# Department of Information Technology
# Fiscal Year 2021 Operating Budget
# Response to Department of Legislative Services Budget Analysis

## Senate Budget and Taxation Committee
***Senator Guy Guzzone***
*February 25, 2020*

## House Appropriations Committee
## Public Safety and Administration Subcommittee
***Delegate Keith E. Haynes***
*March 2, 2020*

The Department of Information Technology (DoIT) appreciates the opportunity to respond to the Department of Legislative Services' (DLS) analysis of the Office of the Secretary budget.

The DLS Analysis focuses on four key observations, which include the audits identifying cybersecurity weaknesses in State agencies, the additional resources provided to improve cybersecurity, the agencies that appear to be struggling with Major Information Technology Development Projects (MITDP) and high vacancies. The following testimony addresses the requests for comments in the analysis, as well as the DLS recommendations.

**Requests for Comment**

1. **Cybersecurity**

   - **The department should be prepared to brief the budget committees on steps taken to improve compliance with employee cybersecurity awareness training.**

     *DoIT agrees wholeheartedly with the analyst's observation that employees are often the weakest link in preventing cybersecurity incidents, and that Cybersecurity User Awareness and Training is one of the most effective mechanisms to prevent many types of threats. We also would suggest that the goal is not compliance with metric targets; rather ensuring that we are adequately preparing our users to identify unusual cyber-indicators, report these anomalies, and not engage in risky behavior. To this end, our metric considers compliance with the standard a user that completes 100% of training activities over a calendar year. If the target were 100%, this would create unusual situations, such as employees that start mid-year and users that miss a single training being non-compliant.*

*This said, Maryland State Finance and Procurement Code § 3A-314 requires at least annual training for any personnel that handles sensitive data, which we consider to be every individual with access to the State's electronic systems. We are currently working to evaluate compliance with the law and believe that compliance with the lower legal standard to be near 100%.*

*Even with near 100% compliance with the legal mandate, we strive to improve our targeted training compliance. With the creation of the State Chief Information Security Officer (SCISO) Role and the responsibility incorporated within the Executive Order, DoIT and the SCISO are working with the vendor to consolidate compliance reporting in such a way that the executive management of each unit can easily identify areas where training is not meeting our high standards. Members of the Maryland Cybersecurity Coordinating Council (MCCC) will provide this reporting to ensure that appropriate awareness is provided and that we provide adequate opportunity for corrective.*

*Finally, because personnel are often the weakest link in security, DoIT implements systems that utilize defense-in-depth, intending to incorporate resilience against human failures into the system. This robustness includes technical controls such as firewalls that identify and block websites that intend to steal credentials, multi-factor authentication, and information sharing with commercial and federal partners to identify users that have had credentials compromised. These layers of defense are generally effective in reducing the impact of a user clicking on a malicious website or unintentionally disclosing their credentials.*

**2. Oversight of Major IT Projects**

- **DoIT should be prepared to brief the committees on strategies and actions taken to improve these measures.**

*As projects in Planning/Project Planning Request (PPR) phase cannot feasibly meet defined criteria established for the implementation of the effort at that phase, DoIT will be revising its metrics to ensure it measures projects meeting defined objectives and success criteria for only those projects in Implementation/Project Implementation Request (PIR). This will provide a more accurate metric for the Major IT Project MFR.*

*Outside of revising the accuracy of the metric, DoIT will be developing a process as to where the goals and objectives are reviewed against the milestones planned and accomplished for the projects.*

3. **High Vacancies Reduce Effectiveness**

- **DLS recommends that the 15 long-term vacant positions be abolished and that the fiscal 2021 turnover rate remain at 8.2%. DLS further recommends that the savings be used to reduce the fiscal 2021 budget by $1 million and that $1 million be restricted so that the funds can only be used to reclassify positions into a new salary scale for IT employees that increases salaries.**

  *Although DoIT does not disagree that the current number of vacancies is abnormally high, the elimination of 15 additional positions will be detrimental to DoIT's operations. DoIT has been filling the vacant positions as funding allows, and over the last year 17 positions have been filled.*

