

Report Title: IT Strategic Plan Summary

Agency: 440 Department of Environmental Quality

Date: 7/24/2017

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?

DEQ is committed to using technology to provide more efficient service and to reduce operational costs. In addition, DEQ must meet certain State and Federal mandates for reporting which have direct impacts on the agency's IT resources and capabilities. DEQ's current technology-based initiatives include:

- Comprehensive Environmental Data System (CEDS): DEQ's system of record for environmental data. DEQ is converting the outdated legacy modules to an architecture that will enable integration among DEQ's enterprise applications and mobile/web deployments.
- Enterprise Content Management System (ECM): DEQ's repository for documents of record, implementing approved document retention. DEQ is upgrading the system to include single sign-on and enhanced ability to integrate seamlessly with the other enterprise applications.
- Geographic Information System (GIS): Geospatial information across DEQ used for modeling, analysis, and public information. DEQ is implementing the GIS strategic plan to ensure future efforts in this area are focused, cost effective, and continue to provide staff with time and cost saving tools.
- Oracle E-Business Suite (eBiz): DEQ's transaction and reporting database for financials, human resources, purchasing, and project costing. DEQ has used (eBiz) as the Financial System of Record since 2000. The Commonwealth has mandated a phased implementation of Cardinal as the Commonwealth Financial System of Record. DEQ has been notified that we must be able to pass transactions through Cardinal no later than Feb 2016. This effort will have a significant business impact to accommodate the Commonwealth Chart of Accounts changes but will also require a development effort to replace our current eBiz to CARS communication with an eBiz to Cardinal communication.
- The exchange of GIS and other environmental data with EPA and others via the National Information Exchange Network (NEIN).

The dynamic nature of environmental regulation demands ever-changing environmental data for analysis and decision-making, requiring a sustained effort toward efficient capture, storage, protection, and exchange of this data. By integrating CEDS, ECM, GIS, and eBiz, DEQ is laying the foundation for future initiatives that will benefit citizens, the regulated community and other government agencies. DEQ's plans for the future include:

- Web-based permit application process and reporting for the regulated community;
- Implementation of the VITA SharePoint offering to replace the agency's intranet;
- Mobilization of more inspectors, water quality assessors, and monitoring staff with tools for on-site data capture and global positioning;
- Sophisticated environmental data modeling and forecasting tools; and
- Efficient data retrieval using Business Intelligence technology and an enterprise data warehouse.

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 affect IT in other Commonwealth agencies, or in other states? If so, how?

As described in the current operational IT investments, DEQ has multiple efforts underway over the next 2 to 4 years: the CEDS Modernization effort and the mandated agency transition to Cardinal. The CEDS modernization is documented in our BRnTs and addressed in 2 proposed projects, Water Modernization and Land Modernization. This is a continuing effort in order to relieve the agency of its reliance on unsupported Oracle software.

Agency IT leadership expects that these projects will be adequately funded either through grant, non general funds or general funds. DEQ Leadership has planned for IT projects and has maintained sufficient non general fund balances to fund the necessary upgrades. In addition, due to proper planning, DEQ is positioned to successfully apply for federal grants to fund mandated federal IT initiatives.

DEQ is committed to project management standards and has shifted to a modified agile development approach. Due to these factors, DEQ is able to initiate and deploy smaller, iterative projects that result in quicker delivery of upgraded technology.

SECURITY SHARED SERVICES - DEQ plans to take advantage of the Security shared service offering in order to adhere to Commonwealth security standards and policies.

INTERNET UTILIZATION - DEQ anticipates a rise of approximately 20% in its internet usage in the coming 2-5 years due to an increase in online interaction with the public via its eReporting effort, an increase in cloud computing opportunities, an expansion of mobile capabilities, and a general increase in internet usage by staff.

CLOUD APPLICATION HOSTING - DEQ intends to take advantage of cloud computing in the coming years. DEQ has 5 applications which would be cloud computing candidates.

IT INFRASTRUCTURE TRANSITION - DEQ is preparing for the IT infrastructure transition as best it can. This transition is expected to be resource intensive for the agency due to testing and possible conversions/migrations. DEQ hopes that it can receive as much lead time as possible in order to adjust schedules and efforts to accommodate the transition.

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?

As a result of the support ending for our Oracle software, the agency strategized and developed a new .Net framework as a foundation for all new CEDS modules as well as other applications. As a result of this strategic plan, the agency is positioned to exploit the web enabled features of the framework which allow access from any internet connection regardless of platform.

