

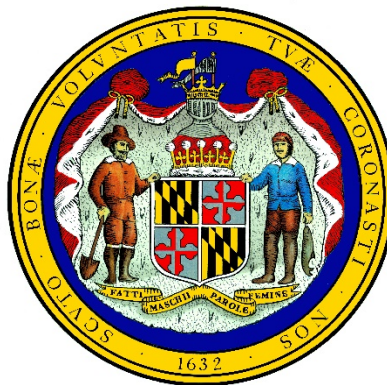
Audit Report

Department of Information Technology

March 2024

Public Notice

In compliance with the requirements of the State Government Article Section 2-1224(i), of the Annotated Code of Maryland, the Office of Legislative Audits has redacted cybersecurity findings and related auditee responses from this public report.



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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

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March 29, 2024

Gregory A. Hook, CPA
Legislative Auditor

Senator Clarence K. Lam, M.D., Senate Chair, Joint Audit and Evaluation Committee
Delegate Jared Solomon, House Chair, Joint Audit and Evaluation Committee
Members of Joint Audit and Evaluation Committee
Annapolis, Maryland

Ladies and Gentlemen:

We have conducted a fiscal compliance audit of the Department of Information Technology (DoIT) for the period beginning May 7, 2018 and ending December 31, 2022. DoIT is responsible for the State's information technology policies, provides information technology technical assistance, and oversees the implementation of major information technology development projects (MITDPs) for the State's Executive Branch agencies. DoIT also manages the State's information technology network (known as networkMaryland). DoIT also provides Enterprise Technology Support Services (ETSS) for certain Executive Branch agencies, which supports fundamental daily agency information technology activities including internet and statewide intranet access, email, computer server operations, and file sharing.

Our audit disclosed deficiencies with DoIT's oversight of the implementation of MITDPs, the monitoring of its vendor for networkMaryland, the monitoring of information systems security and control, and agreements with agencies for ETSS. However, in response to MITDP related findings in this audit report, DoIT advised us that it believes it lacks clear statutory authority to implement and enforce its oversight and implement certain recommendations contained in this audit report. Consequently, DoIT management advised us it will seek necessary legislation to enhance its formal authority and oversight. Although we believe the necessary authority already exists, without statutory changes, DoIT believes implementing the related recommendations set forth in this audit report will continue to be a challenge.

MITDPs

As of July 2022, DoIT was responsible for overseeing the State's 53 MITDPs valued at \$2.9 billion. Our audit disclosed that DoIT delegated significant MITDP responsibilities to State agencies without ensuring the agencies had sufficient resources and qualified personnel. Additionally, DoIT did not ensure

the projects had sufficient oversight to ensure the related projects were completed on time and on budget. For example, DoIT did not assist with the selection of agency project managers or contractors procured by State agencies to design, develop, and implement MITDPs and did not review and approve contract modifications. We also noted that DoIT did not effectively monitor MITDPs to ensure that changes to the scope and cost were appropriate. For example, DoIT did not obtain explanations for significant cost increases of MITDPs and did not ensure monthly health assessments provided by State agencies contained accurate information. DoIT could not explain projected cost increases for two MITDPs that increased a combined \$1.03 billion (271 percent) between 2018 and 2022.

DoIT also did not have an effective process to independently evaluate the performance of the vendor-supplied oversight project managers who were tasked with overseeing the projects. Furthermore, DoIT could not support cost data included in annual reports submitted to the Governor, Department of Budget and Management, and the budget committees of the Maryland General Assembly and did not always include changes in schedule, cost, and other identified problems. For example, the fiscal year 2022 annual report for one project Maryland Total Human Services Integrated Network (MD THINK) stated there were “no project risks to report” even though we determined that DoIT already knew there were major issues with the project.

DoIT did not provide sufficient oversight for one project (MD THINK). Specifically, DoIT could not adequately explain or justify the increase and delays on the system implementation. As of fiscal year ending 2022, the MD THINK estimated cost-to-complete totaled \$588.8 million, which is an increase of \$422.4 million from the original contract amounts of \$166.4 million. As of fiscal year ending 2023, all of the components of the system have been deployed with the exception of one module that is expected to be deployed statewide in quarter three of fiscal year 2024. Although deployed, the components still require further design, development, and implementation efforts. Additionally, DoIT did not take significant action to ensure critical findings identified as part of their oversight process for two projects (MD THINK and *eMaryland Marketplace Advantage*) were resolved timely.

networkMaryland

Our audit disclosed that DoIT used its networkMaryland vendor for staff augmentation and cybersecurity remediation services without consideration of a competitive procurement, did not adequately monitor the contract, and did not ensure the sufficiency of cybersecurity remediation work performed. For example, the bid proposal, evaluation, and Board of Public Works approval all focused on networkMaryland and there was no reference or evaluation of the staff

augmentation or cybersecurity remediation services. Additionally, DoIT did not adequately monitor work orders for staff augmentation services at other agencies and DoIT did not ensure the sufficiency of cybersecurity remediation work.

We received referrals to our fraud, waste, and abuse hotline alleging that DoIT did not request or obtain adequate support for labor charges billed under the networkMaryland contract. Based on our review, we were able to substantiate the concerns raised in the allegations (see Finding 10).

DoIT issued a stop work order effective on May 31, 2023 after approximately \$11.5 million was expended for cybersecurity remediation work. As of January 31, 2023, under the networkMaryland contract, DoIT awarded \$51.2 million in work orders including \$25 million for cybersecurity remediation, \$17.3 million for staff augmentation, and only \$8.9 million (17 percent) was to manage and operate networkMaryland.

Information Systems Security and Control

Our audit disclosed certain deficiencies relating to information systems security and control. However, in accordance with the State Government Article, Section 2-1224(i) of the Annotated Code of Maryland, we have redacted the findings from this audit report. Specifically, State law requires the Office of Legislative Audits to redact cybersecurity findings in a manner consistent with auditing best practices before the report is made available to the public. The term “cybersecurity” is defined in the State Finance and Procurement Article, Section 3.5-301(b), and using our professional judgment we have determined that the redacted findings fall under the referenced definition. The specifics of the cybersecurity findings were previously communicated to those parties responsible for acting on our recommendations.

ETSS

Our audit disclosed that DoIT lacked formal written agreements with 57 of 130 government entities to clarify responsibilities for services it provides to them through the ETSS Initiative and did not recover \$4.8 million from nine entities for services provided.

Finally, our audit included a review to determine the status of the 10 findings contained in our preceding audit report of DoIT dated May 1, 2020. For the non-cybersecurity-related findings, we determined that DoIT satisfactorily addressed 4 of those 7 findings. The remaining 3 findings are repeated as 4 findings in this report. Additionally, we determined the status of the 5 findings contained in our preceding audit report of *DoIT as a Service Provider* dated March 21, 2019. However, since these are cybersecurity-related findings, the current status of these

findings has been redacted. We also determined the status of 8 of the 12 findings contained in our August 3, 2018 performance audit report of *DoIT and Selected State Agencies Telecommunication Resource Sharing Agreements* and concluded that DoIT satisfactorily addressed these findings.

We determined that DoIT's accountability and compliance level was unsatisfactory in accordance with the rating system we established in conformity with State law. The primary factors contributing to the unsatisfactory rating were the significance of our audit findings, the number of repeat findings, and the number of findings across all areas of DoIT's operations.

DoIT's response to this audit is included as an appendix to this report. In accordance with State law, we have reviewed the response and while DoIT agrees with most of the recommendations in this report, we identified several significant instances in which statements in the response conflict with or disagree with the report findings. In each instance, we reviewed and reassessed our audit documentation, and reaffirmed the validity of our finding. In accordance with generally accepted government auditing standards, we have included "auditor's comments" within DoIT's response to explain our position. Furthermore, for the remaining findings and recommendations we have concluded that the corrective actions identified are sufficient to address those concerns. Finally, consistent with State law, we have redacted the elements of DoIT's response related to the cybersecurity audit findings.

We would like to point out that DoIT's response indicates that State agencies are responsible for ensuring an MITDP's successful delivery against cost and time schedule baselines and have sufficient resources for providing project management. However, we continue to believe that current law provides sufficient authority for DoIT to exercise its oversight responsibilities including taking the necessary steps to ensure State agencies can successfully implement an MITDP.

We wish to acknowledge the cooperation extended to us during the audit by DoIT.

Respectfully submitted,

A handwritten signature in black ink that reads "Gregory A. Hook". The signature is written in a cursive, flowing style.

Gregory A. Hook, CPA
Legislative Auditor

Table of Contents

Background Information	8
Agency Responsibilities	8
Law Change	10
Resource Sharing Agreements	10
Forensic Audit of the Maryland Total Human Services Integrated Network (MD THINK) Project	11
Referrals to Our Fraud, Waste, and Abuse Hotline	12
Status of Findings From Preceding Audit Reports	13
Findings and Recommendations	16
Major Information Technology Development Projects (MITDPs)	
Finding 1 (Policy Issue) – The Department of Information Technology (DoIT) should assume greater oversight responsibility to ensure that MITDPs were completed on time and on budget.	17
* Finding 2 – DoIT did not effectively monitor MITDPs to ensure they were on budget and on schedule and that changes to the scope and cost of the project were appropriate.	19
Finding 3 – DoIT did not have an effective process to evaluate oversight project managers hired through vendors to oversee MITDPs.	21
* Finding 4 – DoIT could not support cost data and conclusions included in its annual report submitted to the Governor, the Department of Budget and Management, and the General Assembly; and did not always include changes in schedule, cost, and other identified problems with MITDPs, as required by State law.	23
MD THINK	
Finding 5 – DoIT could not adequately explain or justify the increase in MD THINK costs from the initial \$166.4 million to \$588.8 million and delays in the system implementation, which as of November 2023 was estimated to be approximately three years behind the initial project completion date.	25
* Denotes item repeated in full or part from preceding audit report	