  *While DoIT did not submit an Annual Salary Review (ASR) as part of the FY 2021 budget process as the analysis suggested, DoIT has been working with OPSB, through our DBM HR Analyst, on an ongoing basis to reclass positions that cannot be filled at the current grade. Over the last year DoIT has reclassed 29 positions. Management is currently working with DoIT's HR Analyst to review and update the existing IT classifications in an effort to create a new IT salary scale for IT employees.*

  *The DLS Analysis states "key to effective IT project development and cybersecurity is having qualified State employees managing resources dedicated to developing projects successfully and protecting cybersecurity." By abolishing 15 additional positions in operations DLS is also furthering the State's reliance on contractors to run IT operations. It is our recommendation that these positions remain with DoIT so we can continue to provide the level of service expected from State agencies.*

4. **MITDPF-Funded Projects**

- **DLS recommends that the general fund appropriation be reduced by $2 million and that the budget bill authorize a budget amendment that allows DoIT to appropriate up to $2 million in RSA revenues deposited into the MITDPF in fiscal 2020 and 2021.**

  *DoIT does not concur with the DLS assessment of a $2M general fund reduction. The Governor's Allowance has already accounted for the anticipated revenue based upon current RSA's with various entities.*

5. **Major IT Project Recommendations and Discussion**

- **DHS' MD THINK: To limit end-of-year fund balances, DLS recommends that the fiscal 2021 general fund appropriation be reduced by $16.5 million.**

  *DoIT does not concur with this recommendation. The Governor's Allowance provides sufficient funding for this project.*

- **Comptroller's Office's ITS: To limit end-of-year fund balances, DLS recommends that the fiscal 2021 general fund appropriation be reduced by $2 million.**

  *In consultation with the Comptroller's office, DoIT concurs with this recommendation. Due to the timing of project spending, general funds can be reduced by $2M. Please note, future funding requests may increase by this amount to cover future project costs/spending.*

- **SBE's Major IT Project Management: DLS recommends language requiring that SBE report quarterly on its major IT program.**

  *DoIT concurs with this recommendation. The SBE has ultimate responsibility for the management and decision making authority of their projects. The AEMS project is currently the only approved SBE Major IT Project and subject to DoIT oversight. Both the FY 2019 MITDP End of Year Report and the FY 2020 Mid-Year Report provided by DoIT, stated functionality issues and significant schedule delays were being experienced by the AEMS project, including the reversion back to the Legacy System.*

  *The pollbook project has been submitted for approval as an MITDP in FY2021 and the WAN project does not fit the definition for a MITDP (system development) therefore is not subject to oversight.*

- **Department of State Police's (DSP) Automated Licensing and Registration Tracking System (ALRTS): The department should be prepared to brief the committees on the status of the NICUSA contract and how this will affect ALRTS.**

  *On July 24, 2019 the BPW approved a one-year extension to the NIC contract with an additional one-year option. DoIT is currently working on a transition plan to determine which State applications will be moved to the OneStop Portal. A procurement action will cover those that will not transition to the OneStop Portal.*

  *The ALRTS project plans to transition its single instance of NICUSA payment processing (77R) over to BB&T when the Treasurer's Office begins Phase 3 of their statewide deployment. The STO estimates this to occur in November 2020 if the*

*project remains on schedule. The ALRTS payment processing component of the project is on hold until this is completed. It is assumed that given the rollout schedule for BB&T's services from the State Treasurer's Office, that DoIT will go to the Board to request option year 2 of the NIC contract.*

- **Department of Public Safety and Correctional Services (DPSCS) Computerized Criminal History Replacement: DoIT should brief the committees on the delays that led to this loss of federal funds and steps taken to improve DPSCS's ability to implement major IT projects and avoid losing federal funds available for developing major IT projects.**

  *The project was delayed due to procurement concerns. Without a contract award, the grant funding was lost/no longer available after October 1, 2019. Concerns are related to contractual terms that are not amendable between DPSCS and the vendor. The project team has suspended further evaluation until the impasse is resolved.*

  *As the implementation of DPSCS' projects have been severely impacted due to limited procurement resources, the agency is prioritizing solicitations based on urgency and criticality. The CCH project is unique in that legal teams are resolving procurement issues.*

