

Report Title: IT Strategic Plan Summary

Agency: 425 Jamestown-Yorktown Foundation

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 2018-2020 biennium IT strategic plan covers both the Jamestown – Yorktown Foundation (JYF) (Agency 425) and its sub-agency Jamestown Yorktown Commemorations (JYComm) (Agency 400). The JYF Information Technology (IT) investments allow JYF to provide exciting and compelling enhancements to the educational programs, capture critical nongeneral fund revenues, enhance its reach to the public, and provide efficient administrative support. JYF will continue to use a blend of resources and services provided by JYF IT staff, the Virginia Information Technology Agency (VITA) and contracted services. JYF utilizes five major commercial off the shelf (COTS) software applications to support business functions that generate approximately fifty (50) percent of total revenues. Major ongoing IT costs support network infrastructure; telecommunications, data storage; public wireless and desktop services through VITA and managed print services.

The opening of the American Revolution Museum at Yorktown (ARM@Y), with a \$3.8 million technology investment, expanded museum use of technology to engage visitors and to personalize their experience. Computer interactive programming and the experiential Siege Theater incorporating film, lighting and special effects require on-going support to remain operational 363 days a year. Public wireless in the museum galleries and outdoor exhibit areas allow visitors to utilize mobile applications including augmented reality. During the biennium, Jamestown Settlement will be undergoing a gallery refreshment plan, with a \$2.5 million technology investment, that will incorporate similar audio visual interactive programming utilizing touch screens, monitors, and mobile applications throughout the site.

The public wireless system throughout the museums and outdoor living history areas not only allow visitors to engage with web-based educational content and augmented reality but meets visitor expectations for alternate ticketing options and web-based marketing content that generate critical nongeneral fund revenue. Usage of the public wireless will be monitored to determine if additional wireless access points or bandwidth is required to meet visitor demand.

JYF will utilize special exhibitions as a way to increase technology components. Computer interactives and audio visual displays developed for special exhibitions will be incorporated into permanent exhibits or available through mobile applications or web-based educational content. An ongoing 3D photography digitization effort of

the agency's artifacts and collections, supported with private funds, will continue to provide additional content.

Increases to network bandwidth alleviated response time and allowed for transfer of local servers and utilization of the VITA data center for storage thereby reducing costs and increasing physical security of systems. Additional bandwidth is allowing for the phased replacement of aging telecommunication equipment with voice over internet (VOIP) telecommunication through the VITA UCaaS service.

There is limited support staff for supporting seven (7) day a week museum operations. Two (2) full-time electronics exhibit technicians are responsible for audio-visual support and exhibit technology. Two (2) full-time and two (2) part-time staff oversee IT management and application support for ticketing and reservations, gift shop point-of-sale and inventory management; fundraising, collections management and accounting. With ongoing training constrained due to inadequate resources and an average tenure of less than two years for wage positions it is difficult to retain internal knowledge much less keep informed on newer technologies.

Maintaining sufficient staffing and resources to meet compliance and service levels is an agency objective as existing staff levels are inadequate. JYF continues to contract for the necessary ad hoc skills such as data base (SQL), telecommunications (Wi-Fi) and other specialty skills contingent upon funding.

A strategic needs assessment is being conducted to by external resources to identify opportunities to enhance the visitor experience and improve operational efficiencies. JYF will investigate other application hosting solutions as a cost effective delivery solution where appropriate.

JYF's major Information Technology investments are:

- existing infrastructure support (network, servers, data storage, desktops, laptops, printers, intranet site, security through VITA as well as five (5) major COTS applications);
- providing state-of-the-art audio visual and exhibit technology for Jamestown Settlement and the American Revolution Museum at Yorktown to engage today's visitor; and
- cost effective and sophisticated security technology to protect visitors, state facilities, and historic artifact collections.

JYF IT technology and resource vulnerabilities include:

- lack of long range application planning to address business needs and address application and operating system end of life transitions;
- lack of interfaces and reporting capabilities between applications to eliminate duplicative work and improve business processes;
- VITA-constrained dependencies that limit cost-effective solutions; and
- limited support staff to effectively manage a 7 day a week operation compounded with staff turnover and critical application knowledge transference.