Finding 6 – DoIT did not ensure that Independent Verification and Validation assessments findings were resolved timely by the Department of Human Services and the MD THINK Executive Committee.	27
<i>eMaryland Marketplace Advantage (eMMA)</i>	
Finding 7 – DoIT did not provide effective oversight during the development and implementation of <i>eMMA</i> resulting in significant delays and changes to the cost and scope of the project.	30
networkMaryland	
Finding 8 (Policy Issue) – DoIT used the networkMaryland contract to award significant work unrelated to networkMaryland without considering a competitive procurement process.	34
Finding 9 – DoIT did not adequately monitor work orders for agency staff augmentation services under the networkMaryland contract and documentation of certain work orders could not be provided.	36
Finding 10 – DoIT issued work orders to the networkMaryland vendor for cybersecurity remediation services totaling approximately \$25 million that were not sufficiently detailed and did not adequately ensure that all \$11.5 million invoiced by the vendor was related to work performed on behalf of DoIT work orders.	38
Information Systems Security and Control and Enterprise Services	
Finding 11 – Redacted cybersecurity-related finding	41
Finding 12 – Redacted cybersecurity-related finding	41
Finding 13 – Redacted cybersecurity-related finding	41
Finding 14 – Redacted cybersecurity-related finding	41
Enterprise Technology Support Services (ETSS)	
* Finding 15 – DoIT did not have formal written agreements with 57 of the 130 State and local entities receiving ETSS and did not recover \$4.8 million from nine entities with agreements for services provided.	41
* Denotes item repeated in full or part from preceding audit report	

Equipment	
* Finding 16 – DoIT did not adequately control its equipment inventory and did not maintain accurate detail records.	43
Audit Scope, Objectives, and Methodology	45
Agency Response	Appendix

* Denotes item repeated in full or part from preceding audit report

Background Information

Agency Responsibilities

The Department of Information Technology (DoIT) is responsible for the State's information technology policies, procedures, and standards, and for overseeing the implementation of major information technology projects for the State's Executive Branch agencies and commissions.¹ DoIT also provides technical assistance, advice, and recommendations concerning information technology to these agencies and commissions. Additionally, DoIT develops the Statewide Information Technology Master Plan; manages the Major Information Technology Development Project Fund (MITDP Fund); and coordinates, purchases, and manages information technology and telecommunications services to State agencies. The MITDP Fund helps to support many of the State's major information technology development projects.

DoIT also maintains and supports three critical communication infrastructure systems: (1) the construction of telecommunication towers, (2) the maintenance and expansion of the State's communications fiber optic data network for public sector use called networkMaryland, and (3) the Statewide Public Safety Communication System for first responders known as Maryland FiRST. DoIT's goal for these communication infrastructure systems is to improve broadband access for State agencies and critical local community institutions (such as schools, libraries, hospitals, and public safety agencies).

Finally, DoIT provides Enterprise Technology Support Services (ETSS) for fundamental day-to-day information technology operations, including internet and statewide intranet access, email, computer server operations, and file sharing for Executive Branch agencies authorized in law who have chosen to participate as well as local government entities. During fiscal year 2022, DoIT was providing ETSS to 130 government entities (state and local agencies).

According to the State's records, during fiscal year 2022, DoIT's expenditures totaled approximately \$251.4 million, including \$84.2 million for MITDPs (see Figure 1 on the following page). These expenditures were funded by reimbursable funds totaling \$135.3 million, State general funds totaling \$99.6

¹ According to State law, DoIT does not have authority or responsibility for the University System of Maryland, Morgan State University, St. Mary's College, the Maryland Port Administration, and the Maryland Stadium Authority. Chapter 732, Laws of Maryland 2021, added Baltimore City Community College, and Chapter 242, Laws of Maryland 2022, added the Office of the Attorney General, the Comptroller, and the State Treasurer to the list of entities excluded from DoIT authority and responsibility.

million, and special funds totaling \$11.7 million, and federal funds totaling \$4.8 million. Finally, according to the Department of Budget and Management's fiscal year 2022 Capital Budget *White Book*, DoIT had authorized capital improvement projects with budgeted funds totaling approximately \$56.3 million during the period from July 2018 to June 2021 related to Maryland FiRST. These funds were to continue construction on Maryland FiRST projects which began in fiscal year 2009. According to the State's records, during fiscal years 2021 and 2022, capital expenditures totaled approximately \$3.7 million.

Figure 1
DoIT Positions, Expenditures, and Funding Sources
Full-Time Equivalent Positions as of June 30, 2022

	Positions	Percent
Filled	168	90.8%
Frozen ²	1	0.6%
Vacant	16	8.6%
Total	185	
Fiscal Year 2022 Expenditures		
	Expenditures	Percent
Salaries, Wages, and Fringe Benefits	\$ 22,717,836	9.0%
Technical and Special Fees	203,705	0.1%
Operating Expenses	228,493,557	90.9%
Total	\$251,415,098	
Fiscal Year 2022 Funding Sources		
	Funding	Percent
General Fund	\$ 99,626,674	39.6%
Special Fund	11,743,810	4.7%
Federal Fund	4,796,804	1.9%
Reimbursable Fund	135,247,810	53.8%
Total	\$251,415,098	

Source: State financial and personnel records

² Prior to December 1, 2021, a hiring freeze resulted in certain positions being frozen. Frozen positions were unauthorized to be filled according to budgetary instructions from the Department of Budget and Management. Any position that is currently marked as frozen has not been filled since the freeze was lifted; however, these positions now are available to be filled.

Law Change

Chapter 586, Laws of Maryland 2020, effective July 1, 2020 transferred the responsibility for administering the Universal Service Trust Fund (USTF) and the Telecommunications Access of Maryland (TAM) program from DoIT to the Maryland Department of Disabilities (DOD). The TAM program is supported by the USTF and provides telecommunication relay service for Marylanders who are deaf. The TAM program had expenditures totaling \$3.6 million in fiscal year 2020. Beginning July 1, 2020, the procedures and controls over USTF and the TAM program are subject to audit during our audit of DOD. The procedures and controls over USTF and the TAM program from the beginning of our audit period, May 7, 2018, through June 30, 2020 were subject to review during our current DoIT audit.

Resource Sharing Agreements (RSAs)

On August 3, 2018, we issued a performance audit report on Telecommunication Resource Sharing Agreements. The audit report included a number of findings related to selected agencies, but emphasized the need for DoIT to exercise greater oversight of the RSAs entered into by State agencies in general. The performance audit included the following select findings related to DoIT's oversight of the RSAs:

- DoIT had not established comprehensive policies to guide State agencies on the proper execution, control, and monitoring of RSAs;
- DoIT did not maintain comprehensive records of RSAs and inventories of State-owned telecommunication towers and fiber optic cables for potential resource sharing;
- DoIT did not verify that all monetary compensation was received;
- DoIT did not monitor State agencies to ensure resource sharing monetary compensation was deposited into the MITDP Fund, as required by State law;
- DoIT did not have a strategic plan for marketing resource sharing opportunities to generate revenues and to help achieve statewide telecommunication infrastructure goals;
- DoIT did not monitor existing RSAs with a nonprofit organization to ensure it was providing broadband networks in rural and underserved areas, and had not made any attempts since 2013 to negotiate additional RSAs to further expand the broadband in other rural areas; and
- DoIT executed and renewed resource sharing agreements without proper approvals.

DoIT agreed with a majority of the findings and recommendations in the August 2018 report. During our current audit, we reviewed DoIT's actions in response to that report and noted that it generally complied with the recommendations.

Forensic Audit of the Maryland Total Human Services Integrated Network (MD THINK) Project

On April 19, 2023, the Maryland Department of Human Services (DHS) contracted with an independent accounting firm to conduct a forensic audit of the MD THINK project, which is intended to modernize and integrate several State health and human services information systems. Specifically, the firm was asked to perform a fraud assessment and analyze the management, processes, and procedures undertaken by departments responsible for oversight, operation and financial management of MD THINK during the period from July 1, 2016 to March 17, 2023. On September 22, 2023, the firm issued its forensic audit report which included numerous detailed observations and findings of MD THINK, including the following:

- MD THINK was not developed effectively, leading to issues with overall functionality and the need for ongoing re-work. The project's agile resource staffing requirements did not require specific experience in the industry or with the complex Eligibility & Enrollment system. Consequently, the firm concluded that many of the complex MD THINK calculations and rules have not been developed correctly and are not being fixed effectively, resulting in prolonged deployment of programs with bugs.
- DHS did not maintain a complete and accurate record of service contracts procured for MD THINK. The firm found that MD THINK maintained an Acquisition Summary Report, but 168 executed work orders, task orders, and modifications were not included in the report. In addition, supporting documentation describing the purpose and key attributes did not exist for 175 work orders and modifications that were included in the Acquisition Summary Report. Finally, the firm identified some work orders, task orders, and modification agreements that were missing execution signatures.
- Although the expenditures tested (for hardware, software, and general expenses) by the firm were determined to be for IT related costs, there was no indication in the documentation provided to the firm to identify how these expenditures specifically related to MD THINK.
- Reporting was not sufficiently detailed to provide for effective oversight. For example, while the periodic Portfolio, Steering, and Independent Verification

and Validation (IV&V) meetings were presented to those responsible for project oversight contained specific and significant issues with the program's development and operation, the firm determined that the formal reports provided to the Governor at the end of fiscal years 2021 and 2022 were limited to two summary reports. These summary reports focused primarily on positive aspects of the program and did not provide commentary or insight into any of the reporting, oversight, or risk issues that were identified in the various project oversight presentations.

- The firm concluded that IV&V reports routinely identified risks across multiple programs and periods, but that these risks did not seem to have been fully addressed or resolved timely even when they globally impacted the MD THINK platform. Additionally, the firm was not provided with any documentation to support whether IV&V observations and issues negatively impacting the project were tracked prior to January 2020. Finally, once tracking started after January 2020, the firm reported that necessary corrective actions for such issues were not addressed consistently or timely.
- Documentation was not always available for the 336 individuals employed under MD THINK contracts to support their eligibility to work on the project. For example, the firm identified 58 individuals who lacked evidence that a background check was performed, and background checks for 3 other individuals disclosed issues that the firm concluded should have precluded their involvement on the project.

The forensic report observations and findings were generally focused on the roles of DHS, Maryland Department of Health, and the MD THINK vendor(s). However, we believe the firm's report highlights the need for more direct oversight by an agency with sufficient information technology expertise and/or knowledge, such as DoIT. We further believe that such a conclusion is further supported by several of the findings in this audit report.

Referrals to Our Fraud, Waste, and Abuse Hotline

We received referrals to our fraud, waste, and abuse hotline alleging that DoIT did not request or obtain adequate support for labor charges billed under the networkMaryland contract. Specifically, the allegations stated that timesheets submitted by the vendor included vague descriptions of the work completed by its employees and could not be verified to the labor hours billed to DoIT. Based on our determination of the associated risk, we reviewed DoIT's processes for monitoring work performed by the vendor and reviewed certain of the related work orders and invoices. We also conducted interviews of certain vendor

personnel. Based on our review, we concluded that DoIT did not request or obtain appropriate support from the vendor when reviewing and approving the invoices which substantiated the concerns raised in the allegations (see Finding 10).