Having this framework will allow the agency to proactively leverage web enabled applications as the business processes and requirements evolve to take advantage of “access anywhere” capability. The agency IT staff has the appropriate skill set(s) to support current and future agency technology including technical oversight of IT vendors if needed.

When engaged in multiple IT efforts , the agency utilizes an iterative development methodology to efficiently manage project resources, including IT and the business.

Report Title: Strategic Plan

Agency:

Department of Environmental Quality

Date:

7/24/2017

Current IT Services

Category	Costs Year 1		Costs Year 2	
	GF	NGF	GF	NGF
Projected Service Fees	\$2,405,640	\$1,404,369	\$2,420,419	\$1,412,997
VITA Infrastructure Changes	\$0	\$0	\$0	\$0
Estimated VITA Infrastructure	\$2,405,640	\$1,404,369	\$2,420,419	\$1,412,997
Specialized Infrastructure	\$0	\$0	\$0	\$0
Agency IT Staff	\$2,600,000	\$0	\$2,600,000	\$0
Non-agency IT Staff	\$0	\$0	\$0	\$0
Cloud Computing Service	\$0	\$0	\$0	\$0
Other Application Costs	\$0	\$0	\$0	\$0
Total	\$5,005,640	\$1,404,369	\$5,020,419	\$1,412,997

Proposed IT Investments

Category	Costs Year 1		Costs Year 2	
	GF	NGF	GF	NGF
Major IT Projects	\$0	\$0	\$0	\$0
Non-Major IT Projects	\$0	\$0	\$0	\$0
Agency-Level IT Projects	\$0	\$500,000	\$0	\$500,000
Major Stand Alone IT Procurements	\$0	\$0	\$0	\$0
Non-Major Stand Alone IT Procurements	\$116,352	\$0	\$116,352	\$0
Agency-Level Stand Alone IT Procurements	\$0	\$0	\$0	\$0
Procurement Adjustment for Staffing	\$0	\$0	\$0	\$0
Total	\$116,352	\$500,000	\$116,352	\$500,000

Projected Total IT Budget

Category	Costs Year 1		Costs Year 2		Total Costs
	GF	NGF	GF	NGF	
Current IT Services	\$5,005,640	\$1,404,369	\$5,020,419	\$1,412,997	\$12,843,428
Proposed IT Investments	\$116,352	\$500,000	\$116,352	\$500,000	\$1,232,704
Total	\$5,121,992	\$1,904,369	\$5,136,771	\$1,912,997	\$14,076,132

Report Title: Business Requirements For Technology

Agency: Department of Environmental Quality (DEQ)

Date: 7/24/2017

BReT - Air Quality Monitoring (AQM) Data Aquisition System**BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 6/23/2017**Mandate:** No**Mission Critical:** Yes**Description:**

Procure a fully functional data aquisition system (DAS) solution to poll and display data from ~24 air monitoring locations statewide to assess air quality data and report ot EPA as required. Current contract with IPS MeteoStar is expiring. This system will be fully outside of the COV network and accessed via the internet. An RFP will be developed to solicit solutions.

BReT - CEDS Modernization - Ongoing Enhancements**BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 8/22/2016**Mandate:** No**Mission Critical:** Yes**Description:**

Enhance capability of environmental data tracking by continuing to enhance CEDS based to meet business needs not able to be addressed in the redesign due to VITA CSRM deadline. Ongoing enhancements to meet changes in business needs, new regulations, and increase user efficiency and customer service.

BReT - Enterprise Content Management**BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 12/4/2014**Mandate:** No**Mission Critical:** Yes**Description:**

Upgrade and maintenance of the agency's Enterprise Content Management (ECM) System to include upgrading the system to include single sign-on and enhanced ability to integrate seamlessly with the other enterprise applications.

BReT - IT Security Program**BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 8/11/2016**Mandate:** No**Mission Critical:** Yes**Description:**

Continue to maintain and expand IT Security in the agency. The goal of the agency is to not only meet minimum COV Security Requirements but to exceed these requirements whenever possible to provide a safe and secure IT environment for agency staff.

BReT - XP computers

BRT Type: Business Requirement for Existing Technology

Date Submitted: 11/25/2014

Mandate: Yes

Mission Critical: Yes

Description:

DEQ requires that XP based computers be used as standalone, non-network connected, machines in order to run business critical air analyzers. These analyzers will cost hundreds of thousands of dollars to replace. They are still viable for their intended use, however, the software required to connect and communicate with them require XP based computers.