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 Jamestown-Yorktown Foundation (JYF) relies heavily upon admissions revenue to support its operating budget. With museum visitation of over 600,000 annually, exhibits and facilities need to remain "up-to-date" with functioning technology to preserve the customer base and engage new visitors who are critical to protecting tourism market share and generating nongeneral fund revenues.

Exhibit refresh of the Jamestown Settlement museum galleries will update exhibit technology that has reached the end of its useful life. Computer interactive programming and new audio visuals will engage visitors and provided enhanced educational opportunities than can be offered in static displays. A dedicated public wireless network allows visitors to access additional content, use augmented reality technology and share their experiences via social media. Web-based distance learning and the development of web-based learning center will allow JYF to further extend its educational mission. Ensuring support staff and materials to keep exhibit technology functioning 363 days a year is critical to offering a quality customer experience.

JYF depends on reliable network support and functionality to meet operational demands in museum operations such as ticketing and gift shop sales. VITA provides weekend support for network, but JYF lacks resources to provide internal application support 363 days a year. After hours and weekend support is critical to generating nongeneral fund revenue. Changes due to the VITA multi-sourcing transition may impact critical business operations.

Existing business focused applications are not integrated and may not be cost effective. The isolated platforms have resulted in siloed processes that limit synergies to improve the customer experience. JYF is utilizing external resources to define business requirements and assess alternative solutions such as cloud-based options.

The assessment also address operational support needs and network demands. Other critical technology investments include round the clock security and facilities management systems that keep facilities and exhibits operating while ensuring a positive visitor experience which:

- protects artifacts from theft and environmental threats;
- ensures public safety;
- meets stringent security and temperature and humidity standards for artifacts that meet museum standards and loan standards from national/international museums; and
- maintaining structural soundness.

Increased bandwidth at all three sites has alleviated network response times and has allowed replacement of outdated and failing ISDN telecommunication equipment at the Central Support Complex with the VITA UCaaS voice over IP (VOIP) technology offering and plans are underway to extend the service to Jamestown Settlement.

Due to limited staff resources JYF participates in the VITA's Centralized IT Security Center Services for both Centralized Audit and ISO Services. Limited IT staff is also a factor in managing the IT infrastructure transition as staff must re-allocate time to transition activities instead of working on operational support. Limited resources also impedes the replacement of non-standard personal computer equipment required for video production, audio visual support and exhibit and graphic design and peripherals for point of sale locations.

JYF is considering electronic document management to meet records management requirements and help reduce reliance on paper files. A digital asset management software application will be considered as dedicated application to organize, store and retrieve media and manage digital rights and permissions may be needed to manage web-based content, museum interactives and other digital content,

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 refresh of the Jamestown Settlement museum galleries will be a major IT investment in the current biennium and strategically links to the Jamestown-Yorktown Foundation's (JYF) mission, strategic objectives and education and economic development goals. Capital funding has been approved for the project and it is hoped that the project will be completed in time for the 2019 Commemoration. The technology components of the project will be audio visual, computer interactives and exhibit technology.

The development of business requirements and assessment of existing business applications including ticketing and reservations application software will determine future investments.

JYF will continue to install Voice Over IP (VOIP) for telecommunications at Jamestown Settlement should funding be identified.

JYF lacks the critical skills and staff necessary to support future technologies in mobile applications, Wi-Fi technologies, HelpDesk, database software, hosted Share Point access and social media. The agency will contract for these specialty skills as needed and contingent upon funding.

Report Title: Strategic Plan

Agency: Jamestown-Yorktown Foundation

Current IT Services

Category	Costs Year 1		Costs Year 2	
	GF	NGF	GF	NGF
Projected Service Fees	\$758,839	\$369,043	\$781,604	\$380,114
VITA Infrastructure Changes	\$3,360	\$0	\$3,360	\$0
Estimated VITA Infrastructure	\$762,199	\$369,043	\$784,964	\$380,114
Specialized Infrastructure	\$0	\$0	\$0	\$0
Agency IT Staff	\$341,326	\$47,595	\$341,326	\$47,595
Non-agency IT Staff	\$0	\$105,000	\$0	\$75,000
Cloud Computing Service	\$0	\$0	\$0	\$0
Other Application Costs	\$66,500	\$7,000	\$66,500	\$7,000
Total	\$1,170,025	\$528,638	\$1,192,790	\$509,709