Status of Findings From Preceding Audit Reports

Our audit included a review to determine the status of the 10 findings contained in our preceding audit report, dated May 1, 2020. As disclosed in Figure 2 on the following page, for the non-cybersecurity-related findings, we determined that DoIT satisfactorily addressed 4 of those 7 findings. The remaining 3 findings are repeated as 4 findings in this report. We also determined the status of the 5 findings contained in our March 21, 2019 audit report of *DoIT as a Service Provider*. However, since these are cybersecurity-related findings, the current status of these findings has been redacted.

Additionally, we determined the status of 8 of the 12 findings contained in our August 3, 2018 performance audit report of *DoIT and Selected State Agencies Telecommunications Resource Sharing Agreements*. We concluded that DoIT satisfactorily addressed these findings.

Figure 2
Status of Preceding Findings

Preceding Finding	Finding Description	Implementation Status
DoIT		
Finding 1	DoIT lacked sufficient documentation that it effectively monitored Major Information Technology Projects (MITDPs), and did not always accurately report estimated project costs as required.	Repeated (Current Finding 2 and 4)
Finding 2	DoIT had not established a process to independently evaluate oversight project managers hired through a vendor to oversee MITDPs.	Not repeated
Finding 3	DoIT did not ensure that the Maryland FiRST vendor met certain contractual requirements related to radio coverage nor ensure contract milestones regarding radio coverage were completed prior to payment.	Not repeated
Finding 4	DoIT did not adequately monitor the construction of a tower and ensure that the related payments totaling \$1.4 million were proper.	Not repeated
Finding 5	Intrusion detection and prevention system coverage did not exist for a substantial amount of untrusted network traffic flowing into DoIT's internal network.	Status Redacted ³
Finding 6	DoIT lacked assurance that adequate information technology security and operational controls existed over its managed cloud collaboration and eGovernment software systems that were hosted, operated, and maintained by service providers.	Status Redacted ³
Finding 7	Personally identifiable information was not adequately restricted in the State's Financial Management Information System and was visible to 5,204 employees Statewide.	Status Redacted ³
Finding 8	DoIT did not adequately monitor task order payments and did not obtain support for the related invoices from its networkMaryland vendor for which payments totaled \$56.8 million.	Not Repeated
Finding 9	DoIT lacked formal written agreements with the 29 participating State agencies to clarify responsibilities of technology support services performed by DoIT and the reimbursement of related costs.	Repeated (Current Finding 15)

³ Specific information on the current status of this cybersecurity-related finding has been redacted from the publicly available report in accordance with State Government Article, Section 2-1224(i) of the Annotated Code of Maryland.

Figure 2
Status of Preceding Findings

Preceding Finding	Finding Description	Implementation Status
Finding 10	DoIT did not adequately control its equipment inventory and did not maintain accurate detail records.	Repeated (Current Finding 16)
DoIT as a Service Provider		
Finding 1	DoIT had not updated the State of Maryland <i>Information Security Policy</i> applicable to Executive Branch and independent State agencies for almost six years despite new and increasing IT security risks.	Status Redacted ⁴
Finding 2	DoIT did not have an information technology disaster recovery plan for its third-party operated enterprise services hosting data center to aid in the recovery of related information systems operations.	Status Redacted ⁴
Finding 3	DoIT lacked assurance that adequate information technology security and operational controls existed over its State enterprise services operations hosted by its third-party data center hosting service provider.	Status Redacted ⁴
Finding 4	Operating system software updates were not applied to network devices in use on DoIT-managed customer agencies' networks and on DoIT-only networks.	Status Redacted ⁴
Finding 5	DoIT's enterprise services operation lacked procedures for maintaining malware protection controls on customer agencies' workstations relative to workstation administrative rights assignment and updating certain vulnerable application software products.	Status Redacted ⁴

⁴ Specific information on the current status of this cybersecurity-related finding has been redacted from the publicly available report in accordance with State Government Article, Section 2-1224(i) of the Annotated Code of Maryland.

Findings and Recommendations

Major Information Technology Development Projects (MITDPs)

Background

State law provides the Department of Information Technology (DoIT) with the responsibility for overseeing the development and implementation of MITDPs. MITDPs (also referred to in this report as “projects”) are defined as any information technology development project that meets one or more of the following conditions:

- The project’s estimated total cost is at least \$1 million.
- The project supports a critical business function associated with the public health, education, safety, or financial well-being of the citizens of Maryland.
- The DoIT Secretary determines the project requires special attention.

State law requires DoIT to approve funding for MITDPs only when projects are supported by an approved system development life cycle (SDLC) methodology.⁵ The SDLC defines actions, functions, or activities to be performed for the critical stages of the project, such as planning, implementation, and operation. DoIT contracts with three vendors to hire oversight project managers (OPMs) but still retains ultimate responsibility for overseeing the MITDPs. DoIT’s oversight responsibilities, in conjunction with its OPMs, generally include the following:

- maintain a clear understanding of project objectives, funding, risks, milestones and successes to ensure they are well managed and on track;
- provide guidance regarding adherence to the State’s SDLC methodology;
- advise agency on proposed project timelines and assessments on project resource needs and approve changes to project scope, schedule, and cost;
- create and update templates, work instructions, guidance, and samples for agencies to use in procurements and SDLC activities;
- review agency project monthly health assessments and periodically meet with the agency; and
- determine the necessity of Independent Verification and Validation (IV&V) assessments with the agency.

⁵ Since 2016, DoIT requires State agencies to adopt an SDLC which adheres to agile values and principles such as cross-agency collaboration, frequent, incremental delivery of modular solutions, and modern development over outdated approaches. According to DoIT’s *Agile SDLC Policy*, the agile method intends to deliver more value in less time by breaking work down into loosely-coupled components or services, and delivering the project incrementally in rapid learning cycles.

According to DoIT's records, as of June 2022, there were 53 MITDPs with an estimated cost at completion of approximately \$2.9 billion. Ninety-two percent of the value of these projects was for agencies responsible for providing services in the health, education, financial, transportation, and public safety sectors of State government. MITDPs are funded from multiple sources including the State's MITDP Fund, which DoIT administers. According to DoIT's records, Fund expenditures totaled approximately \$23.7 million during fiscal year 2022, including \$163,000 for project oversight.

Finding 1 (Policy Issue)

DoIT should assume greater oversight responsibility to ensure that MITDPs were completed on time and on budget.

Analysis

DoIT should assume greater oversight responsibility to ensure that MITDPs were completed on time and on budget. DoIT delegated significant MITDP responsibilities to State agencies without ensuring the agencies had sufficient resources, qualified personnel, and oversight to ensure the related projects were completed on time and on budget. Although DoIT's *MITDP Standards Manual* permitted delegation of MITDP responsibilities, we noted the following areas of delegation were potentially detrimental to the successful implementation of MITDPs and contrary to DoIT's overall responsibility and purpose. Additional findings in the audit report describe examples of specific MITDP problems, which in our opinion resulted from this practice.

- DoIT did not evaluate State agencies to ensure they had sufficient and qualified personnel with technical knowledge to adequately monitor the MITDPs. For example, although DoIT had some involvement with the Maryland Total Human Services Integrated Network (MD THINK) project, it delegated primary responsibility to the Department of Human Services (DHS) for procuring and monitoring of MD THINK despite the project involving components related to other departments and agencies. Rather than coordinating the procurement and monitoring of the project itself, DoIT delegated these key responsibilities to DHS without formally ensuring that DHS had sufficient and qualified technical personnel to ensure the project was implemented timely and on budget. As further discussed in Finding 5, the MD THINK project costs and implementation timeline has increased significantly from original estimates.
- DoIT did not assist with the selection of agency project managers or the contractors procured by State agencies to design, develop, and implement MITDPs. DoIT management advised us that it was not involved with

developing the request for proposals (RFPs) to ensure the RFPs included appropriate and sufficient evaluation criteria, such as the contractor's technical expertise and approach, experience with similar projects, and key staff qualifications. Additionally, DoIT did not evaluate proposals received by State agencies from contractors to ensure the most qualified contractor was selected, and it did not ensure the contract contained clearly stated deliverables, milestone acceptance criteria, and penalties for failing to meet the terms of the contract.

- DoIT did not review and approve contract modifications for MITDPs initiated by State agencies and was not always familiar with the nature and scope of the modifications. Rather, DoIT management advised us that it relied on State agencies to ensure contract modifications were appropriate.
- DoIT did not review and approve contractor invoices for MITDPs, at least on a test basis, to ensure State agencies were properly reviewing the invoices. DoIT management advised us that it relied on State agencies to review and approve invoices since the agencies have the budgetary appropriation for the MITDP, including verifying if deliverables were received, milestones were met, and determining if penalties should be assessed.

The *Statewide Information Technology Master Plan* provides that DoIT is to oversee, consult, and guide covered units in the development of major information technology systems, and directly assume project management responsibilities for new or failing MITDPs. The plan also provides that DoIT can re-direct or terminate MITDPs that are not delivering the value or outcomes expected. Although we believe that the plan provides DoIT with the necessary authority, DoIT management disagreed and advised that it believes it lacks clear statutory authority to implement and enforce the oversight intended by the plan and implement recommendations in this and several findings contained in this audit report. Consequently, DoIT management advised us it will seek necessary legislation to enhance its formal authority and oversight.

Recommendation 1

We recommend that DoIT take the necessary steps to establish adequate safeguards to ensure the successful implementation of MITDPs, especially when delegating key aspects of MITDP oversight. For example, DoIT should verify that State agencies have appropriate qualified personnel with sufficient technical knowledge, assist with MITDP contract procurements and subsequent contract modifications, and periodically review MITDP expenditures for compliance with contract terms.

Finding 2

DoIT did not effectively monitor MITDPs to ensure they were on budget and on schedule and that changes to the scope and cost of the project were appropriate.

Analysis

DoIT did not effectively monitor MITDPs to ensure they were on budget and on schedule and that changes to the scope and cost of the project were appropriate. Our test of certain aspects of three MITDPs (MD THINK, *eMaryland Marketplace Advantage – eMMA*, and the Medicaid Management Information System II – MMIS II) with an estimated cost to complete totaling approximately \$1.47 billion disclosed the following.

Information Technology Project Requests (ITPRs)

DoIT did not always document its review and approval of annual agency project status reports, known as ITPRs, prior to submitting them to the Department of Budget and Management (DBM) and the Department of Legislative Services (DLS) for budget analysis purposes.⁶ DoIT also did not review the methodology of key estimates, such as cost and schedule, included in the ITPR, and did not obtain an explanation for significant changes (such as increases in estimated project costs).