BReT- DEQ IT Sourcing BReT

BRT Type: Business Requirement for Existing Technology

Date Submitted: 8/11/2016

Mandate: Yes

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 approximately 800 users in our agency. We also have 15 applications that have hooks into messaging services which will need to be tested. Workplace Collaboration Services (VITA provided SharePoint) DEQ does not use WCS SharePoint. We have 0 applications serviced via AirWatch which will need remediation.

Server/storage (including housing of equipment) BReT:

VITA is initiating disentanglement from NG servers and storage. DEQ has 47 servers which will need to be migrated and tested during this transition. 20 applications will be affected by this move and will need to be tested.

Authentication/directory services BReT:

DEQ has 15 applications which will need to be migrated and tested during the authentication/directory services transition. Number of users (internal and external) are 800 internal and 12000 external.

End user computing BReT :

DEQ has 383 desktops and 545 laptops and 54 network printers which will need to be migrated.

Data networks BReT :

DEQ does not have any networks that are not mpls which will need to be migrated.

Voice Networks BReT:

DEQ has 963 UCaaS phone lines and 0 other phone lines which will need to be migrated.

Cloud Computing BReT:

DEQ 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, etc.. 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, DEQ will engage VITA's Shared Security Services.

Internet Usage BReT:

DEQ projects that internet usage will increase by 20% due to an increase use of video streaming, an increase in user access to the internet, increase in cloud service computing, etc..

BReT- Managed Print Services

BRT Type:	Business Requirement for Existing Technology
Date Submitted:	2/11/2016
Mandate:	No
Mission Critical:	No

Description:
Procure Managed Print Services via state contract to replace current agency printers in order to increase efficiency and realize significant cost savings. (monthly savings of \$8,117)

BRnT - Cardinal Interface

BRT Type:	Business Requirement for New Technology
Date Submitted:	9/30/2016
Mandate:	Yes
Mission Critical:	Yes

Description:
Develop interface from Oracle eBiz to Cardinal for financial and payroll data

BRnT - CEDS Modernization

BRT Type:	Business Requirement for New Technology
Date Submitted:	9/23/2014
Mandate:	Yes
Mission Critical:	Yes

Description:
Update CEDS in order to maintain it (replace unsupported technology)and meet business needs of the agency.

BRnT - Collaboration Tool

BRT Type:	Business Requirement for New Technology
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Date Submitted:	9/29/2014
Mandate:	No
Mission Critical:	Yes
Description:	
Implement a collaboration tool to replace DEQNet and enable document sharing.	
BRnT - Expand Mobile Capability	
BRT Type:	Business Requirement for New Technology
Date Submitted:	8/22/2016
Mandate:	No
Mission Critical:	No
Description:	
Expand the use of mobile capability in DEQ leveraging the new architecture of CEDS.	
BRnT - GIS	
BRT Type:	Business Requirement for New Technology
Date Submitted:	9/29/2014
Mandate:	No
Mission Critical:	No
Description:	
Expand use of GIS in agency and increase amount of environmental GIS data available to public.	
BRnT - Grants Management	
BRT Type:	Business Requirement for New Technology
Date Submitted:	8/11/2016
Mandate:	No
Mission Critical:	
Description:	
Provide for a consolidated, consistent, and efficient way of tracking grants within the agency. Currently multiple programs have grants both received and awarded to external entities. Each program has developed its own method to track these monies. An effort is underway to streamline and standardize grants tracking. The final step in this effort is to provide a system that will accommodate these business processes effectively and efficiently.	
BRnT- DEQ eReporting	
BRT Type:	Business Requirement for New Technology
Date Submitted:	8/22/2016
Mandate:	Yes

Mission Critical:	Yes
Description:	
Expand required information reporting capability per the EPA eReporting rule and enable ability to apply for permits and interact with the agency electronically to include Web-based permit application process and reporting for the regulated community and enable efficient data retrieval using Business Intelligence technology.	

Report Title: Appendix A 16 - 18 Report

Agency: Department of Environmental Quality (DEQ)

Date: 7/24/2017

Agency Head Approval:

No

There are no Category 1, 2, or 3 IT Projects and no Budget Category: Major IT Projects for this agency.

Report Title: Appendix A 16 - 18 Report

Agency: Department of Environmental Quality (DEQ)

Date: 7/24/2017

Agency Head Approval:

No

Stand Alone Non-Major Procurements

Procurement Name:	DEQ Managed Print Services		
Procurement Description:	Obtain Managed Print Services (MPS) from American Business Systems (ABS) via state contract		
Procurement Planned Start Date	4/4/2016	Procurement Planned Completion Date	10/31/2016
		Appropriation Act Status	
Service Area			Weight
There are no service areas for this project.			