

Report Title: IT Strategic Plan Summary

Agency: 402 Marine Resources Commission

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 Agency has a suite of fifteen web based applications that are used by internal agency staff for most daily business functions related to marine resource management. Our systems also offer some services to a limited number of external users and citizens. These applications and numerous associated ad hoc data processes collectively handle hundreds of thousands of new data records annually, as well as millions of historical records. The Agency has three staff positions that are dedicated primarily to marine resource management functions, but are also responsible for implementation and support of agency business application systems and associated databases. Agency staff also provide assistance to the Virginia Information Technology Agency and Northrop-Grumman (VITA-NG) off-site technical staff that have the primary responsibility for supporting the Commission's information technology (IT) infrastructure. The Agency has a main office network with 70 desktop and laptop computers and two servers; one additional virtual server is hosted at the VITA-NG Commonwealth Enterprise Solutions Center (CESC). Agency IT staff also assist in support of about 40 more desktop and laptop computers located in Agency field offices or used for telework, as well as about 60 Virginia State Police Statewide Agencies Radio System (STARS) laptops used by Marine Police Officers. Agency business systems staff also maintain the Agency public web site and Geographic Information System (GIS) web based resource mapping tools. The Agency does not anticipate any major disruption of its IT environment by the transition away from the VITA-NG infrastructure partnership to a multi-supplier environment by FY19. Our most critical asset is the single virtual server hosted at CESC; that server has been updated to Redhat Linux 6.x and we would expect, while potentially time consuming, its function could be transferred to another state contracted IT server environment without major difficulty.

MRC activities while small scale are consistent with COV ITSP goals for IT Infrastructure Services Program (ITISP), Shared Data & Analytics (SDA), Information Security & Risk Management (ISRM), Digital Government / Internet of Things (DG), Enterprise Information Architecture & Data Governance (EIADG), Cloud Computing Services (CCS), Enterprise Services (ES). Agency staff has reviewed the COV ITSP appendices listing at risk software and applications and has no issues that will not be addressed within the needed technical support cycles.

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?

OVERVIEW: The Agency completed rebuilding of its suite of business applications in a web based development environment in 2012 using in-house resources. The completion of application renovation tasks has begun to allow the Agency more opportunity to offer additional citizen web access to agency data and business applications. Adding new functionality accessible to external users is still a challenge for an agency of our size and limited resources. The agency manages a relatively large suite of customized business systems and associated databases that are necessary to meet the Agency's mission, so support and maintenance of these systems, while they have been modernized, also continues to be a challenge for the limited staff we have available for this purpose, particularly when the staff that support these systems still devote the majority of their time to marine resource management functions.

SECURITY SHARED SERVICES: MRC has signed a MOU with VITA for audit services. Next audit planned for CY2019. MRC currently has agency personnel to perform information security officer functions.

INTERNET UTILIZATION: In FY 17, MRC upgraded bandwidth for its main office MPLS circuit from 6 mbps to 45 mbps and its Marine Police Dispatch Center MPLS circuit from 1 Mbps to 3 Mbps.

CLOUD APPLICATION HOSTING: The Agency will consider cloud application hosting services as an alternative to the current CESC based virtual server environment or any alternative non-cloud based server hosting services the COV may develop.

IT INFRASTRUCTURE TRANSITION: The Agency does not anticipate any major disruption of its IT environment by the transition away from the VITA-NG infrastructure partnership to a multi-supplier environment by FY19. Our most critical asset is the single virtual server hosted at CESC; that server has been updated to Redhat Linux 6.x and we would expect, while potentially time consuming, its function could be transferred to another state contracted IT server environment without major difficulty.

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?