## ***Issues***

1. **Overview of State Cybersecurity**

- **The department should brief the committees on the role of the new SCISO. This should include a discussion of actions taken by MCCC to improve cybersecurity.**

  *The role of the State Chief Information Security Officer (SCISO) was created as part of Executive Order 01.01.2019.07, as part of the Governor's broader Cyber-Defense Initiative. The SCISO has three primary functions.*

  *The first is to serve the Governor and his staff as a trusted advisor, providing advice and consultative assistance as requested.*

  *The second function is to serve as the CISO for the totality of the Executive branch of the State Government at an executive level and more tactically at DoIT. This includes ensuring that standards and policy exist to usher the State Government to a more secure posture. Additionally, as mentioned previously, the SCISO is responsible for the management of Security Awareness and Training for all employees.*

  *The third component of the role is to chair the Maryland Cybersecurity Coordinating Council (MCCC). The MCCC met again on 2/24/2020, for the third time, and has*

*been diligently working to develop additional policy and guidance to improve cybersecurity. The council is currently reviewing a revamped and updated document that describes the guidelines and process for incident handling and reporting, which includes events ranging from drive-by website defacements to major network infiltration, and everything between. Additionally, the council is reviewing a policy describing the requirement for centralized risk management and vulnerability reporting, with both of these documents expected to be approved and published this month. The council intends to review and approve the revised MEMA/DoIT/GoHS Maryland State Cyber-disruption plan in the second half of the calendar year and has a growing backlog of policy documents to review and disseminate.*

*All of these activities serve to improve the cybersecurity posture by providing units with actionable information to cascade through their organization and to provide the Office and Security Management and DoIT with the information to prioritize decisions in reducing the risk of a cyber incident, including investing in hardware and software solutions to protect critical resources that would otherwise be under-protected.*

2. **Ransomware Attacks Also Pose a Cybersecurity Threat**

- **The department should be prepared to discuss what it is doing to protect the State against ransomware. This should include a discussion of how current vulnerabilities are addressed.**

*The State has made substantial strides in reducing the likelihood of a ransomware attack impacting State units. The three primary mechanisms, outside of the aforementioned User Awareness and Training, for this include an intentional reduction in attack surface, vulnerability remediation through patching and configuration, and cybersecurity contingency planning.*

*The reduction in attack surface component is primarily a function of two system components and configurations. First, the Office of Security Management published a configuration standard for the hardware firewall platform used many units. This platform protects approximately 71% of the employees of the State. The standard describes the configuration settings that provide substantial protection against many of the common ways that ransomware can enter a network. We are consistently updating this standard as threats evolve, and working with the various units to ensure that their configurations meet the standard. Secondly, we have implemented, for systems under DoIT's management, a solution that manages the endpoint firewall. This provides additional protection when systems are connected to an untrusted network, such as a public wireless network. These two mitigations have created an unbelievable reduction in the attack surface.*

*Additionally, we have implemented a system that monitors systems and networks for missing patches, outdated hardware and software, and configurations that create an opportunity for ransomware to spread, among other security issues. These vulnerabilities are automatically prioritized utilizing intelligence feeds that consider the specific circumstance of that vulnerability, along with the attacks that are active in the wild, to build a prioritized rating system. This prioritized ranking allows us to utilize a combination of automatic and manual tools to remediate issues and remove the vulnerability whenever possible. When it isn't possible, we investigate compensating controls and other mitigations to reduce the likelihood that the specific vulnerability could be exploited.*

*This apparatus, along with tools from agencies outside of DoIT's purview, will feed into a newly procured solution that evaluates the internal and external posture of systems to rate the risk using a credit-score style rating.*

*Even with all of the risk reduction that we've done, we consider a major security incident to be an eventuality, not a possibility. Given that, we've invested in collaborating with Maryland Emergency Management Agency, the Governor's Office of Homeland Security, The Maryland Coordination and Analysis Center, and the Maryland Air National Guard to ensure that we have both a refined process for incident response, as well as developed capabilities to respond to these events appropriately.*

**3. Maryland FiRST Radio Maintenance and Equipment Replacement**

- **DoIT should brief the committees on its efforts to rebid the interoperability radio system O&M and lifecycle replacement contracts. This should include how to increase the number of qualified bidders.**

