Report Title: 2020 - 2022 IT Strategic Plan

Agency: 778 Department of Forensic Science (DFS)
Date: 1/28/2021

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 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?

DFS' primary business function is to provide forensic laboratory services to the Commonwealth's state and local law enforcement agencies, medical examiners, Commonwealth's Attorneys, fire departments, and state agencies in the investigation of any criminal matter. These functions are supported by DFS' Laboratory Information Management System (LIMS) which is made up of three modules - LIMS Case Management, LIMS DNA Databank and LIMS Breath Alcohol.

DFS' current IT investments are focused on support of the agency's strategic goals and continuing enhancements of its LIMS modules to provide more efficient delivery of forensic services and maintaining compliance with the COV IT security policy. Current information technology emphasis is on:
· Providing a secure portal to allow law enforcement the ability to remotely enter or pre-log requests for laboratory examination (RFLE).
· Providing enhanced secure electronic notification and dissemination of completed certificate of analysis (COA) reports.
· Continuing efforts to strategize with the LIMS vendor to provide technological productivity and efficiency enhancements.
· Continuing efforts to ensure and maintain compliance with the Commonwealth IT security policy (to include new service offerings i.e. file/folder/disk encryption, DR, etc.).
· Developing and providing business analytics interactive visualization capabilities.
· Launching, supporting and maintaining a grant funded web based victim Physical Evidence Recovery Kit tracking (PERK) system.
· Increasing the speed of the collection of breath test results from breath alcohol test instruments located throughout the Commonwealth.

DFS has developed and deployed additional Laboratory Information Management System (LIMS) Case Management updates and plans to upgrade to the latest version ofLIMS once it is released, the latest version will provide integration with the pending launch of the PERK system.   The new version also provides additional capabilities formoving forward with creating a secure portal to increase the efficiency of RFLE submissions and dissemination of COAs/reports.

The LIMS DNA Databank module enhancement was deployed to accommodate new buccal collector kits. This module was needed to track samples using barcode technology and new reagents. Also, a document storage facility was deployed to allow storing documents with associated DNA sample records. The next enhancement to the LIMS DNA Databank module provides a web accessible capability for law enforcement agencies to confirm the existence of required offender DNA samples. This enhancement will reduce the number of multiple samples collected for the same offender and help reduce the omission of required offender samples.

The LIMS Breath Alcohol module was recently upgraded to provide access to redacted breath test results from the DFS website. This enhancement significantly reduced the number of freedom of information act (FOIA) requests received by the agency. DFS is currently in the process of developing a method to increase the speed of the collection of breath test results from breath alcohol test instruments located throughout the Commonwealth. A more efficient collection process will decrease the lag time between when a breath test was administered and when the results of the test are available for access through the LIMS module.

The DFS IT staff continues to maintain and provide end-user support for the agency's out-of-scope scientific instrumentation computing environment and building automation network. The DFS IT staff manages contracts for the LIMS module's annual maintenance/support and several other agency specific applications (agency helpdesk, secure FTP application, web hosting, etc.). DFS also expects several modifications to the DFS web site will be required to maintain compliance with the COV IT Security policy.

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 cost of the agency's IT infrastructure managed by the VITA MSI is subject to any potential rate increases related to network, cloud and other managed services, which must be planned for as a contingency. Additionally, DFS is concerned that existing WAN bandwidth speeds may not be sufficient to handle the increased usage of the internet due to Executive Order 19 (cloud computing), and therefore plans for potential increased costs for increased speeds.   DFS must plan for the potential for increased costs associated with IT security audits, to address any changes in security compliance requirements that may occur due to COV IT Security Policy changes during the biennium.

Financial factors and IT staff resources are impacting the ability of the agency to meet its information technology (IT) goals. DFS engages the MSI to help complete IT projects, however these engagements come at a cost over the standard service offerings and often require custom work orders which increase the overall cost of IT. Mandates such as the COV IT security program, Continuity of Operations (CP) and Disaster Recovery (DR) requirements demand continuous vigilance and also increase costs. Limited resources and increasing demand to reduce case TAT will require DFS to enhance and ensure more efficient service delivery mechanisms (including the IT environment and LIMS Modules). The costs associated with the COV IT security program compliance and external technical resources to augment agency IT resources are factors that also impact the agency's IT environment. DFS' IT environment is further hampered by limited agency IT staff supporting agency wide IT systems such as LIMS, PERK, data analytics and collection of Breath Alcohol test results.
  This weakness was noted in the DHRM succession planning exercise.