Proposed IT Investments

Category	Costs Year 1		Costs Year 2	
	GF	NGF	GF	NGF
Major IT Projects	\$0	\$1,465,000	\$0	\$300,000
Non-Major IT Projects	\$0	\$0	\$0	\$0
Agency-Level IT Projects	\$0	\$0	\$0	\$0
Major Stand Alone IT Procurements	\$0	\$0	\$0	\$0
Non-Major Stand Alone IT Procurements	\$175,000	\$0	\$0	\$0
Agency-Level Stand Alone IT Procurements	\$75,000	\$150,000	\$0	\$150,000
Procurement Adjustment for Staffing	\$0	\$0	\$0	\$0
Total	\$250,000	\$1,615,000	\$0	\$450,000

Projected Total IT Budget

Category	Costs Year 1		Costs Year 2		Total Costs
	GF	NGF	GF	NGF	
Current IT Services	\$1,170,025	\$528,638	\$1,192,790	\$509,709	\$3,401,163
Proposed IT Investments	\$250,000	\$1,615,000	\$0	\$450,000	\$2,315,000
Total	\$1,420,025	\$2,143,638	\$1,192,790	\$959,709	\$5,716,163

Report Title: Business Requirements For Technology

Agency: Jamestown-Yorktown Foundation (JYF)

Audit Compliance BRnT**BRT Type:** Business Requirement for New Technology**Date Submitted:** 9/15/2017**Mandate:** Yes**Mission Critical:** No**Description:**

The Jamestown-Yorktown Foundation has entered into a MOU agreement with Virginia Information Technologies Agency (VITA) providing Centralized IT Security Services supporting the implementation and management of the Jamestown-Yorktown Foundation's security program. This MOU includes the update/development of agency BIA, sensitive IT systems risk assessments, and additional program needs. As such the agency is making substantial progress toward the implementation of their security program.

The Jamestown-Yorktown Foundation has entered into a MOU agreement with Virginia Information Technologies Agency (VITA) providing IT Security Audit Service for the scheduled audits of of agency-defined sensitive IT systems. This MOU includes the identification of specific systems to be audited and each agency has been scheduled for system audits during the MOU period of performance.

BRnT End of Life 2008 Server JYF**BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 8/30/2017**Mandate:****Mission Critical:****Description:**

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

BRnT JS 2019 Special Exhibition Interactives**BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 3/8/2018**Mandate:** No**Mission Critical:** No**Description:**

Computer interactive production for the JS 2019 special exhibition "TENACITY" (formerly "Forget Her Not"). Interactives will complement static exhibits focusing on personal stories and biographies of Powhatan, English and Angolan women. Touchscreen technology will allow visitors to access video clips,

audio clips and digitized primary sources to get a full understanding of the real women who traveled to Jamestown. The interactives will be designed to be integrated into the permanent galleries at the conclusion of the special exhibition. Interactive on line component will allow visitors to explore women's stories over time.

Interactive will utilize same technology and wireframes developed for Yorktown and Jamestown permanent galleries.

BReT JYF COV IT Infrastructure Transition

BRT Type:	Business Requirement for Existing Technology
Date Submitted:	9/22/2016
Mandate:	No
Mission Critical:	Yes

Description:

The Commonwealth is transitioning to a multi-supplier model for IT Infrastructure. This BRT outlines the infrastructure an agency will need to plan and test in support of the transition.

Messaging BReT:

VITA is initiating disentanglement from NG messaging services in 2016. Messaging Services for email, enterprise collaboration services, and mobile device management are required for 250+ users in our agency. We also have 2 applications that have hooks into messaging services which will need to be tested. We have 4 MFP copiers that use email messaging. We have 1 applications serviced via AirWatch which will need remediation.

Server/storage (including housing of equipment) BReT:

VITA is initiating disentanglement from NG servers and storage. JYF has 3 physical and 4 virtual servers at CESC and 5 physical servers on site which will need to be migrated and tested during this transition. Eleven applications will be affected by this move and will need to be tested.

Authentication/directory services BReT:

JYF has eleven applications which will need to be migrated and tested during the authentication/directory services transition. Number of users (internal and external) are 250+ users.