We were advised by DoIT management that in response to our prior DoIT report they implemented a review of ITPRs in fiscal year 2021. However, our test of nine ITPRs for the aforementioned three projects during fiscal years 2021 through 2023 disclosed that four were not reviewed until after being submitted to DBM and an ITPR for MD THINK was never prepared. Additionally, we found that the schedules in certain ITPRs were not accurate. For example, the schedule for *eMMA* ITPRs submitted in August 2020 for fiscal year 2022 projections, the ITPR reported the project would be completed in November 2021, but also reported budget estimates through fiscal year 2023. DoIT advised us that its limited staffing impacts its ability to review ITPRs timely.

DoIT also did not obtain an explanation for significant increases in the costs of MITDPs. For example, although DoIT was aware that the estimated cost of completion for the Maryland Department of Health (MDH) MMIS II project

⁶ An ITPR generally includes a summary of the project, the needs addressed, potential risks, possible alternatives, estimated costs, and funding sources, and describes how the project meets the goals of the Statewide Information Technology Master Plan. For all approved projects, State law requires an initial ITPR submission to DoIT, and DoIT requires agencies to submit subsequent ITPRs on an annual basis through the MITDP's life cycle. DoIT is required by law to review and approve the ITPR to ensure the accuracy of the cost data and projected spending.

increased by approximately \$177.5 million from the preceding year's (fiscal year 2023) ITPR, it did not request an explanation from MDH for the increase. In response to our inquiry DoIT could not provide an explanation for the increase and advised us that it was MDH's responsibility to ensure estimates are reasonable.

Monthly Health Assessments

DoIT did not ensure the OPMs verified the accuracy of information in MITDP monthly health assessments provided by State agencies, as required. The health assessments are prepared monthly by the applicable State agency's project manager, reviewed by the OPM, and shared with DoIT leadership to ensure that risks and issues are identified and mitigated timely. For example, our test of health assessments for MD THINK for 24 months disclosed 14 health assessments had not been prepared as required, and while the remaining 10 health assessments were completed and contained medium and high risk ratings, justifications were not provided to indicate if information was verified for accuracy. We were advised by DoIT management that medium and high risk ratings should have justifications.

Changes in Scope, Cost, and Schedule

DoIT did not always review and approve changes in the MITDP scope, cost, and schedule. DoIT policy required State agencies to describe in detail the portions of the original scope, cost, and schedule that changed, prior to the approval of any changes; such as a side-by-side comparison of the previously approved budget versus the proposed updated budget. The policy further states that any agency found not to be implementing this policy for their MITDPs will be in danger of having the MITDP suspended or terminated. Our review disclosed that DoIT did not always formally review and approve these changes. For example, DoIT did not approve the increase in estimated cost to complete for MD THINK and MMIS II as required by its policy and was unable to explain the projected cost increases for these two MITDPs that increased by a combined \$1.03 billion (271 percent) between 2018 and 2022.

Similar conditions regarding the lack of sufficient documentation of project monitoring efforts have been commented upon in our four preceding audit reports of DoIT dating back to November 10, 2009. In its response to our preceding audit report, DoIT stated that it disagreed with the finding and recommendation as it did not believe it needed to provide such a level of documentation. Through our Office's efforts to obtain clarification from DoIT on its response to our preceding audit report, DoIT eventually agreed that it has oversight responsibilities for MITDPs and that it would reevaluate its oversight process. However, as noted

above, DoIT did not implement the corrective actions, in part, because it did not believe it had the necessary authority as addressed in Finding 1.

Recommendation 2

We recommend that DoIT

- a. ensure annual ITPRs are submitted by State agencies, and that DoIT reviews and approves them prior to submitting it to DBM and DLS for budget analysis purposes (repeat);**
- b. review the methodology and basis for estimated costs and schedules on ITPRs to ensure these estimates appear reasonable and are supported;**
- c. obtain and review explanations for significant changes, such as increases in project costs;**
- d. require the OPMs to ensure monthly health assessments are provided by State agencies, verify the accuracy of information reported, and provide justifications for the risk ratings (repeat); and**
- e. review and approve changes in scope, cost, and schedule, as required by its policy.**

Finding 3

DoIT did not have an effective process to evaluate oversight project managers (OPMs) hired through vendors to oversee MITDPs.

Analysis

DoIT did not have an effective process to evaluate OPMs hired through vendors to assist with monitoring MITDPs. The purpose of an OPM is to assist DoIT in ensuring project scope, costs, and implementation schedules remain on target and achieve a successful result. Consequently, OPMs have numerous responsibilities including reviewing and assessing MITDP documentation (such as ITPRs), determining the need for IV&V assessments, and reviewing monthly health assessments prepared by the related State agencies. During calendar years 2019 through 2022 expenditures to the three vendors totaled \$12.5 million.

In accordance with a standard provision in the OPM contracts, DoIT established a performance evaluation process. Specifically, DoIT allowed the OPMs to perform a quarterly self-assessment evaluation addressing seven areas: Attendance, Productivity, Work Quality, Teamwork, Communication, Customer Service, and Initiative.

Our review disclosed that the performance evaluation process did not clearly demonstrate OPMs were satisfactorily performing their job duties and meeting expectations. Additionally, the performance evaluations lacked clearly defined

criteria for performance areas and the three rating categories (Satisfactory, Needs Improvement, Unsatisfactory) were not a thorough evaluation of performance since critical job duties necessary to monitor the overall health of assigned MITDPs were not defined. Consequently, assurance was lacking that OPMs were satisfactorily performing their duties, meeting expectations, and effectively monitoring the development and implementation of 53 MITDPs⁷ valued at \$2.9 billion as of June 30, 2022.

Our review also disclosed that DoIT did not critically review these self-assessments and the evaluations did not consider the OPMs compliance with specific job duties and responsibilities necessary to ensure the health of MITDPs. For example, the evaluations did not consider specific job duties (such as assessing the need for an IV&V) to determine OPM success, resulting in the assessments not being an effective tool to monitor OPMs in an observable, measurable, and objective manner. Effective performance evaluations are also important since unsatisfactory OPM performance could allow DoIT to require corrective actions or request replacement OPM personnel.

Our test of 34 quarterly self-assessment evaluations for 5 OPMs disclosed that 28 evaluations reflected “satisfactory” for each performance area and DoIT also always indicated satisfactory ratings without specific justification. Specifically, 15 of the 28 evaluations did not include any comments from DoIT and a written justification for satisfactory ratings were not required. When evaluations contained comments, they were not specific or comprehensive. For example, one evaluation stated the OPM “strives to consistently improve in all areas.” Finally, for the remaining 6 evaluations, DoIT advised us that it could not locate them due to data loss. Therefore, we could not determine if evaluations were actually completed.

In response to our prior report for DoIT, DoIT implemented a performance evaluation process. However, our review determined that the evaluations did not document that OPMs were satisfactorily meeting expectations to help ensure MITDPs were effectively monitored. In our opinion, due to the critical nature of the OPMs responsibilities, we believe that it would be appropriate to apply evaluation standards similar to those used with State employees. According to the *DBM Performance Planning and Evaluation Program Guidelines* used to evaluate State employees, a key to a successful evaluation process is written position specific performance standards that are observable, measurable, and objective. Position specific performance standards should place the employee on notice as to what is required to be rated outstanding, satisfactory, or

⁷ One of the 53 MITDPs was not overseen by an OPM. Instead, it was overseen by DoIT personnel directly. In addition, 2 of the 53 MITDPs had not yet been assigned an OPM.

unsatisfactory. DBM's performance evaluations contain ratings in two areas: performance of specific job duties and behavioral elements similar to the performance areas. Furthermore, DBM's *Guidelines* generally require comments supporting why the specific performance ratings are warranted.

Recommendation 3

We recommend that DoIT

- a. ensure performance evaluations adequately demonstrate that OPMs were satisfactorily performing their job duties (such as including specific comments that justify the ratings) and meeting expectations;**
- b. develop written definitions and criteria, similar to DBM *Guidelines* noted above, that define each performance area and rating category to ensure evaluations are an effective tool to monitor the OPMs in an observable, measurable, and objective manner; and**
- c. retain the performance evaluations and take corrective action when OPMs performance is unsatisfactory.**

Finding 4

DoIT could not support cost data and conclusions included in its annual report submitted to the Governor, DBM, and General Assembly; and did not always include changes in schedule, cost, and other identified problems with MITDPs, as required by State law.

Analysis

DoIT could not support cost data and conclusions included in its fiscal year 2022 annual report dated November 1, 2022, and did not always include changes in schedule, cost, and problems with MITDPs. State law requires DoIT to submit an annual report to the Governor, DBM, and the budget committees of the Maryland General Assembly. For each MITDP, the report is to include (1) the status of the project; (2) a comparison of the estimated and actual costs of the project; (3) any known or anticipated changes in scope or costs of the project; (4) an evaluation of whether the project is using best practices; and (5) a summary of any monitoring and oversight of the project from outside the agency in which the project is being developed, including a description of any problems identified by an external review and any corrective actions taken.

Our review disclosed that DoIT could not provide documentation to support the cost-to-date and estimated cost-to-complete figures included in the annual report. Additionally, DoIT did not always accurately report known or anticipated changes in schedule, cost, and scope, as required by State law. For example, for one project (MMIS II), the fiscal year 2022 annual report stated there were no known

or anticipated cost changes. However, we noted that the reported estimated cost to complete increased by \$108.8 million from the preceding year's annual report.

In addition, DoIT did not always provide a summary of problems identified from an external review, as required by State law. For example, the fiscal year 2022 annual report for the MD THINK project stated there were "no project risks to report" even though DoIT knew, prior to submitting the report, there were major issues with the project. Specifically, the July 2022 IV&V received by DoIT on September 1, 2022, reported high risks related to scope and time management, and medium risk with cost management and testing and validation. This IV&V was received by DoIT two months before the annual report was issued, so DoIT knew that the annual report presented an over-optimistic and inaccurate depiction of the current status of the MD THINK implementation.

A similar condition regarding inaccurate information being reported was noted in our preceding audit report for DoIT. DoIT disagreed with the prior recommendation to ensure that the annual report includes accurate costs data. Specifically, DoIT management indicated that it performs limited reviews of information submitted by other State units used in the report based on available information and that a more detailed review is outside the scope of its statutory responsibility and available resources. We continue to believe that since DoIT is required by law to prepare and submit the annual report, it should ensure that information reported is complete, accurate, and adequately supported.