The following items could potentially require or mandate changes to DFS' use of IT and result in the need for additional, unplanned IT investments:
· Evolving requirements mandated by the body that accredits DFS's scientific operations.
· Laws or regulations impacting offender DNA sample collection and tracking.
· Data storage requirement and other costs associated with implementing the DR plan.
· Data storage requirements for storing high resolution image files and instrument data electronically.
· Developing and maintaining business analytics interactive visualization capabilities.
· Corrective actions resulting from pending IT security audits.
· Costs associated with new IT Security Standards (i.e. new ISO position that reports directly to the agency head).
· Costs associated with assessing, evaluating and transitioning to applicable systems Software as a Service (SAAS) platform or Cloud based services (Executive Order 19)
· Costs associated with increasing bandwidth requirements to cloud based systems (Executive Order 19).
· Costs associated with remedying vulnerability scan findings.
· Unforeseen costs not covered by grant funding for the PERK tracking system.
· Enhancements to the LIMS Breath Alcohol module will be required if digital document authentication standards are established for use with all public records in the Commonwealth.

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 agency has reviewed its revised Business Impact Analysis (BIA) and is developing Continuity Plan and Disaster Recovery solutions that meet the requirements of the revised BIA. Accommodating the demand to decrease case TAT, the new LIMS module will need to have enhanced capabilities for remote access to enable the criminal justice community to submit requests for laboratory examinations electronically. The enhancement will also need to enable remote disposition of reports and case status. Along with new case record documentation storage ability, these capabilities will increase the overall efficiency of the laboratory environment and reduce case TAT. DFS recognizes the need for improved efficiencies in case management including retrieving and analyzing data. DFS is receiving ever increasing requests from the criminal justice community to provide forensic analytical and submission data analyzing trends in criminal activity across the COV. The agency is working on data analytics to accommodate these needs.

DFS is also reviewing other initiatives to increase laboratory efficiency leveraging the use of new laboratory technology that can integrate with the agency's IT environment. DFS also plans to implement new features of the LIMS to include secure electronic dissemination of reports and remote entry of Requests for Laboratory Examinations (RFLE) via the internet.

These objectives will help DFS meet the technology goals of the agency and the COV IT Strategic Plan. A primary goal is to increase efficiency through workforce productivity using new and leveraging existing technology. Investments in these areas should enhance laboratory efficiency leading to a decrease in case TAT and play a significant role in reaching agency and COV strategic goals.

Report Title: IT Strategic Plan Budget Tables

Agency: 778 Department of Forensic Science (DFS)
Date: 1/28/2021

Current IT Services				
	Costs Year 1		Costs Year 2	
Category	GF	NGF	GF	NGF
Projected Service Fees	$3,044,542.00	$797.00	$3,348,996.00	$821.00
VITA Infrastructure Changes	$0.00	$0.00	$0.00	$0.00
Estimated VITA Infrastructure	$3,044,542.00	$797.00	$3,348,996.00	$821.00
Specialized Infrastructure	$0.00	$0.00	$0.00	$0.00
Agency IT Staff	$500,000.00	$0.00	$500,000.00	$0.00
Non-agency IT Staff	$50,000.00	$0.00	$55,000.00	$0.00
Cloud Computing Service	$50,000.00	$0.00	$55,000.00	$0.00
Other Application Costs	$100,000.00	$0.00	$100,000.00	$0.00
Total	$3,744,542.00	$797.00	$4,058,996.00	$821.00

Proposed IT Investments				
	Costs Year 1		Costs Year 2	
Category	GF	NGF	GF	NGF
Major IT Projects	$0.00	$0.00	$0.00	$0.00
Non-Major IT Projects	$0.00	$0.00	$0.00	$0.00
Agency-Level IT Projects	$200,000.00	$0.00	$220,000.00	$0.00
Major Stand Alone IT Procurements	$0.00	$0.00	$0.00	$0.00
Non-Major Stand Alone IT Procurements	$0.00	$0.00	$0.00	$0.00
Agency-Level Stand Alone IT Procurements	$0.00	$0.00	$0.00	$0.00
Procurement Adjustment for Staffing	$0.00	$0.00	$0.00	$0.00
Total	$200,000.00	$0.00	$220,000.00	$0.00

