Report Title: IT Strategic Plan Summary

Agency: 301 Department of Agriculture & Consumer

Services

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?

The Virginia Department of Agriculture and Consumer Services (VDACS) Information Technology (IT) environment includes an Oracle environment running 50 internal applications. Twentyfive additional applications are supported by outside vendors. The infrastructure is provided by the Virginia Information Technology Agency/Northrop Grumman (VITA/NG) Partnership whose contract expires in June 2019. These three venues provide the platform on which the agency operates. Approximately half of the agencys 506 staff members telework, are home-based, or travel regularly. The mobile workforce is a key element in the way technology is currently being used and how it will be used in the future. New systems and enhancements to systems were implemented in the last biennium that include a migration to Cardinal, the COV financial management system, improvements to the Food Safety System, a Quality Management System for Laboratory Services, an online Fertilizer Reporting tool, implementation of a contact management system for Marketing, and changes to several web-based, customer-facing applications. In addition, the Oracle database and application environment was upgraded to a new version of the software and all applications were migrated to this environment. Systems slated for replacement or significant enhancements in the 2018-2020 biennium that support agency's five strategic goals and support the automation of manual processes are underway. The systems include the following.

AFIS Dairy System

AFIS Food Inspection System

AFIS USA LIMS System

AFS Agency Access Request System

AFS Revenue Management System

CO FARMLINK System

CP OWM Inspection Reporting System

CP OARS Admin - Charitable and Regulatory Programs

CP OARS Portal - Charitable and Regulatory Programs

CP OCRP Charitable Gaming Financial Reporting

CP OCRP Charitable Organization Search System

CP OCRP Charitable Solicitations Registration System

CP OPIS Cotton Shares Billing Sy stem

CP OPIS Feed System

CP OPISFertilizer System

CP OPIS Lime System

CP OPIS Pure Harvest Seed SamplingSystem

CP OPIS Turf Fertilizer Reporting System

CP OWM WINWAM System

MKT Market News Constituent Notification System

MKT Market News Livestock Reporting System

MKT Marketing Client Database System

OPS Pesticide EDC System

OPS Pesticide Mi-Forms System

New initiatives will be underway over the next six years that include rewriting the agency's Oracle applications in MS .NET framework to add functionality and to ensure that all applications, external-facing and internal-facing can be used on any device (from desktop computers to mobile phones). The main application server at VDACS is being upgraded requiring recompiling over 2500 modules and testing each module to ensure they work in with the new software. VDACS is finalizing the reconciliation process for the Commonwealth financial system, Cardinal, expanding the on-line payment portal for billing, registrations, licenses, and fees, completing the Customer Relationship Management application for Marketing, completing enhancements to the electronic document management system in pesticide, and completing the off-line client module for the Food Safety Application. VDACS manages requests for new application services using the ITIM Model. Currently there are Agency leadership will use these initiatives to satisfy new business requirements, improve performance, improve efficiencies, and provide improved services to constituents. Although IT resources are limited, the agency will make use of Cloud offerings, the IT Contingent Labor Contract, the eGov contracts and COTS applications to fulfill requests in the changing environment. Several initiatives will require additional funding to complete on schedule and within the next several bienniums.

Security requirements continue to increase. The changes include increased governance by the central IT agency, increased reporting requirements, audits becoming more detailed, and increased threats from internal and outside sources. VDACS has been handling these needs with a slim security staff but has committed existing resources that equal four FTEs to meet the requirements. These requirements and other mandates have prohibited the agency from moving forward on agency application priorities and initiatives that are being demanded by our customers.

Additional requirements related to infrastructure services in the next four to six years will be in the forefront. The current Infrastructure Partnership will be replaced with multiple supplier model and a services integrator. The full impacts to the agency are not fully realized at this time although some services may be transitioned back to the agencies requiring staff to perform those duties. Expectations include the need for these multiple projects to be managed internally to protect VDACS' interests. VDACS' development, project management, business analysis, development, database, infrastructure and security resources will be required during the planning period and implementation period. New ordering, billing and service processes will be implemented to transition to the new vendors. One vendor will be replaced by a minimum of 9 vendors between 2017 and 2022. A project manager will be required to coordinate and facilitate communications and technical work. Technical staff will be required to manage the transition to new vendors in the following arenas: email, mainframe, server/storage, security, help desk, network, desktop/pc/end user computing. telecommunications, voice and cross functional services. This will occur while continuing to maintain the current technology environment and while focusing on new initiatives required by agency management and mandates.

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?