Recommendation 4

We recommend that DoIT

- a. ensure that its annual reports include accurate estimated costs to complete (repeat) and retain documentation to support the amounts reported; and**
- b. accurately report known or anticipated changes in schedule, cost, and scope and provide a summary of problems identified by an external review, as required by State law.**

MD THINK

Background

The MD THINK project was initiated in fiscal year 2017 to modernize and integrate several State health and human services information systems. MD THINK is a shared data repository for storage and retrieval of consumer data and a one-stop location for determining eligibility and enrollment in various health and human services programs, including the Child, Juvenile, and Adult

Management Application (CJAMS) and the Child Support Management System (CSMS).⁸ The shared platform is intended to avoid duplication of data collection and improve the experience for program participants.

The MD THINK project plan was submitted to the federal Department of Health & Human Services and the Department of Agriculture to obtain federal funding for the project. The plan established a State agency steering committee to oversee the project consisting of the DHS, DoIT, Department of Juvenile Services, the Maryland Department of Labor, the MDH, the Maryland Health Benefit Exchange, DBM, and the Governor's Office.

Governor Executive Orders effective July 29, 2021 and April 20, 2022, established an MD THINK Executive Committee to “set policy, objectives, and priorities and govern MD THINK and its data and information and platform technology assets.” The Executive Committee was also required to “promote the appropriate sharing of information among units of State government” and “be responsible for the protection, privacy, and appropriate use of shared data and personal information on the platform.” Finally, an Executive Director position was established to manage MD THINK.

Between April 2017 and May 2018, the Board of Public Works (BPW) approved four contracts totaling \$166.4 million for the MD THINK project, which originally had an estimated completion date of May 2021. These contracts included development of the MD THINK platform and applications, cloud hosting services, IV&V services, and a building lease to provide office space for personnel to work on the development of MD THINK. Approximately 77 percent of the MD THINK project has been funded with federal funds.

Finding 5

DoIT could not adequately explain or justify the increase in MD THINK costs from the initial \$166.4 million to \$588.8 million and delays in the system implementation, which as of November 2023 was estimated to be approximately three years behind the initial project completion date.

Analysis

DoIT could not adequately explain or justify the significant cost and implementation delays with MD THINK. Rather, DoIT referred us to DHS, and by extension, the Executive Committee to obtain the requested information.

⁸ CJAMS replaces legacy systems supporting the Social Services Administration and DJS. With CJAMS, caseworkers will be able to take mobile devices and tablets in the field reducing data entry and allowing case notes to be entered in real time. CSMS will replace the legacy Child Support Enforcement System and improve automation in case management.

However, as noted below there were several contract extensions (in both funding and time) that neither DHS nor DoIT could readily justify. As of October of 2022, there were 17 contract modifications (see Figure 3) to the MD THINK project that included scope changes and time extensions, including adding additional agency applications and extended cloud services. The modifications extended the contract completion dates from an original estimated completion date May 2021 to the end of fiscal year 2023.

Figure 3
MD THINK Contract Modifications as of October 2022
(amounts in millions)

Contract	Original Contract Amount	17 Contract Modifications			Revised Contract Amount
		Scope Changes	Time Extensions or Renewals	Total	
Platform Infrastructure, Applications, and Related Agile Development Services	\$113.3	\$195.9	\$36.0	\$231.9	\$345.2
Cloud Hosting Platform and Related Services	50.0	83.9	16.0	99.9	149.9
IV&V Services	1.0	-	3.8	3.8	4.8
Building Lease	2.1	\$1.4	-	1.4	3.5
Total	\$166.4	\$281.2	\$55.8	\$337.0	\$503.4
		83%	17%		

Source: Board of Public Works approved contract modifications

Even with the aforementioned contract modifications, the estimated MD THINK costs totaled \$588.8 million as of June 30, 2022. This represents an increase of \$422.4 million from the original contract amounts of \$166.4 million. In the January 2022 and June 2022 re-baseline requests to DoIT, DHS attributes the additional time needed and increased project costs to issues identified with the eligibility and enrollment component during field testing and the changes needed by the federal Department of Agriculture. In addition, issues were identified during the pilot phase for the child support management system application component requiring system workflows needing to be redesigned. Finally, gaps in system functionality were identified in the juvenile services module of CJAMS.

According to DoIT's fiscal year 2023 annual report of MITDP's dated November 2023, all components of MD THINK have been deployed with the exception of the juvenile services module of CJAMS, which is still being developed and is expected to be deployed statewide in quarter three of fiscal year 2024. In addition, use and analysis of the deployed components have revealed functionality gaps that require further design, development, and implementation work. In our

opinion, as the State agency responsible for major IT development projects, DoIT should have been actively monitoring the development of MD THINK and providing necessary expertise with the goal of ensuring the project was delivered on budget and on time.

Various concerns regarding the development and management of MD THINK were identified in both the forensic audit noted on page 9 and the IV&V noted in Finding 6. As a member of the MD THINK Executive Committee, DoIT had a critical role in actively monitoring MD THINK. See Finding 2 for examples of a lack of specific DoIT monitoring and the impact on project management and development. However, as noted in Finding 1, DoIT believed it lacked the necessary authority to request and obtain the necessary documentation even though it was a key member of the MD THINK Executive Committee.

Recommendation 5

We recommend that DoIT, in accordance with State law, and in conjunction with the MD THINK Executive Committee,

- a. monitor the project to ensure that costs, functionality, and delivery dates are consistent with the terms of the contracts or adequately justified if significant variances are necessary; and**
- b. ensure the project is fully implemented or take immediate corrective actions.**

Finding 6

DoIT did not ensure that Independent Verification and Validation assessments (IV&V) findings were resolved timely by DHS and the MD THINK Executive Committee.

Analysis

DoIT did not ensure that IV&V findings were resolved timely by DHS and the MD THINK Executive Committee. To assist in project oversight, DoIT contracted with an independent public accounting firm in May 2018 to provide IV&V services of the project's progress and identify areas that need improvement for the project to be successful. The IV&V contractor provided periodic reports to DoIT and the other State agencies on the MD THINK Executive Committee that detail issues that impact the progress of the project.

Our review of IV&V reports issued from January 2020 through May 2022 identified 251 issues with low (178), medium (44), or high (29) risk.⁹ As of May 2022, 33 of 251 issues were considered open, including 15 high-risk issues. Although high-risk issues require immediate action, 14 of the 15 high-risk issues had remained open from 3 to 27 months. These open issues included the following critical aspects of the project management.

- The system design for one component did not meet the requirements of the State agency that would be primarily using it, which could lead to this component not being fully adopted.
- Project leaders did not develop plans with sufficient detail to determine feasible completion dates resulting in slippage of reported completion dates.
- Project reporting does not properly delineate the difference between the number of hours consumed versus the actual completion of the work resulting in the misrepresentation of the actual progress.
- Project leaders had not updated the project completion timeline since June of 2020 and had not assessed the financial impact of changes in project scope resulting in inaccurate reporting and State leaders being misinformed on the project's status.
- Project leadership did not ensure the system complied with all State and federal policies during user acceptance testing, which may result in the system not passing certification by its federal partners.
- Project leaders had not established readiness criteria with specific metrics and completion goals to determine if the system phase was completed and ready to be implemented in additional jurisdictions. This could lead to delays in implementation as well as additional costs.

DoIT's *Enterprise Program Management Office MITDP Standards Manual* stipulates that "agreed upon determinations communicated in IV&V reporting will be used by agency project management to implement efficient and effective processes, pursue risk reduction and enable project success." Not addressing critical issues identified by the IV&V timely can lead to a project not being fully functional, not meeting schedule goals, or exceeding budgets. Notwithstanding the aforementioned *Manual*, as noted in Finding 1, DoIT believed it lacked the

⁹ The IV&V findings were categorized as either low, medium, or high risk. The IV&V report defined low risk as an area that did not have significant risk in the near term and current processes were sufficient to mitigate the issue over the next 30 days. A medium risk needed to be resolved as inefficiencies existed, however the current processes could be used with some refinements. High risks were critical issues that may impact the project, most likely resulting in either the inability to achieve the scope, timeline, or budget that requires immediate action.

necessary authority to ensure critical findings from assessment reports are appropriately resolved and corrected.

Recommendation 6

We recommend that DoIT ensure critical findings from IV&V project assessment reports for MD THINK are resolved timely, including those noted above.

eMaryland Marketplace Advantage

Background

The Department of General Services (DGS), DBM, and DoIT worked together to draft a solicitation for the procurement and maintenance of a new eProcurement system that was issued in March 2018. DGS, in participation with the Office of the Comptroller and the State Treasurer's Office, evaluated vendor proposals and on March 6, 2019 BPW approved a 10-year contract totaling approximately \$38.2 million. The new eProcurement system is called *eMaryland Marketplace Advantage (eMMA)* and includes several enhancements over the prior *eMaryland Marketplace (eMM)* system including an interface with the State's Financial Management Information System (FMIS), document management, and search and reporting capabilities.

The new system was intended to address existing operational inefficiencies with *eMM*. The integration with FMIS was a feature included in the original *eMM* contract and was intended to address concerns noted in the 2007 Governor's Transition Report; however, *eMM*'s implementation stalled early in development and it was never interfaced with FMIS. As a result, employees were required to enter information manually and redundantly into both *eMM* and FMIS. *eMM* also lacked document management capabilities; and, therefore, vendors were required to upload the same documents for every procurement action. Additionally, *eMM* lacked robust search and reporting capabilities which limited comprehensive monitoring of statewide purchasing activity and strategic sourcing efforts.

The current contract contains fixed-price and indefinite-quantity components. The fixed price components include *eMMA* development and implementation, software licensing, and optional features, while the indefinite-quantity components include hourly rates for labor categories used under work orders. The total contract value was comprised of \$7.8 million for development and implementation during the first 2 years of the project, \$14.9 million for operation and maintenance for the 10-year base period, and \$15.5 million for value-added modules to perform other work associated with the implementation based on

approved work orders (see Figure 4). An example of a value-added module, which was not specifically included in the scope of the original contract, was a DGS issued work order for the vendor to add invoicing capabilities to *eMMA*.

State laws and regulations generally provide that *eMMA* is to be used by State agencies, counties, municipalities, public institutions of higher education, local public school systems, and other certain entities to publish awards greater than \$50,000. In addition, registered vendors may utilize *eMMA* to receive notices of bid opportunities and securely submit bids to the aforementioned entities.

