher professional development and exhibit experiences rich with the actual specimens and artifacts documenting the natural and cultural heritage of Virginia. Researchers worldwide benefit from these collections. VMNH's scientists contribute regularly to the published literature of biology, geology, paleontology and archaeology. To inventory and make these collections available, VMNH uses a highly customized COTS collections database Proficio by Re:discovery Software, Inc. A newly revamped lab assists researchers with new photography, microscopy and 3D printing equipment.

VMNH's education department utilizes its Distance Learning Adventure Classroom to provide a virtual presence providing significant SOL-based experiences for children, professional development, and educational training for numerous teachers across the Commonwealth and beyond.

VMNH uses all services from VITA for personal computing, network infrastructure, messaging and telecommunication, as well as Centralized Information Security Officer (ISO) Service and IT Security Audit Service. VMNH has also been using a virtual server for several years, which meets EO19 requirements. Latency has been an issue on a virtual server with our collections database, Proficio, as compared to a local server due to the distance associated with network traffic routing. This collections database was recently upgraded and now utilizes SQL Server. The yearly maintenance and license fee renewals for this COTS software is currently not funded.

Due to the excessive cost and slow speed of a T1 line for the MPLS network, VMNH contracted Comcast Business to provide a broadband backbone for our ERCS (Enterprise Remote Connectivity Service) network for a more robust network at a 900% yearly cost savings and meets VMNH's needs. Currently, this is an unfunded expense.

VMNH's aging phone system requires upgrading. Researching found that the infrastructure hardware is no longer available and if a part fails, there are no replacements. By the Museum using an ERCS network, the standard use of

a UCCaaS phone system is not feasible.

Video streaming on the state networks causes bandwidth issues, so the local city government was contracted to provide a fiber internet access. This provides the WIFI connection for distance learning, interactive exhibits, the education rooms and lecture halls, the HVAC and security camera systems (for monitoring and adjusting remotely) as well as providing free internet access for the public during their visits. This separate network keeps the usage and any security issues isolated from the state network. Currently, this is an unfunded expense.

Other critical technology investments include:

Physical security of the facility, employees, specimens and visitors:
o   Digital Watchdog Spectrum IP cameras
o   Aura badging system doors access
o   Fire and Burglar systems with 24/7 monitoring.

HVAC monitoring and control:
o   Alerton Ascent Compass system to monitor heating, cooling and humidity.

Audio Visual and exhibit technology to engage visitors with an explanation of Virginia's natural history.

WeatherBug provided by Earth Networks for weather instrumentation and camera to provide readings to the local weather forecasters.

Computer interactives and audio visual displays continue to be updated or incorporated into both temporary and permanent exhibits to engage visitors and personalize their experience.

VMNH uses a 3rd party for our website and it has recently gone through a major overhaul to provide updates to ongoing events and information.

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?

Since the occurrence of COVID-19, the museum has had to implement more virtual accessibility to continue our involvement with the community and schools. Due to so many different technologies that our customers use, we have had to be flexible in all forms of technology for this virtual presence, whether it be Zoom, Google Meet, Teams, YouTube, Facebook Live or whatever else is being used to accommodate our audience. This has also resulted in reduced visitation, resulting in lower revenue from ticket sales, festivals and the store sales. This decline has had an impact on the IT investments to provide more on-line virtual experiences.

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?

VMNH will maintain the license and support fees for all applications as well as the Centralized Information Security Officer (ISO) Service and IT Security Audit Service.

UCaaS, being the state's standard phone system, is not compatible with our network. Verizon's VCE solution is being looked at as a replacement of our aging legacy system during this biennium.

To address the latency issue with our collections software, VMNH is looking into an ECOS assessment to see if the manufacturer of the software, Re:discovery Software, Inc. can host the database. This would fix all latency issues as well as not having to reinstall the software on workstations after a refresh.

A satellite facility is being proposed to be established in Wanyesboro and in the design stage and the IT requirements have not been established as of yet.

IT Strategic Plan Budget Tables

Agency:	942 Virginia Museum of Natural History (VMNH)
Date:	3/7/2023

Current IT Services				
		Costs Year 1		**Costs Year 2**	
Category	**GF**	**NGF**	**GF**	**NGF**
Projected Service Fees	$144,703.98		$149,045.10	
VITA Infrastructure Changes				
Estimated VITA Infrastructure	$144,703.98	$0.00	$149,045.10	$0.00
Specialized Infrastructure				
Agency IT Staff	$32,000.00		$32,000.00	
Non-agency IT Staff				
Cloud Computing Service				
Other Application Costs	$50,517.00		$50,517.00	
Total:	$227,220.98	$0.00	$231,562.10	$0.00

Proposed IT Investments				
		Costs Year 1		**Costs Year 2**	
Category	**GF**	**NGF**	**GF**	**NGF**
Major IT Projects:				
Non-Major IT Projects:				
Agency-Level IT Projects:				
Major Stand Alone IT Procurements:				
Non-Major Stand Alone IT Procurements:				
Agency-Level Stand Alone IT Procurements:	$3,000.00		$3,000.00	
Procurement Adjustment for Staffing:				
Total:	$3,000.00	$0.00	$3,000.00	$0.00

Projected Total IT Budget				
		Costs Year 1		**Costs Year 2**	
Category	**GF**	**NGF**	**GF**	**NGF**
Current IT Services:	$227,220.98	$0.00	$231,562.10	$0.00
Proposed IT Investments:	$3,000.00	$0.00	$3,000.00	$0.00
Total:	$230,220.98	$0.00	$234,562.10	$0.00

| Grand Total | | | | | $464,783.08 |

Business Requirements For Technology

Agency:	942 Virginia Museum of Natural History
Date:	3/7/2023

BReT Broadband Internet for ERCS	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	3/26/2021
Mandate:	
Mission Critical:	Yes
Description:	
Monthly fee to ISP for broadband internet service for the Commonwealth of Virginia's ERCS network at $144.85	

BReT Re:discovery Upgrade	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	3/26/2021
Mandate:	Yes
Mission Critical:	Yes
Description:	
Update the application from Re:discovery to the current version Proficio	

BRet VMNH Phone System	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	3/26/2021
Mandate:	
Mission Critical:	Yes
Description:	
Update our current system that is no longer made and needs to be upgraded	

IT Strategic Plan Projects

There are no projects for this agency.

IT Strategic Plan Procurements

There are no stand alone procurements for this agency.