*The current Motorola maintenance contract expires on Nov 16, 2022. It has one option year available to extend the period of performance to Nov 16, 2023. The exercise of the option year will be dependent on when Phase 5 is completed and its two-year warranty period is over. To facilitate the maintenance of the entire radio system and keep just "one cook in the kitchen", the current maintenance contract needs to be in effect until the Phase 5 warranty period is over. The current Phase 5 build-out schedule has three counties going operational in November 2020, and the last two counties operational in January 2021. Though we are working to bring the schedule in, it can be negatively impacted by weather, availability of tower crews, permit acquisitions and fiber work.*

*Maintenance of the total Maryland First Radio system can be broken down into 19 different support services. Twelve of those support services are currently provided for with the existing Motorola maintenance contract as delineated in the table below:*

| *Service* | *Provider/Contract* |
|---|---|
| *Software Maintenance & System Upgrade (SUA Program)* | *Motorola* |
| *Security Update Services* | *Motorola* |
| *Security Monitoring* | *Motorola* |
| *Dispatch and Case Management* | *Motorola* |
| *Network Monitoring and Monitoring Support Services* | *Motorola* |
| *Technical Support* | *Motorola* |
| *Infrastructure Repair with Advance Replacement* | *Motorola* |
| *Remote Location – Core Sites Onsite Support* | *Motorola* |
| *Remote Location – RF Sites Onsite Support* | *Motorola* |
| *Remote Location – Dispatch Centers Onsite Support* | *Motorola* |
| *Remote Location – Microwave, Fiber, NetGuardian Onsite Support ** | *Motorola* |
| *NICE IP Logging* | *Motorola* |
| *Subscriber portable & mobile radios local support and lifecycle replacement* | *Radio Communications Master Contract* |
| *Generator Maintenance* | *MC Dean* |
| *UPS Battery Maintenance and lifecycle replacement* | *Hardware Master Contract* |

| | |
|---|---|
| *RF and Microwave Antenna Systems* | *Radio Communications Master Contract* |
| *HVAC Maintenance* | *Site Support Service* |
| *Site, Shelter and Tower Maintenance* | *Various* |
| *Non-Motorola provided Transmission Mediums such as Fiber* | *Skyline* |
| ** Onsite support for Motorola provided equipment only* | |

*Work to draft an RFP for the follow-on maintenance contract will commence in the fall of 2021. The current plan for developing the RFP is to subdivide the support services into logical groups and allow vendors to bid on the entire package or to bid for those support services that they can provide. This will help to expand the number of qualified bidders. Two support services are proprietary services only provided by Motorola. If Motorola does not win the entire maintenance support contract, a sole source contract will have to be made for these two services.*

*Lifecycle replacement of subscriber portable and mobile radios:*

*Between FY 2012 to FY 2019 some 12,600 portable and mobile radios were purchased, with radio project funding, for $69.3M and provided to 27 different state agencies. In addition, some agencies have gone out and bought additional radios with their own funding.*

*Though the initial procurement of subscriber radios were centrally funded, these radios are "front end" costs that are the responsibility of individual agencies to manage, maintain and replace when needed. DoIT has submitted in the future year budget plan, starting in FY 2022, a notional amount of funding for subscriber radio lifecycle replacement as a placeholder for the overall State budget. As the oldest radios reach 10 years in age, it will be the responsibility of individual state agencies to plan, budget and justify their lifecycle replacement costs.*

*State agencies will be able to procure their lifecycle replacement radios by using the Radio Communications Master Contract 2018. With this Master Contract, procurements are released to pre-approved vendors and competitive bids are received. Currently, there are eleven manufactures of the P25 Phase II subscriber radios (this is the radio that works on the MD FiRST system) that have authorized resellers or do direct sales on this Master Contract.*