**** Decision Packages **** The Commission will re-locate its headquarters to new office space in 2018. In preparation for that move the agency plans to submit a decision package for \$92,000 in additional funding to support the following increased recurring costs related to the move: \$26,000 for upgrade of analog phone system to Ucaas/VOIP \$6,000 to include a wireless access points within the new building \$8,000 for backup ERCS circuit for COV network in the new building \$52,000 for upgraded bandwidth to support Ucaas/VOIP and agency operations. The agency relocation is dictated by the Department of General Services, and the planned move has many positive factors. The increased, recurring costs requested. The agency's 18-20 IT decision package are moderate and will facilitate the move and make much needed modernization changes for the Commission's IT infrastructure. The agency does not have suitable, sustained funding to cover these added costs. If the improvements are not made the agency will continue to have to make use of inefficient, over-committed infrastructure that will diminish staff productivity. Other Proposed IT Solutions The Commission business application systems staff has always recognized that their primary responsibility is development and maintenance of technology to support marine resource management. We have sought to employ information technology to allow us to perform those functions efficiently and cost-effectively. We do not attempt to run a leading edge IT program because we are not funded sufficiently to meet that objective. We strive to have an up-to-date, secure IT environment that supports our business functions. This objective has become more complex to maintain as demand for business application services increase, systems become more open to outside users, and security risks and security precautions grow more diverse. Most work by business application systems staff at the agency continues to be on refining and maintaining the fifteen web applications the agency now hosts. Work on adding new features that offer some citizen accessibility via the web and mobile devices for selected applications will also be continued. Staff will also plan to do cosmetic renovation work on the agency public web site as time allows. Information security has been emphasized in the last four biennium and will continue to be a consistent focus in the upcoming biennium. The Agency plans to take advantage of the new Chief Information Security Officer (CISO) sponsored security audit services starting in FY17. Since about 2007 staff has maintained compliance with the state SEC 501 security standard and the CISO annual security data points and currently plans to have Agency staff continue to provide Information Security Office (ISO) services for the agency. In the Fisheries program, agency staff will be refining systems to better handle seafood buyer data, including consolidation of buyer identification information and addition of web features targeted at obtaining data from seafood buyers. Other smaller projects are the refinement of web based harvest reporting features for selected recreational saltwater fisheries, including coordinated native mobile device app features, and addition of more specific artificial reef information in improved mapping features. In the Law Enforcement Division agency staff will work to expand an officer scheduling feature piloted in 2016 to other regions of the Marine Police. Agency business applications staff will also be looking at assisting Marine Police staff in the development of tools for Incident Based Reporting (IBR); this low priority project was planned for the 2014-16 biennium, but has been delayed to the 2016-18 biennium, and may even be shifted to the 2018-20 biennium. Agency staff plans to assist the VSP with installation of new STARS laptops for the second half of our officers in the Fall of 2017; the first half were completed in Spring 2016. In Geographic Information System (GIS) activities, Agency staff will continue to refine mapping tools integrated within agency developed data applications (mapping of fixed fishing device locations, JPA permit locations, lease application locations, commercial harvest distribution information, artificial reef locations), including features formatted for use on mobile devices.

Report Title: Strategic Plan

Agency: Marine Resources Commission

Current IT Services

| Category | Costs Year 1 | | Costs Year 2 | |
|-------------------------------|--------------|-----------|--------------|-----------|
| | GF | NGF | GF | NGF |
| Projected Service Fees | \$423,394 | \$215,113 | \$436,096 | \$221,566 |
| VITA Infrastructure Changes | \$92,000 | \$0 | \$92,000 | \$0 |
| Estimated VITA Infrastructure | \$515,394 | \$215,113 | \$528,096 | \$221,566 |
| Specialized Infrastructure | \$0 | \$0 | \$0 | \$0 |
| Agency IT Staff | \$25,000 | \$0 | \$25,000 | \$0 |
| Non-agency IT Staff | \$0 | \$0 | \$0 | \$0 |
| Cloud Computing Service | \$0 | \$0 | \$0 | \$0 |
| Other Application Costs | \$0 | \$0 | \$0 | \$0 |
| Total | \$540,394 | \$215,113 | \$553,096 | \$221,566 |

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 | \$0 | \$0 | \$0 |
| 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 | \$0 | \$0 | \$0 | \$0 |
| Procurement Adjustment for Staffing | \$0 | \$0 | \$0 | \$0 |
| Total | \$0 | \$0 | \$0 | \$0 |