A continuing demand for streamlined and on-line services from constituents, an increasing requirement for compliance with central agency standards, policies and procedures, and minimal resources hinder the agencys ability to move forward with information technology (IT) initiatives. The Commonwealth of Virginia (COV) Security Standards, Governmental Accounting Standards Board Pronouncement 51, Executive Directive 7, audit requirements, budget limitations, new central agency applications, new federal mandates and data standards are examples of specific mandates.

- The expiring infrastructure contract in 2019 will impact the agency in IT and across all business areas. The consequences and impacts will run through 2022, began in fiscal year 2016-2017 and include costs to provide contract management, project management, infrastructure transitions, agency responsibility changes, and disaster recovery costs.
- The updated COV Security Standards require upgrades to the agency's computing environment and require that controls be put in place in the development process. These requirements hinder the agency's ability to move forward with new initiatives due to resource constraints.
- One of the priorities of the agency Commissioner is to ensure that constituents and customers have access to services provided by VDACS 24 x 7 and to improve the customer experience with VDACS. This initiative is an agency priority. Several projects are underway and planned in the future to improve these services that include the Food Safety automation for inspection staff, implementing on-line payments for service for which customer receive an invoice and other on-line services.
- The FDA requirement to establish a Produce Safety Program. and plans to bring online registration and licensing services to Pesticide and Charitable Solicitation. SECURITY SHARED SERVICES
- VDACS is currently not using the security services but is managing the requirements internally.INTERNET UTILIZATION
- Performance issues continue to be a problem in the main office and field offices. VDACS will need resources to increase the bandwidth to resolve the performance issues. These costs have not been budgeted.

CLOUD COMPUTING SERVICES AND APPLICATION HOSTING

- Software as a Service is an attractive option for application requests that can be solutioned in the Cloud. VDACS will need to purchase ECOS services from VITA to ensure vendor compliance. ECOS costs have not been budgeted for any VDACS applications.

IT INFRASTRUCTURE TRANSITION

- With the potential for 9 vendors to replace the Northrop Grumman contract, additional resources throughout IT will be required for the transition. This includes resources for managing the transitions, and technical staff in the security, personal computer, telecommunications, network, email, help desk, server and mobile device areas. The resources required for this transition have not been budgeted. DIGITAL GOVERNMENT
- Additional governance will be required as technology expands and the Internet of Things (IoT) becomes more prominent. Although the agency has strong policies and procedures in place for mobile computing, the changing technology will require that the agency invest in digital government, ensure the security controls are in place and position itself to effectively implement the new technologies.

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 changes necessary in IT impact all lines of business in the agency. IT initiatives are important because they will increase operational efficiencies and add value to the Commonwealth by increasing services to citizens. The changes meet federal, state and regulatory mandates while incorporating an easy to use web-facing experience for our customers in addition to providing faster turnaround on services offered by the agency. The improvements will allow the agency to maximize the effectiveness of the agency's human resources.

The agency uses an IT Investment Management (ITIM) process through the Business Investment Group (BIG) to prioritize IT projects from an agency business perspective. IT projects will be addressed in several ways. Some enhancements will be handled using the current Oracle development environment. Some new systems will be implemented using outside vendors to implement COTS applications that will be configured by vendors and housed at CESC. Other new systems will be implemented as SaaS. Enhancements will also be addressed using outside vendors that focus on their application niche as well as contract developers to enhance .NET web-facing applications. VDACS portfolio of applications is significant with over 60 unique applications in production.

- Funding is available through select nongeneral fund programs for several initiatives. Funding for projects related to generalfund supported programs is limited, and the funding disparity between program areas complicates IT project prioritization. The Department of Agriculture and Consumer Services diverse programs are supported by a variety of funding sources including general fund support (50.4 percent), user fees (8.7 percent), commodity grading fees (9.8 percent), commodity board self-assessments (13.8 percent) and federal grants (17.3 percent).
- The IT staff requires significant training to create applications using the new .NET Framework development tools.
- In addition to IT s taff and agency subject matter experts, contract staff will be used to support the agency initiatives as needed.
- Other systems will be acquired as COTS applications and the use of the eGov contracts. The solutions critical to the agency include the following new systems and system enhancements
- AFIS Implement new Produce Safety Program Application
- AFS Revenue Management Revenue Online Portal
- Online Charitable Solicitations Registration Tool
- Online Pesticide Registration and Licensing Tool
- Enhancements to AFS Agency Access Request
- Implementation of Document Management tools and Data Retention services
- CP On-Line Agency Registration System Provide additional programs with the ability for on-line customer registrations
- CP Pure Harvest migration to a new system
- AFIS OVS Permitting application
- CP Charitable Gaming Financial Reporting enhancements

A budget decision package will be submitted to the Department of Planning and Budget for the agency defined priority projects.