Figure 4
***eMMA* Contract Award**

	Development and Implementation	Operation and Maintenance	Value-Added Modules*
Year 1	\$6,385,563	\$1,431,800	-
Year 2	1,459,687	1,491,000	-
Year 3	-	1,491,000	-
Year 4	-	1,491,000	-
Year 5-10	-	8,946,000	-
Value-added modules	-	-	\$15,470,021
Subtotals	\$7,845,250	\$14,850,800	\$15,470,021
Total Contract Award:			\$38,166,071

*Value-Added Modules were included in the vendor's proposal, in addition to the core functionality used as the basis for the bid evaluation.

Finding 7

DoIT did not provide effective oversight during the development and implementation of *eMMA* resulting in significant delays and changes to the cost and scope of the project.

Analysis

DoIT did not provide effective oversight during the development and implementation of *eMMA* resulting in significant delays and changes to the cost and scope of the project. Specifically, DoIT did not adequately ensure the *eMMA* project was properly planned and monitored. For example, *eMMA* did not have an overall integrated schedule for project tasks and there was no standard method for tracking percentage of completion for the project. Additionally, even though *eMMA* has a significant impact on the State's procurement processes, DoIT did not treat the procurement as a statewide system, which would have been guided

by an executive steering committee. Although a steering committee was ultimately created, it was almost a year after the contract award.

According to the vendor's approved proposal, the date for the final phase of system implementation of *eMMA* was March 2020, but in DoIT's December 2019 monthly health assessment, it was revealed there were significant issues with the project plan for integrating data from all State agency systems into *eMMA*. An IV&V began in October 2020 and a final report was issued in February 2021 disclosing that the *eMMA* project had issues with project management, communication, and governance. For example, the report noted a lack of an overall integrated schedule for project tasks, as noted above, as well as a lack of sufficient dedicated staff and critical differences of opinions on how best to integrate *eMMA* data. We noted no formal action was taken by DoIT to resolve the project issues noted in the monthly health assessments or the open items from the IV&V report.

DGS submitted a request to DoIT which included an expansion to track Minority Business Enterprise procurement participation goals, and a procure-to-pay function with a new estimated completion date of December 2023 for the integration of FMIS feature. According to the request, an estimated \$11 million in additional funding would be necessary to complete all phases of the *eMMA* project. The request was approved by DoIT on August 26, 2022.

According to DoIT's fiscal year 2023 annual report of MITDP's dated November 2023, *eMMA* is estimated to be completed in fiscal year 2026 with a cost totaling \$70.9 million, an increase of \$32.7 million over the original contract cost. As noted in Finding 1, DoIT believed it lacked the necessary authority to enforce implementation of oversight recommendations.

Recommendation 7

We recommend that DoIT provide significant oversight and direction over *eMMA*. In particular, DoIT should ensure

- a. *eMMA* is completed in accordance with the most recently approved schedule and budget;**
- b. issues identified by the monthly health assessments and the IV&Vs are resolved, including developing an overall project schedule with defined tasks and a standardized method of tracking percentage of completion is used; and**
- c. based on its own IT project expertise, proactively identify other actions intended to encourage vendor resolution of the current *eMMA* issues and ensure DGS complies with the terms of its contract.**

networkMaryland

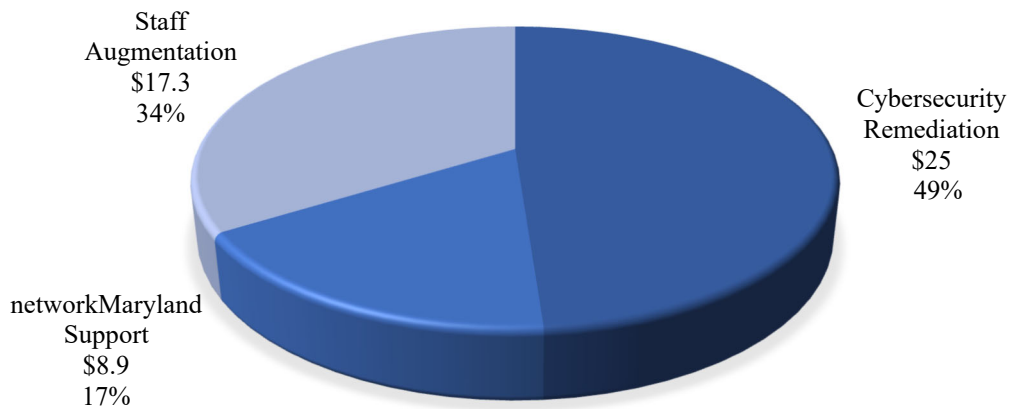
Background

networkMaryland is the State's high-speed data network for public sector use that allows agencies and other government entities to host and share common applications. In July 2022, DoIT awarded a new \$74.7 million, seven-year contract, to the incumbent vendor, to maintain networkMaryland. The prior contract award and subsequent modifications totaled \$104 million for the period of April 1, 2015 through December 31, 2022. The vendor is to provide management and operations services relating to data networks and support; security; network engineering; fiber optic construction, design, engineering, and repair for networkMaryland. In addition, other State agencies may use the networkMaryland vendor for specific staff resources in order to augment current agency staff, on either an hourly or annualized basis.

Agencies who need services submit a written request to DoIT that specifies the requirements of the desired work. DoIT, in conjunction with the networkMaryland vendor, approves the personnel resources, labor rates, and establishes a work order for the services. Invoices are received and paid by DoIT and reimbursed by the agencies through billings for networkMaryland services.

According to DoIT's records as of January 31, 2023, it awarded work orders to the vendor under the current contract valued at \$51.2 million; consisting of \$25 million for cybersecurity remediation, \$17.3 million for DoIT staff augmentation, and \$8.9 million to specifically manage and operate networkMaryland (see Figure 5). The awarded work orders as of January 31, 2023 (approximately seven months into the contract term) represented a majority of the initial seven-year, not-to-exceed contract amount of \$74.7 million. Additionally, a majority of the work orders were for periods of twelve months or less with expected end dates on or before June 30, 2023.

Figure 5
networkMaryland Approved Work Orders
as of January 2023
(dollar amounts in millions)



Source: DoIT records

According to State records, as of April 11, 2023, DoIT had paid \$19.1 million to the vendor, which includes payments for services provided to other State agencies and entities.

We received referrals to our fraud, waste, and abuse hotline alleging that DoIT did not request or obtain adequate support for labor charges billed under the networkMaryland contract. Specifically, the allegations stated that timesheets submitted by the vendor included vague descriptions of the work completed by its employees and could not be verified to the labor hours billed to DoIT. As a result, we reviewed DoIT's processes for monitoring work performed by the vendor and reviewed certain of the related work orders and invoices. We also conducted interviews of certain vendor personnel. Based on our review, we concluded that DoIT did not request or obtain appropriate support from the vendor when reviewing and approving the invoices which substantiated the concerns raised in the allegations (see Finding 10).

Finding 8 (Policy Issue)

DoIT used the networkMaryland contract to award significant work unrelated to networkMaryland without considering a competitive procurement process.

Analysis

DoIT used the networkMaryland contract for staff augmentation and significant cybersecurity remediation¹⁰ services without a formal consideration of a competitive procurement. In addition, the technical proposal, evaluation, and BPW approval all focused on networkMaryland support work with no reference or evaluation of the staff augmentation or cybersecurity remediation services.

Staff Augmentation

DoIT's use of the networkMaryland vendor for staff augmentation (both for DoIT and other State agencies) circumvented competitive procurement and control agency oversight for these services. Specifically, DoIT effectively sole sourced 14 work orders for staff augmentation totaling \$16.8 million as of January 2023, to the networkMaryland vendor, and therefore bypassed the need for BPW approval (which is required for contracts valued over \$200,000). While the contract did allow for other State agencies to request staff to augment their current staffing level, we question whether the provision anticipated the significant extent of its use by DoIT itself.

We questioned why DoIT would limit staff augmentation work orders to only the networkMaryland vendor, instead of utilizing its existing Consulting and Technical Services (CATS+) master contract to procure these services. The purpose of the CATS+ master contract is to enable State agencies to procure information technology staff quickly, efficiently, and cost effectively through a secondary competitive process amongst over 400 pre-approved contractors. DoIT management advised us that it had used the CATS+ master contract for staff augmentation work in the past but that BPW approval would be required for work orders greater than \$200,000 in accordance with State procurement regulations, which would have resulted in additional time delays before the work could proceed.

¹⁰ According to the National Institute of Standards and Technology, cybersecurity remediation is the act of mitigating a vulnerability or threat by preventing damage, protecting, and restoring computers and electronic communications systems and services, including the information within these systems.

Cybersecurity Remediation

DoIT also used the networkMaryland contract for cybersecurity remediation services (the process of identifying and fixing information technology security threats), which may not have been the preferred method for completing this work. Specifically in November 2022, DoIT management requested its legal counsel to review the work orders, due to concerns about using the networkMaryland contract for cybersecurity remediation services. DoIT's counsel advised them that the work is within the scope of the contract but only because of the general language about providing management and operations services in support of the agency's operational responsibilities. DoIT's counsel further stated that the contract documents clearly identify work related to networkMaryland as the primary focus, and that if consulted prior to the event, counsel would have recommended that DoIT use another contract vehicle. DoIT also advised us that it had concerns regarding a perceived low BPW approval rate for emergency procurements generally, so it decided not to use this available procurement method for these services.

In addition, DoIT also used staff augmentation services in order to complete cybersecurity remediation work which we also contend was not within the scope of the contract. DoIT management personnel contended that staff augmentation may be used for cybersecurity remediation services and therefore was within the scope of the contract. However, the request for proposal (RFP) only included two sentences related to staff augmentation. Specifically:

DoIT also anticipates furnishing services under this TORFP¹¹ to Other Requesting Agencies via Work Orders issued by DoIT. DoIT anticipates that Work Orders issued on behalf of Requesting Agencies will primarily be managed as defined scope projects, however requests could also be made for specific staff resources to augment current agency staff, either on an hourly or annualized basis.

Given these minimal statements in the RFP on staff augmentation and no mention of cybersecurity remediation OLA continues to believe these services were not within the scope of the contract; and had they been, much more robust language should have been included in the RFP detailing the scope of these services.

¹¹ Task Order Request For Proposal (TORFP) is a solicitation document containing a description by the State of the individual projects for which proposals will be solicited under a master contract.

As of January 2023, DoIT has approved the use of 11 cybersecurity remediation work orders totaling \$25 million. DoIT management advised us that it used the networkMaryland contract for these services because the cybersecurity remediation work was urgent. However, State procurement regulations provide for an emergency procurement method for immediate and serious needs that cannot be met through normal procurement methods.