Projected Total IT Budget				
	Costs Year 1		Costs Year 2	
Category	GF	NGF	GF	NGF
Current IT Services	$3,744,542.00	$797.00	$4,058,996.00	$821.00
Proposed IT Investments	$200,000.00	$0.00	$220,000.00	$0.00
Total	$3,944,542.00	$797.00	$4,278,996.00	$821.00

Report Title: Business Requirements For Technology

Agency: 778 Department of Forensic Science (DFS)
Date: 1/28/2021

BReT - Annual Maintenance and Support Contracts (LIMS modules)	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	No
Mission Critical:	
Description:	
Annual Maintenance and Support Contracts (LIMS modules):LIMS FA-BrAD Module $25,000 (FY 20-22)LIMS DNA-Databank Module $15,000(FY 20-22)LIMS Case Management Module $50,000(FY 20-22)	

BRet DFS Centralized ISO and Audit	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	
Mission Critical:	
Description:	
Outsourced ISO augmentation and VITA Audit service (VITA)ISO Services FY 20-22: $38,000Audit Services FY 20-22: $36,000	

BReT DFS IT Security Program Compliance	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	No
Mission Critical:	
Description:	
COV IT security program compliance	

BRet DFS LIMS Case Management Enhancements	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	No
Mission Critical:	
Description:	
DFS LIMS Case Management module enhancement and cloud storage/access.	

BReT DFS LIMS DNA Databank Enhancement	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	
Mission Critical:	
Description:	
DFS' LIMS DNA Databank module enhnacement for search, review and track VSP SOR data and buccal kits.	

BReT DFS LIMS FA-BrAD Enhancement	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	
Mission Critical:	
Description:	

DFS' LIMS FA-BRaD module enhnacement to provide decrease the access time to instrument data

BReT End of Life 2008 Server DFS	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	
Mission Critical:	
Description:	

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

BReT PERK Tracking System	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020
Mandate:	
Mission Critical:	
Description:	

Maintain/Enhance a public facing Physical Evidence Recovery Tracking (PERK) System.

BRnT DFS IT Disaster Recovery	
BRT Type:	Business Requirement for New Technology
Date Submitted:	5/14/2020
Mandate:	
Mission Critical:	
Description:	

DFS Disaster Recovery and CP

BRnT Storage Technology/Capacity	
BRT Type:	Business Requirement for New Technology
Date Submitted:	5/14/2020
Mandate:	
Mission Critical:	
Description:	

DFS current storage technology will not accommodate the new storage requirements and achieve the RTO and RPO. If DFS is to meet its goal to become less dependent on paper, the current technology will need to be replaced.

DFS IT Sourcing BReT	
BRT Type:	Business Requirement for Existing Technology
Date Submitted:	5/14/2020

Mandate:	
Mission Critical:	

Description:
Messaging Services for email, enterprise collaboration services, and mobile device management are required for over 300 users in the Department of Forensic Science. The Department of Forensic Science has 10 servers (3 physical, 4 virtual and 3 CIFS) which will need to be migrated and tested during this transition to the COV private cloud. Five (5) applications will be affected by this move and will need to be tested. The Department of Forensic Science has 5 applications which will need to be migrated and tested during the authentication/directory services transition. Number of users (internal and external) are 320 internal and 0 external. The Department of Forensic Science has 35 desktops and 315 laptops and 60 network printers which will need to be migrated. The Department of Forensic Science has 404 UCaaS phone lines and 113 other phone lines which will need to be migrated. The Department of Forensic Science has 4 MPLS circuits which will need to be migrated. The Department of Forensic Science projects that internet usage will increase by 10% due to deployment of the LIMS remote RFLE entry and report dissemination system.

Report Title: IT Strategic Plan Projects

Agency: 778 Department of Forensic Science (DFS)
Date: 1/28/2021

There are no projects for this agency.

Report Title: IT Strategic Plan Procurements

Agency: 778 Department of Forensic Science (DFS)
Date: 1/28/2021

Stand Alone Procurements:

There are no stand alone procurements for this agency.