Report Title: Strategic Plan

Agency: Department of Agriculture & Consumer

Services

Current IT Services

Category	GF	NGF	GF	NGF
Projected Service Fees	\$1,409,992	\$816,428	\$1,452,292	\$840,921
VITA Infrastructure Changes	\$110,000	\$65,000	\$110,000	\$65,000
Estimated VITA Infrastructure	\$1,519,992	\$881,428	\$1,562,292	\$905,921
Specialized Infrastructure	\$135,376	\$95,194	\$135,376	\$95,194
Agency IT Staff	\$922,618	\$321,316	\$922,618	\$321,316
Non-agency IT Staff	\$1,400,284	\$215,869	\$1,077,284	\$215,869
Cloud Computing Service	\$50,000	\$0	\$53,000	\$0
Other Application Costs	\$366,117	\$68,081	\$366,117	\$68,084
Total	\$4,394,387	\$1,581,888	\$4,116,687	\$1,606,384

Proposed IT Investments

Costs Year 1 Costs Year 2

Category	GF	NGF	GF	NGF
Major IT Projects	\$0	\$0	\$0	\$0
Non-Major IT Projects	\$0	\$198,400	\$0	\$84,600
Agency-Level IT Projects	\$570,000	\$520,000	\$320,000	\$340,000
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	\$500,000	\$600,000	\$0	\$0
Procurement Adjustment for Staffing	\$0	\$0	\$0	\$0
Total	\$1,070,000	\$1,318,400	\$320,000	\$424,600

Projected Total IT Budget

Costs Year 1	Costs Year	2
ooto .ou		•

Category	GF	NGF	GF	NGF	Total Costs
Current IT Services	\$4,394,387	\$1,581,888	\$4,116,687	\$1,606,384	\$11,699,347
Proposed IT Investments	\$1,070,000	\$1,318,400	\$320,000	\$424,600	\$3,133,000
Total	\$5,464,387	\$2,900,288	\$4,436,687	\$2,030,984	\$14,832,347

Report Title: Business Requirements For Technology

Agency: Department of Agriculture & Consumer Services

(VDACS)

BReT - Agency Application Re-engineering and Enhancements

BRT Type:	Business Requirement for Existing Technology	
Date Submitted:	8/22/2017	
Mandate:	Yes	
Mission Critical:	No	

Description:

Several existing systems are slated for replacement or significant enhancements which are necessary to ensure that the applications are in compliance with the Commonwealth Policies and Standards and that audit requirements are met. The applications in line for enhancements and modifications include the following systems.

- Market News Constituency Notification
- Charitable Gaming Financial Reporting
- Agency Access Request
- Pesticide EDC security upgrade
- Farmlink Database enhancements
- Dairy Services System enhancements
- Virginia Wine Distribution Corp Enhancements

New functionality is required to enhance the customer experience, improve employee processes, increase efficiencies and provide more services for constituents.

Note: The PERL and .NET applications are currently hosted through eGov vendors. Either eGov or staff augmentation vendors will update some of the applications. Internal resources will be part of the projects and will address the Access Request and Dairy Services enhancements.

BReT - Food Safety, Produce Safety and Dairy Services Inspection Systems

BRT Type:	Business Requirement for Existing Technology	
Date Submitted:	8/16/2017	
Mandate:	Yes	
Mission Critical:	Yes	

Description:

The Inspection Module of the Food Inspection System was implemented in Spring 2014. The Sample Module was developed and implemented in biennium 2014-2016. The off-line client module was delivered in August 2017. Additional modules for Food Safety will be developed in FY 2018 and 2019. These modules include complaints, financials, vehicular incidents, integration with VDACS Revenue Management System and an inspector scheduler. The application, in an Oracle environment, will be enhanced to include new modules, increased security controls and additional reporting functions while in a mobile environment.