Recommendation 8

We recommend that DoIT

- a. modify the networkMaryland contract to clearly define the scope and extent of all services provided;**
- b. obtain retroactive approval from BPW for the current staff augmentation and cybersecurity remediation work orders; and**
- c. for any additional work and in the spirit of its counsel's legal advice, solicit secondary competition amongst approved CATS+ contractors for staff augmentation and cybersecurity remediation services to maximize competition and help ensure it receives the most advantageous contract terms.**

Finding 9

DoIT did not adequately monitor work orders for agency staff augmentation services under the networkMaryland contract and documentation of certain work orders could not be provided.

Analysis

DoIT did not adequately monitor work orders for staff augmentation services at other agencies under the networkMaryland contract and could not provide documentation of certain work orders. Our review of 12 work orders totaling \$35.9 million (including 4 staff augmentation, 3 cybersecurity remediation, and 5 networkMaryland support) authorized under both the prior and current networkMaryland contract, disclosed the following conditions.

- DoIT did not adequately verify amounts paid from 3 work orders totaling \$9.1 million for staff augmentation at the Maryland Department of Health (MDH). Specifically, DoIT paid the vendor invoice based on timesheets submitted with the invoice without verifying with MDH that the work was completed and hours billed were reasonable. In this regard, one payment totaling \$467,000 included charges for 40 hours of “training” which was not authorized under the work order.

- DoIT did not maintain accurate records of work orders authorized under the current contract. Specifically, our test of 6 work orders under the new contract totaling \$25.5 million disclosed that 3 work orders totaling \$21.1 million had inaccurate work order amounts or expenditure information. For example, one work order was recorded in DoIT's records as having a contract amount of \$3.4 million less than the actual work order.
- DoIT was unable to provide any documentation for 4 work orders under the prior contract, totaling \$3 million. As a result, we were unable to determine if the work orders were properly approved, the scope of work was defined and appeared reasonable, or if expenditures were in accordance with the work order. According to DoIT management, these records could not be located due to employee turnover.
- DoIT did not have a record of all subcontractors and approved work orders without identifying the subcontractor(s), as required by the contract. For example, DoIT approved a \$1.7 million work order to augment staff at MDH. According to MDH, the work was completed by a subcontractor for the networkMaryland vendor that was not included in the contract documents or specified on the work order.
- DoIT did not approve certain work orders as required. Specifically, 2 work orders totaling \$2.7 million were not approved until we requested copies of the work orders approximately 10 months after work had begun. DoIT paid the vendor \$2.3 million prior to approving these work orders and advised us that the untimely approval was an oversight.

Recommendation 9

We recommend that DoIT

- ensure labor hours billed for staff augmentation work orders for other State agencies are accurate prior to approving invoices for payment,**
- ensure approved work order documentation is maintained, and**
- ensure subcontractors are approved and qualified.**

Finding 10

DoIT issued work orders to the networkMaryland vendor for cybersecurity remediation services totaling approximately \$25 million that were not sufficiently detailed and did not adequately ensure that all \$11.5 million invoiced by the vendor was related to work performed on behalf of DoIT work orders.

Analysis

DoIT issued work orders to the networkMaryland vendor for cybersecurity remediation services that were not sufficiently detailed and did not ensure that the amounts invoiced by the vendor were related to work performed on behalf of DoIT work orders. Beginning in April 2022, DoIT issued a series of work orders to the networkMaryland vendor to enhance system security.¹² As of January 2023, DoIT had awarded 11 work orders to the vendor totaling \$25 million for cybersecurity remediation services and payments on these work orders totaled approximately \$11.5 million as of May 2023.

The Composition of DoIT Work Orders Precluded Effective Oversight and Monitoring of Costs

DoIT work orders did not correlate estimated costs to specific deliverables or progress to improve the level of DoIT's cybersecurity, and many deliverables were not clearly defined. Consequently, we concluded that DoIT was unable to monitor vendor billed costs to the specific work performed. DoIT management advised us that this lack of correlation resulted in changes in the scope of work and likely cost inefficiencies. For example, one work order was initially approved for \$4.3 million and DoIT approved scope changes to increase the cost to \$12.7 million without clearly defining the additional work to be performed related to the \$8.4 million cost increase. The lack of comprehensive work orders contributed to the conditions noted in the allegations.

Similar concerns were noted in an independent assessment of these cybersecurity remediation efforts issued by a third-party DoIT contractor in February 2023, which concluded that for certain vendor work, the resources were estimated for implementation activities without a clear understanding by DoIT and the vendor of the scope of work. The assessment also noted there was a lack of clarity on the reasonableness of the cost without having defined implementation activities.

¹² In the fall of 2021, a DoIT contractor conducted a cybersecurity assessment of DoIT's system security and issued an assessment report containing more than 100 recommendations to help DoIT improve its system security. DoIT used its networkMaryland contractor to address these concerns.

DoIT Did Not Ensure the Propriety of Labor Hours Billed by the Vendor

DoIT did not ensure labor hours billed were accurate, the related work was completed, or that the hours billed were proper and supported. Specifically, the DoIT employee responsible for overseeing a significant portion of the cybersecurity remediation work was not involved in reviewing and approving the vendor's invoices.

There Was a Lack of Support That Hours Billed Were for DoIT Related Activities

DoIT could not readily provide sufficient documentation that the work performed in relation to the hours billed adequately supported the propriety of amounts invoiced and were for DoIT related activities. We found that the vendor invoiced for hours worked by numerous employees, but DoIT personnel could not provide any support for the nature of the work performed for the invoiced hours other than employee timesheets, which DoIT routinely received from the vendor.

Our targeted review of electronic vendor timesheet records provided to DoIT that supported labor hours billed for 6 months (from June to November 2022) totaling approximately \$2 million identified instances of unspecified work performed (such as "attending meetings"), which DoIT could not adequately support.

For example, we requested support for the work performed for 20 non-descriptive timesheet entries from the aforementioned timesheets on hand. DoIT personnel could not provide documentation to support these entries and agreed that some of the time descriptions contained insufficient detail to show relevance to the work order or appropriate effort relative to the time charged. For the 20 non-descriptive timesheet entries, the vendor billed 601 hours, totaling approximately \$100,000. Since the vendor employees may work on multiple contracts, we could not determine if the hours charged were for DoIT related activities.

In response to our inquiries, the vendor advised us that this situation was due in part to some DoIT project managers requesting general time descriptions for the work performed instead of having specific time descriptions. For example, for one time entry tested, we found that the vendor discussed the insufficient description with DoIT, and DoIT agreed the item could be charged because it was aware of the work performed by the vendor's employee for that day. The vendor proactively removed other time charges during this same period, that were not sufficiently detailed. Finally, the vendor advised us that it changed the review process in May 2023 to require approval by relevant project managers for all time charged.

DoIT Issued a Stop Work Order for the Cybersecurity Remediation Work

DoIT issued a stop work order effective May 31, 2023 after approximately \$11.5 million was expended for cybersecurity remediation work. DoIT management advised us it issued the stop order after receipt of the independent assessment and its realization that the work orders needed clearer deliverables. Consequently, DoIT thought it prudent and appropriate to pause and assess DoIT's cybersecurity level before reissuing work orders with clearer specification and defined deliverables that appropriately match the costs to be billed.

Concerns Raised in the Allegations Were Substantiated

The combination of the lack of comprehensive work orders and DoIT not obtaining appropriate detailed support for the labor hours invoiced substantiates the concerns raised in the allegations. Subsequent to the completion of our fieldwork and draft report issuance, DoIT advised us that it requested and obtained support from the vendor for past labor hours invoiced, which we did not review. As a result, based on our discussion with the Office of the Attorney General's Criminal Division, we did not refer the matter to the Criminal Division as of the date of this report.

Recommendation 10

We recommend that DoIT

- a. ensure all future cybersecurity remediation work orders and deliverables are clearly defined and estimated costs correlate to deliverables;**
- b. ensure labor hours billed are accurate for work completed and properly supported; and**
- c. in conjunction with legal counsel, consider the recovery of funds previously paid for inadequate work product, to the extent practicable.**

Information Systems Security and Control and Enterprise Services

We determined that the Information Systems Security and Control and Enterprise Services section, including Findings 11 through 14 related to "cybersecurity," as defined by the State Finance and Procurement Article, Section 3.5-301(b) of the Annotated Code of Maryland, and therefore are subject to redaction from the publicly available audit report in accordance with the State Government Article 2-1224(i). Consequently, the specifics of the following findings, including the analysis, related recommendations, along with DoIT's responses, have been redacted from this report copy.

Finding 11
Redacted cybersecurity-related finding.

Finding 12
Redacted cybersecurity-related finding.

Finding 13
Redacted cybersecurity-related finding.

Finding 14
Redacted cybersecurity-related finding.

Enterprise Technology Support Services (ETSS)

Finding 15
DoIT did not have formal written agreements with 57 of the 130 State and local entities receiving ETSS and did not recover \$4.8 million from nine entities with agreements for services provided.

Analysis

DoIT did not enter into a formal written memorandum of understanding (MOU) with 57 (46 state agencies and 11 local government entities) of the 130 entities participating in the ETSS program and did not recover \$4.8 million from nine entities for services provided. The ETSS program covers fundamental day-to-day information technology operations, including internet and statewide intranet access, email, computer server operations, and file sharing for Executive Branch agencies authorized in law who have chosen to participate, as well as local government entities.

During fiscal year 2020, DoIT developed a standard MOU template for participating entities that stipulates the responsibilities of participating entities and DoIT. For example, the entity agrees to use one or more recurring services offered by DoIT in its service catalogue and submit all service and support requests in accordance with DoIT's standard process.¹³ The MOU also provides

¹³ DoIT utilizes a web-based application that can be accessed by participating agencies that details service rates, service measures, and the calculation of amounts due.

that the cost for the services are detailed on the projected remittance request submitted to the entity each year and are incorporated into the budgetary process to be paid with reimbursable funds.

- As of July 2022, 57 of the entities that received services totaling \$30.6 million during fiscal year 2022 had not signed an MOU. According to DoIT records, during fiscal year 2022 software upgrades and equipment totaling \$61.4 million was purchased on behalf of the 130 participating entities.
- DoIT did not recover \$4.8 million from nine entities for purchases made on their behalf, which had been outstanding for periods ranging from 6 to 18 months. Seven of the nine entities had entered into MOUs with DoIT which included terms for calculating and billing service rates. According to DoIT management, the agencies had questions regarding how these services are measured and DoIT had offered to meet with them to resolve their concerns.