***Recommendations***

1. **Add the following language:**

   **Provided that 15 regular positions shall be reduced from the budget of the Department of Information Technology (DoIT), and that $60,000 in general funds, $40,000 in special funds, and $900,000 in reimbursable funds associated with these positions may not be expended for that purpose but instead may be used only for the purpose of enhancing DoIT salaries by creating a new salary scale for information technology positions. The Department of Budget and Management and DoIT should report on salary actions to the budget committees by September 4, 2020. Funds not expended for this restricted purpose may not be transferred by budget amendment or otherwise to any other purpose and shall revert to the General Fund or be canceled. Further provided that the budget of DoIT shall be reduced by $60,000 in general funds and $40,000 in special funds.**

   *While DoIT does not agree with the elimination of 15 positions, DoIT concurs with the recommendation to enhance DoIT salaries by creating a new salary scale for information technology positions. The State has not been able to attract enough top talented individuals in IT operations and cybersecurity due to offering much lower salaries than private sector or even other public sector entities.*

2. **Reduce funding for the Medicaid Management Information System II replacement information technology development project based on expectations of program spending in fiscal 2020 and 2021.**

   *DoIT does not concur with this recommendation. MDH is forecasting a budget shortfall in general funds to cover the state portion of the state/federal funding match program for the Medicaid program and the $1M is required.*

3. **Reduce funding for the Maryland Total Human-services Information Network Major Information Technology Development Project to reflect anticipated spending in fiscal 2020 and 2021.**

   *As stated in the request for comment, DoIT does not concur with this recommendation. The Governor's Allowance provides sufficient funding for this project.*

4. **Reduce funding for the Integrated Tax System Major Information Technology Development Project based on anticipated spending needs in fiscal 2021.**

*As stated in the request for comment, in consultation with the Comptroller's office, DoIT concurs with this recommendation. Due to the timing of project spending, general funds can be reduced by $2M. Please note, future funding requests may increase by this amount to cover future project costs/spending.*

5. **Reduce general funds appropriated in the Major Information Technology Development Fund (MITDPF). The Department of Information Technology (DoIT) estimates that annual revenues from resource sharing agreements (RSA) are $1.1 million. These funds are deposited into the MITDPF. The MITDPF does not reflect these revenues for fiscal 2020 and 2021. Recognizing these revenues provides an additional $2 million enabling a general fund reduction of the same amount. DoIT is authorized to appropriate up to $2 million RSA revenues deposited into the MITDPF in fiscal 2020 and 2021.**

   *DoIT does not concur with the DLS assessment of a $2M general fund reduction. The Governor's Allowance has already accounted for the anticipated revenue based upon current RSA's with various entities.*

6. **Adopt the following narrative:**

   **Total Statewide Costs of the Department of Human Services' Maryland Total Humanservices Integrated NetworK: The Maryland Total Human-services Integrated NetworK (MD THINK) is a shared human services platform. The objective is to keep individual data in one system instead of numerous silos throughout State government. Other State systems, such as the Maryland Department of Health's Medicaid Management Information System are being migrated onto MD THINK. Appendix N of the Governor's Budget Highlights for fiscal 2021 shows that the total cost to the Department of Human Services is $468 million. These costs do not include all costs borne by State agencies to migrate onto MD THINK. The Department of Information Technology (DoIT) should report to the committees on the total estimated cost of MD THINK. This should include costs by year and also costs incurred as well as required in the future of all State agencies by State agency. The report should be submitted by September 4, 2020.**

   *DoIT concurs with this recommendation under the condition that DoIT expects all agencies who have or will be migrating onto MDTHINK will comply, cooperate, and coordinate with DoIT in providing the required information in order to complete the report.*

7. **Add the following section:**

   **Section XX Department of Information Technology Position Reduction Savings**

**SECTION XX. AND BE IT FURTHER ENACTED, That the reimbursable funds appropriation in the Department of Information Technology programs F50B04.01 State Chief of Information Technology, F50B04.02 Security, F50B04.03 Application Systems Management, and F50B04.04 Infrastructure, shall be reduced by a total of $900,000. Funding shall be reduced from within programs in the Executive Branch, Legislative Branch, and Judicial Branch agencies in Section 1 of this Act in accordance with a schedule determined by the Governor, the Presiding Officers, and the Chief Judge. The reduction shall equal at least the amount indicated for the funds listed: Fund Amount General $540,000 Special $180,000 Federal $180,000.**

*As stated in the request for comment, DoIT does not agree with this recommendation.*