The Produce Safety Program is mandated by the FDA to enforce the FSMA Produce Safety Rule. Deadlines to implement a farm inventory database, inspection module and sampling module are by June 30, 2018. Update 3/20/2018 - It has been determined that VDACS needs to procure a new application service to meet this mandate. The funding has been extended for an additional 3 years. The Dairy Services program currently conducts inspections through a manual process which is later keyed into the Dairy System at the central office. The goal is to automate the inspection process to streamline

the work at by Dair	he work at by Dairy Services Staff.		
BReT - On-Line Se	ervices - Revenue Management, OARS Payment Portal		
BRT Type:	Business Requirement for Existing Technology		
Date Submitted:	8/22/2017		
Mandate:	No		
Mission Critical:	No		

Description:

Provide customers and constituents with on-line services to perform licensing, registration, permitting and bill paying activities with VDACS. VDACS currently provides some on-line services but this function needs to be expanded to many programs in the agency. The following are examples of areas that are planned to be included in this initiative.

- Charitable Solicitations
- Pesticide Services
- Feed, Fertilizer, and Lime
- Laboratory Services Fees
- Food Safety and Inspection Fees
- Commodity Services fees for Peanut, Egg, Grain, Livestock and Vegetable Grading
- Veterinary Services for permitting to allow Animal Disease Traceability

BRET - VDACS IT Sourcing BRT Type: Business Requirement for Existing Technology Date Submitted: 8/17/2017 Mandate: Yes Mission Critical: Yes

Description:

The Commonwealth is transitioning to a multi-supplier model for IT Infrastructure. This BRT outlines the infrastructure VDACS will need to plan and test in support of the transition. The COV Infrastructure contract expires in 2019. The central IT agency, VITA, is beginning disentanglement with the current provider in the 2016-2018 biennium. VDACS requires the resources to work through the process to disentangle all of the infrastructure services and transition to new suppliers. This includes email, mainframe, security, all server, all network, all help desk, and all desktop infrastructure services in use by agency staff. This will be a huge undertaking requiring many agency resources to work through the process that includes contract administration, project management, creating test plans, testing and technical support, in addition to the time it will take all employees to transition to the new services. The transition could have significant impacts on agency lines of business. Below are the details for some of the procurements that will be executed for this endeavor. The costs associated with this BReT are based on the worst case scenario, where the agency would have to stand up its entire infrastructure and provide the staff to support that infrastructure.

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 over 500 users at VDACS. We also have approximately 6 applications that have hooks into messaging services which will need to be tested. Workplace Collaboration Services (VITA provided SharePoint) and AirWatch are not used by VDACS.

IBM Mainframe: VITA initiated disentanglement from NG IBM Mainframe services in 2016. VDACS has

only used CARS for this device and is researching whether these services are still needed. Server/storage (including housing of equipment): VITA is initiating disentanglement from NG servers and storage. VDACS has 25 servers which will need to be migrated to a new provider and tested during this transition. Over 60 applications will be affected by this move and willneed to be tested.

Authentication/directory services: VDACS has over 60 applications which will need to be migrated and tested during the authentication/directory services transition. Over 500 internal and approximately 6000 external users will be impacted by the changes.

End user computing: VDACS has 170 desktops, 220 laptops and 45 network printers which will need to be migrated.

Data networks: VDACS has 7 MPLS and 12 broadband networks that will need to be migrated.

Voice Network: VDACS has 2 UCaaS phone systems which consist of about 60 UCaaS phone lines and approximately 475 Virtual Communication Express or other phone lines which will need to be migrated.

Cloud Computing: VDACS is investigating moving 4 applications to a Cloud services vendor. The business reason for the move is to reduce costs, increase efficiencies and reduce IT agency footprint. Applications are not cloud ready and the agency will 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: To meet Commonwealth Security requirements, VDACS will engage VITA's Shared Security Services/procure outside security services from an outside vendor utilizing DPB funds as needed.

Internet Usage: VDACS projects that internet usage will increase by 15% due to increased marketing initiatives, increases in the number of web-facing applications available to staff and the increased need for video services for training of staff and customers.

BReT End of Life 2008 Server VDACS 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. **BReT- Oracle Upgrade and Application Migration** Business Requirement for Existing Technology **BRT Type: Date Submitted:** 8/17/2017 Mandate: No **Mission Critical:** Yes **Description:**

Upgrade the agency's Oracle application server to a new version of the development tools, migrate 35 applications and test an additional 15 applications. This will ensure that the application server continues to run supported software as required by the COV Security Standard.

Re-engineer and rewrite the Oracle applications that currently exist in older technology and move them to a .NET framework environment. The new environment will provide for mobility of staff and a responsive design that should have a live of over 10 years. The move to this environment is expected to take the agency approximately 5 years to complete because the 50 applications listed above must all be rewritten in the new environment. This is a significant endeavor for the agency but will position the technology environment for the future and will position the agency to more efficiently deploy additional on-line services to customers.