Projected Total IT Budget

| Category | Costs Year 1 | | Costs Year 2 | | Total Costs |
|-------------------------|--------------|-----------|--------------|-----------|-------------|
| | GF | NGF | GF | NGF | |
| Current IT Services | \$540,394 | \$215,113 | \$553,096 | \$221,566 | \$1,530,170 |
| Proposed IT Investments | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total | \$540,394 | \$215,113 | \$553,096 | \$221,566 | \$1,530,170 |

Report Title: Business Requirements For Technology**Agency:** Marine Resources Commission (MRC)**BReT Marine Police Incident Based Reporting (IBR)****BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 9/21/2017**Mandate:** No**Mission Critical:****Description:**

The MRC Marine Police have a business need to report a limited number of incidents to the VSP. To date that requirement has occurred with somewhat manual processes, the Marine Police are interested in developing or buying software to do IBR in a more automated manner. If possible, an IBR feature will be added to our existing custom web application in use by our Marine Police. Expected cost \$5,000 to \$15,000. This low priority project was planned for the 2014-16 biennium, but was been delayed to the 2016-18 biennium, and likely will be shifted to the 2018-20 biennium.

MRC IT Sourcing BReT**BRT Type:** Business Requirement for Existing Technology**Date Submitted:** 9/21/2017**Mandate:** No**Mission Critical:****Description:****Messaging BReT:**

VITA is initiating disentanglement from NG messaging services in 2017. Messaging Services for email, enterprise collaboration services, and mobile device management are required for 150 users in our agency. We also have 15 applications that have hooks into messaging relay services which will need to be tested. For Workplace Collaboration Services (VITA provided SharePoint), the Marine Resources Commission does not use WCS SharePoint. We have no agency owned applications serviced via AirWatch which will need remediation.

IBM Mainframe BReT:

VITA is initiating disentanglement from NG IBM Mainframe services in 2017. Marine Resources Commission has no agency owned applications on the IBM which will need to be migrated and tested during this transition.

Server/storage (including housing of equipment) BReT:

VITA is initiating disentanglement from NG servers and storage. Marine Resources Commission has 3 servers which will need to be migrated and tested during this transition. 15 agency owned applications will be affected by this move and will need to be tested.

Authentication/directory services BReT:

Marine Resources Commission has no agency owned applications which will need to be migrated and tested during the authentication/directory services transition. Number of users (internal and external) are 150 internal and 3 external.

End user computing BReT :

Marine Resources Commission has 34 desktops and 72 laptops and 6 network printers which will need to

be migrated.

Data networks BReT :

Marine Resources Commission has no networks that are not mpls which will need to be migrated.

Voice Networks BReT:

Marine Resources Commission currently has no UCaaS phone lines, but has 120 other phone lines which are planned to be migrated to UCaaS in 2018 as part of a agency headquarters relocation.

Cloud Computing BReT:

Marine Resources Commission is investigating moving 15 applications to a Cloud services vendor; currently the applications reside in a standardized LAMP environment on a CESC hosted virtual server. The business reasons for a potential migration to cloud services would be to reduce costs, increase efficiencies, and reduce agency IT footprint. Applications are cloud ready. Agency does not anticipate needing 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, Marine Resources Commission will engage VITA's Shared Security Services for sensitive system audits and use internal staff for Information Security Officer (ISO) services utilizing DPB funds.

Internet Usage BReT:

The Marine Resources Commission determined that internet usage had exceeded bandwidth capacity and had to be increased, and in FY17 implemented an increase of its two MPLS circuits from 6Mbps to 45Mbps for the agency headquarters primary data circuit and from 1Mbps to 3Mbps for our Marine Police Dispatch Center. The agency headquarters increase was also necessary in preparation for a planned 2018 headquarters relocation project that includes a phone system upgrade to Ucaas requiring additional bandwidth. Agency savings from vacancies are being used in FY17 and FY18 to cover the increased costs, but a IT decision package will be submitted for the 2018-2020 biennium to request long term funds for the needed circuit upgrades.

Report Title: Appendix A 18 - 20 Report

Agency: Marine Resources Commission (MRC)

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 18 - 20 Report

Agency: Marine Resources Commission (MRC)

Agency Head Approval:

No

There are no stand alone major procurements for this agency.