End user computing BReT :

JYF has 185 desktops and 75 laptops and 34 network printers which will need to be migrated.

Data networks BReT :

JYF has 1 network that is not mpls which will need to be migrated.

Voice Networks BReT:

JYF has 28 UCaaS phone lines and 3 analog phone lines which will need to be migrated. JYF has ISDN phones at Jamestown Settlement and Central Support Complex.

Cloud Computing BReT:

JYF is investigating moving 5 applications to a Cloud services vendor. The business reason for the move is to reduce costs; increase efficiencies; reduce IT agency footprint; and vendor supply to Cloud only solutions. Applications are cloud ready. Agency will not need to bring in outside consulting to assess what needs to be done to the applications and supporting infrastructure in order to become cloud ready.

Security Services BReT:

To meet Commonwealth Security requirements, JYF will engage VITA's Shared Security Services utilizing DPB funds >.

Internet Usage BReT:
 JYF projects that internet usage will increase by 35% due to video streaming, agency websites, cloud services and telework.

BRnT JS Exhibit Renovation Technology

BRT Type:	Business Requirement for New Technology
Date Submitted:	8/25/2016
Mandate:	No
Mission Critical:	Yes

Description:
 Planning and replacement of technology components in permanent museum galleries. Includes audio visual equipment such as projectors, monitors, touch panels, software, controllers, and related installation. This technology is essential to the museum operations.

Mobile Applications BRnT

BRT Type:	Business Requirement for New Technology
Date Submitted:	8/25/2016
Mandate:	No
Mission Critical:	No

Description:
 JYF plans to exploit mobile applications in the museum galleries as part of the exhibits to enhance the customer experience.

Ticketing and Reservation System BRnT

BRT Type:	Business Requirement for New Technology
Date Submitted:	8/25/2016
Mandate:	No
Mission Critical:	Yes

Description:
 The ticketing and reservation application is 8 years old(installed in 2006). As industry trend and customer expectations have advanced for mobility, JYF needs an application to support this customer expectation.

Time and Attendance BRnT

BRT Type:	Business Requirement for New Technology
Date Submitted:	8/25/2016

Mandate:	No
Mission Critical:	No
Description:	
The Department of Human Resources Management and Time, Attendance and Leave (TAL) does not address the manual timekeeping for more than 200 JYF wage staff.	
Upgrade to Windows 10 BReT	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	8/25/2016
Mandate:	No
Mission Critical:	
Description:	
Upgrade agency to Windows 10; ensure compatibility with all applications	
VOIP at Jamestown Settlement BRnT	
BRT Type:	Business Requirement for New Technology
Date Submitted:	8/25/2016
Mandate:	No
Mission Critical:	Yes
Description:	
The telephone system at Jamestown Settlement has been installed over 10 years and will need to be replaced with the Commonwealth's VOIP standard telephone system, UCAAS.	

Report Title: Appendix A 18 - 20 Report

Agency: Jamestown-Yorktown Foundation (JYF)

Agency Head Approval:

No

Budget Category: Major Projects				
JS Exhibit Renovation Technology				
Appropriation Act/Funding Status			Project Initiation Approval - Not Funded	
<p>This project will involve vendor selection, concept development, design, installation, and maintenance of technology components in the permanent museum galleries of Jamestown Settlement to create an updated, energetic and contemporary visitor experience that refreshes the current stories and further explores key themes in the history and cultures of Jamestown. Expected completion is Q1 2020.. Vendor(s) will be selected to provide film/special effects and computer interactives. The primary vendor (s) may engage sub-contractors per their discretion, for which they will be responsible. Contractors will submit recommended hardware specs to JYF's hardware vendor to price, purchase and install the equipment that they are able to provide. All firms on the project will work closely together to ensure selected equipment integrates with exhibit design, infrastructure requirements and VITA policies. Contractor payment will be tied to pre-determined key deliverables of the project. The film/special effects contract includes design, planning, scripting, graphic design, production, editing and final installation of one multi-sensory immersive experiential theater film, two short films and animated projections. The computer interactives contract includes a mobile app, an online quiz or game, a large touchscreen interactive relating to the 1609-10 "starving time", and a large interactive wall with opportunity for on-site and online visitor input. All program content, including scripts, imagery, and production steps will be approved by JYF curatorial staff.</p>				
Planned project start date:	10/30/2017	Planned project end date:	3/30/2020	
PPEA Involvement:	No			
Estimated Costs:	Total	General Fund	Nongeneral Fund	Nongeneral Funding Source
Project Cost (estimate at completion):	\$2,833,457			
Estimated project expenditures first year of biennium:	\$1,500,000	\$0	\$1,500,000	
Estimated project expenditures second year of biennium:	\$300,000	\$0	\$300,000	
Service Area			Weight	
425 JYF 14503 Education and Extension Services			Primary	