BRnT - Agricultural Commodity and Regulatory System

BRT Type:	Business Requirement for New Technology	
Date Submitted:	8/22/2017	
Mandate:	No	
Mission Critical:	No	

Description:

Implement a system to address the registration and licensing needs of the Seed, Feed, Fertilizer, Lime, Nursery and Plant and Pest Services programs. A system is needed to allow customers to submit registrations via an on-line portal that will meet COV security standards, improve staff efficiency, reduce costs associated with annual licenses and product registrations, and provide for on-line data entry and payments. The agency is looking for COTS or SaaS applications that focus on providing these services to other states.

BRnT - VDACS Cardinal and CIPPS Integration

BRT Type:	Business Requirement for New Technology
Date Submitted:	8/22/2017
Mandate:	Yes
Mission Critical:	Yes

Description:

The Cardinal Payroll Project will replace CIPPS (Commonwealth Integrated Payroll and Personnel System) over the next two years. This project leverages the Commonwealth's investment in Oracle's PeopleSoft application and will allow for full integration to the Cardinal Financials application. By replacing CIPPS with Cardinal, we will reduce the risks associated with our current aging system, which will not be supported by the vendor after May of 2018. Cardinal will meet the majority of Commonwealth's payroll business requirements and will provide robust reporting tools and capabilities. Functional areas in scope include Payroll, Time and Labor, Absence Management, limited Human Resources including Base Benefits, ePay, and integration with Cardinal Financials.

VDACS will meet the Spring 2018 deadline to perform payroll functions in Cardinal. The BRT is being submitted in the event that something goes wrong with the planned go-live date.

BRnT - VDACS Content Management

BRT Type:	Business Requirement for New Technology
Date Submitted:	8/22/2017

Mandate:	No
Mission Critical:	No
Description:	

The majority VDACS' transactions require handling hardcopy documents, from initial contact with internal and external clients, the completion transactions, and filing of documents. Searches of the archived information involve varying degrees of time and effort. Various solutions in the agency have been implemented including microfilm. The absence of an Enterprise Content Management (ECM) system is slowing efforts to achieve agency efficiencies.

Report Title: Appendix A 18 - 20 Report

Agency: Department of Agriculture & Consumer Services

(VDACS)

Agency Head Approval: No

Budget Cate	gory: Non-Ma	ajor Projects	3		
PROJECT- AFIS Pro	duce Safety				
Appropriation Act/Fu		Investment Business Case Approval -			
The Produce Safety P (FSMA) Produce Safe and sampling module signed prior to that da service to meet this m maintenance, cloud ho	ty Rule. Deadlines to were by June 30, 201 te. It has been detern andate. Project costs	implement a farm in 18; but, the FDA has nined that VDACS ne assume stand up of	ventory database allowed an exter eds to procure a	e, insponsion if a new a	ection module f the contract is application
Planned project start date:	1/1/2018	Planned project end	date:	2/1/2019	
PPEA Involvement:	No				
			T		
Estimated Costs:	Total	General Fund	Nongeneral F	und	Nongeneral Funding Source
Project Cost (estimate at completion):	\$440,400	\$0	\$44	10,400	
Estimated project expenditures first year of biennium:	\$198,400	\$0	\$19	98,400	Non-general - Federal
Estimated project expenditures second year of biennium:	\$84,600	\$0	\$8	34,600	
Funding Required:	Total	General	Nongenera	al	
Funding required for first year of biennium:	\$0	\$0		\$0	
Funding required for second year of biennium	\$0	\$0		\$0	
Service Area	Weig	jht			
301 VDACS 55401 Re	Primary				
BReT - Food Safety, F	tion Systems	Prima	ary		
301 VDACS 54101 Ag Response	gricultural and Food E	mergencies Prevent	ion and	Seco	ndary

PROCUREMENT - AFIS	Produce Safety		
Procurement Description:	Produce Safety Ruinspection module 3/20/2018 - It has application service an additional three Note: The costs fo and represent the	ule. Deadlines to imple and sampling module been determined that to meet this mandate years. In the procurement are vendor's proposal co	ted by the FDA to enforce the FSMA lement a farm inventory database, e are by June 30, 2018. Update t VDACS needs to procure a new e. The funding has been extended for e less than the costs for the full project sts for FY18-FY21 years. Cost of the tenance and cloud hosting increase
Planned Delivery Date:	5/15/2018		

Report Title: Appendix A 18 - 20 Report

Agency: Department of Agriculture & Consumer Services Date: 7/24/2018

(VDACS)

Agency Head Approval: No

There are no stand alone major procurements for this agency.