BRnT JS Exhibit Renovation Technology			Primary	
Project Related Procurements				
BRnT JS Security Technology Replacement PROCUREMENT				
Procurement Description:	This procurementt is for the replacement of obsolete security technology supporting the Jamestown gallery exhibits, atrium exhibits and ships. Replacement parts are not available.			
Planned Delivery Date:	7/31/2014			
JS Exhibit Renovation Technology Procurement				
Procurement Description:	Planning and replacement of technology components in permanent museum galleries. Includes audio visual equipment such as projectors, monitors, touch panels, software, controllers, and related installation. This technology is essential to the museum operations			
Planned Delivery Date:	6/30/2017			
Budget Category: Non-Major Projects				
Ticketing/Reservation Software Replacement				
Appropriation Act/Funding Status			Investment Business Case Approval - Not Funded	
Planning of updating of ticketing reservation system including point of sale equipment and online ticketing.				
Planned project start date:	12/1/2016	Planned project end date:	6/30/2018	
PPEA Involvement:	No			
Estimated Costs:	Total	General Fund	Nongeneral Fund	
Project Cost (estimate at completion):	\$650,000	\$650,000	\$0	
Estimated project expenditures first year of biennium:	\$0	\$0	\$0	
Estimated project expenditures second year of biennium:	\$0	\$0	\$0	
Funding Required:	Total	General	Nongeneral	
Funding required for first year of biennium:	\$0	\$0	\$0	
Funding required for second year of biennium	\$0	\$0	\$0	
Service Area			Weight	
425 JYF 14503 Education and Extension Services			Primary	

425 JYF 14507 Operational and Support Services

Secondary

There are no procurements for this project.

Report Title: Appendix A 18 - 20 Report

Agency: Jamestown-Yorktown Foundation (JYF)

Agency Head Approval:

No

Stand Alone Non-Major Procurements

Procurement Name:	JS 2019 Special Exhibition Interactives - Procurement		
Procurement Description:	<p>Computer interactive production for the JS 2019 special exhibition "TENACITY" (formerly "Forget Her Not"). Interactives will complement static exhibits focusing on personal stories and biographies of Powhatan, English and Angolan women. Touchscreen technology will allow visitors to access video clips, audio clips and digitized primary sources to get a full understanding of the real women who traveled to Jamestown. The interactives will be designed to be integrated into the permanent galleries at the conclusion of the special exhibition. Interactive on line component will allow visitors to explore women's stories over time.</p> <p>The vendor will be responsible for development of all software, installation (on existing hardware) and, if necessary, training. Training is unlikely as the expanded interactive content is similar to existing interactives installed at ARM-Y and Jamestown Settlement. Internal resources will not be used to develop or install the interactives. This will be a sole source procurement for services only.</p>		
Procurement Planned Start Date	3/30/2018	Procurement Planned Completion Date	10/31/2018
		Appropriation Act Status	
Service Area			Weight
There are no service areas for this project.			
Procurement Name:	Yorktown Veterans Special Exhibition Interactives Procurement		
Procurement Description:	<p>Computer interactive production for a special exhibit in the American Revolution Museum at Yorktown. Interactivity on a touch table and legacy video wall allows visitors to have a meaningful; emotional connection to four Revolution War veteran's personal stories, the role they played in shaping the new nation, and the relevance of their stories to our lives today.. These interactives will be designed so that software and hardware components can be integrated into other areas of the museum following the closing of the special exhibition.</p>		
Procurement Planned Start Date		Procurement Planned Completion Date	3/1/2016
		Appropriation Act Status	
Service Area			Weight
There are no service areas for this project.			