A similar condition on the failure to enter into comprehensive MOUs with ETSS program participants was commented upon in our preceding DoIT audit report. In response to that report, DoIT stated that it had developed a standard MOU and was working with the agencies to get the documents executed. However, during the current audit, DoIT advised it was unsure why State agencies had yet to enter into MOUs, but that it did not believe that local governments had to have an MOU.

Recommendation 15

We recommend that DoIT

- a. enter into formal MOUs with all agencies for which it provides ETSS. The MOU should clarify DoIT and agency responsibilities, specific services to be provided by each, and a mechanism to provide for the cost of these services (repeat); and**
- b. ensure amounts due from agencies are timely recovered, including those noted above.**

Equipment

Finding 16

DoIT did not adequately control its equipment inventory and did not maintain accurate detail records.

Analysis

DoIT did not have adequate procedures and controls over its equipment inventory and did not maintain accurate records. DoIT reported equipment (primarily information technology hardware) valued at \$60.6 million to the DGS as of June 30, 2021.

- DoIT did not conduct annual physical inventories of its sensitive equipment as required. Specifically, as of August 2022, DoIT had not conducted a complete physical inventory of equipment during the audit period.
- DoIT did not accurately report equipment additions and disposal activity to DGS. Specifically, DoIT reported equipment additions of \$3.4 million on the DGS annual report of fixed assets when their financial records indicated equipment purchases of \$6.2 million during fiscal year 2021 (a difference of \$2.8 million). DoIT management advised us that the majority of this difference was likely due to equipment purchases made on behalf of other State agencies, which were never physically in DoIT's possession. However, DoIT could not provide us with support of their assertions.

The DGS *Inventory Control Manual* requires State agencies to accurately report and safeguard equipment, maintain comprehensive detail records and an independent control account, and conduct a physical inventory of sensitive equipment at least once a year and a complete physical inventory of all equipment at least once every three years, including investigating discrepancies.

Similar conditions were noted in our preceding DoIT audit report. In response to that report DoIT indicated that by June 2020 it would ensure independent and documented annual physical inventories are conducted and work with DGS to identify the requirements to accurately report inventory to DGS, per their current asset management policies. However, as noted above, the stated corrective actions were not implemented.

Recommendation 16

We recommend that DoIT comply with the requirements of the DGS *Inventory Control Manual* by

- a. conducting annual independent physical inventories (repeat), and**

- b. ensuring property is properly reported to DGS on the annual report of fixed assets and investigating the aforementioned difference and submitting a corrected annual report to DGS.**

Audit Scope, Objectives, and Methodology

We have conducted a fiscal compliance audit of the Department of Information Technology (DoIT) for the period beginning May 7, 2018 and ending December 31, 2022. The majority of our fieldwork, including the review of information technology security, was conducted from August 5, 2021 to July 15, 2022. However, certain significant concerns were identified during the audit, resulting in additional fieldwork related to DoIT's oversight of major information technology development projects and networkMaryland projects being conducted from March 13, 2023 to June 26, 2023. The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

As prescribed by the State Government Article, Section 2-1221 of the Annotated Code of Maryland, the objectives of this audit were to examine DoIT's financial transactions, records, and internal control, and to evaluate its compliance with applicable State laws, rules, and regulations.

In planning and conducting our audit, we focused on the major financial-related areas of operations based on assessments of significance and risk. The areas addressed by the audit included monitoring of major information technology development projects, as well as monitoring of other projects, information systems security and controls, enterprise technology support services, procurement and monitoring of networkMaryland, disbursements, and equipment. Furthermore, we reviewed DoIT's processes for monitoring work performed by the networkMaryland vendor and reviewed certain of the related work orders and invoices based on referrals received on our fraud, waste, and abuse hotline. We also determined the status of the findings contained in our preceding audit reports of DoIT and *DoIT as a Service Provider* as well as 8 of the 12 findings contained in our performance audit report on telecommunication resource sharing agreements dated August 3, 2018.

Our assessment of internal controls was based on agency procedures and controls in place at the time of our fieldwork. Our tests of transactions and other auditing procedures were generally focused on the transactions occurring during our audit period of May 7, 2018 to December 31, 2022, but may include transactions before or after this period as we considered necessary to achieve our audit objectives.

To accomplish our audit objectives, our audit procedures included inquiries of appropriate personnel, inspections of documents and records, tests of transactions, and to the extent practicable, observations of DoIT's operations. Generally, transactions were selected for testing based on auditor judgment, which primarily considers risk, the timing or dollar amount of the transaction, or the significance of the transaction to the area of operation reviewed. As a matter of course, we do not normally use sampling in our tests, so unless otherwise specifically indicated, neither statistical nor non-statistical audit sampling was used to select the transactions tested. Therefore, unless sampling is specifically indicated in a finding, the results from any tests conducted or disclosed by us cannot be used to project those results to the entire population from which the test items were selected.

We also performed various data extracts of pertinent information from the State's Financial Management Information System (such as revenue and expenditure data) and the State's Central Payroll Bureau (payroll data), as well as from the contractor administering the State's Corporate Purchasing Card Program (credit card activity). The extracts are performed as part of ongoing internal processes established by the Office of Legislative Audits and were subject to various tests to determine data reliability. We determined that the data extracted from these sources were sufficiently reliable for the purposes the data were used during this audit.

We also extracted data from other systems maintained by DoIT or its contractors for the purpose of testing. We performed various tests of the relevant data and determined that the data were sufficiently reliable for the purposes the data were used during the audit. Finally, we performed other auditing procedures that we considered necessary to achieve our audit objectives. The reliability of data used in this report for background or informational purposes was not assessed.

DoIT's management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records; effectiveness and efficiency of operations including safeguarding of assets; and compliance with applicable laws, rules, and regulations are achieved. As provided in *Government Auditing Standards*, there are five components of internal control: control environment, risk assessment, control activities, information and communication, and monitoring. Each of the five components, when significant to the audit objectives, and as applicable to DoIT, were considered by us during the course of this audit.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports are designed to assist the Maryland General Assembly in exercising its legislative oversight function and to provide constructive recommendations for improving State operations. As a result, our reports generally do not address activities we reviewed that are functioning properly.

This report includes findings relating to conditions that we consider to be significant deficiencies in the design or operation of internal control that could adversely affect DoIT's ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable laws, rules, and regulations. Our report also includes findings regarding significant instances of noncompliance with applicable laws, rules, or regulations. Finally, this report includes two findings, which are identified as a "Policy Issue". Such findings represent significant operational or financial-related issues for which formal criteria may not necessarily exist, and for which management has significant discretion in addressing, but the recommendation represents prudent and/or practical actions, which we believe should be implemented by the agency to improve outcomes. Other less significant findings were communicated to DoIT that did not warrant inclusion in this report.

State Government Article Section 2-1224(i) requires that we redact in a manner consistent with auditing best practices any cybersecurity findings before a report is made available to the public. This results in the issuance of two different versions of an audit report that contains cybersecurity findings – a redacted version for the public and an unredacted version for government officials responsible for acting on our audit recommendations.

The State Finance and Procurement Article, Section 3.5-301(b), states that cybersecurity is defined as "processes or capabilities wherein systems, communications, and information are protected and defended against damage, unauthorized use or modification, and exploitation." Based on that definition, and in our professional judgment, we concluded that certain findings in this report fall under that definition. Consequently, for the publicly available audit report all specifics as to the nature of cybersecurity findings and required corrective actions have been redacted. We have determined that such aforementioned practices, and government auditing standards, support the redaction of this information from the public audit report. The specifics of these cybersecurity findings have been

communicated to DoIT and those parties responsible for acting on our recommendations in an unredacted audit report.

As a result of our audit, we determined that DoIT's accountability and compliance level was unsatisfactory. The primary factors contributing to the unsatisfactory rating were the number and significance of our audit findings, including the number of findings repeated from our preceding audit reports. Our rating conclusion has been made solely pursuant to the aforementioned law and rating guidelines approved by the Joint Audit and Evaluation Committee. The rating process is not a practice prescribed by professional auditing standards.

DoIT's response to our findings and recommendations is included as an appendix to this report. Depending on the version of the audit report, responses to any cybersecurity findings may be redacted in accordance with State law. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise DoIT regarding the results of our review of its response.

APPENDIX



Wes Moore | Governor
Aruna Miller | Lt. Governor
Katie Savage | Secretary

March 27, 2024

Gregory A. Hook, CPA
Legislative Auditor
301 W. Preston Street, Room 1202
Baltimore, MD 21201

Dear Mr. Hook:

The Department of Information Technology (DoIT) has received the fiscal compliance audit for the period beginning May 7, 2018 and ending December 31, 2022.

DoIT acknowledges the efforts of the legislative auditors during this audit. Responses to the audit findings are attached to this cover letter.

Sincerely,

Katie Savage

Katherine M. Savage
Secretary
Department of Information Technology

Department of Information Technology

Agency Response Form

Major Information Technology Development Projects (MITDPs)

Finding 1 (Policy Issue)

DoIT should assume greater oversight responsibility to ensure that MITDPs were completed on time and on budget.

We recommend that DoIT take the necessary steps to establish adequate safeguards to ensure the successful implementation of MITDPs, especially when delegating key aspects of MITDP oversight. For example, DoIT should verify that State agencies have appropriate qualified personnel with sufficient technical knowledge, assist with MITDP contract procurements and subsequent contract modifications, and periodically review MITDP expenditures for compliance with contract terms.

Agency Response			
Analysis	Additional Comment		
Please provide additional comments as deemed necessary.	<i>DoIT is responsible for project oversight, which includes monitoring the status of MITDP projects and identifying risks and issues; however, State agency actions (or inactions) determine the outcome of the project. State agencies are responsible for ensuring a project's successful delivery against cost and time schedule baselines, as well as that they have sufficient resources and qualified personnel providing project management.</i>		
Recommendation 1	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	<i>DoIT does agree that adequate safeguards should be implemented to ensure the successful implementation of MITDPs. DoIT has submitted changes to Maryland statute, to be considered as part of the 2024 legislative sessions, that clarifies both DoIT and the agency's role in MITDP oversight and approval.</i> <i>Specifically, DoIT would like more authority to assess agencies' capacity and resourcing to develop, implement and oversee major IT development projects. DoIT is not currently empowered nor resourced to validate the technical skill set of personnel within agencies. This is a change we are seeking in legislation.</i>		

Department of Information Technology

Agency Response Form

Finding 2

DoIT did not effectively monitor MITDPs to ensure they were on budget and on schedule and that changes to the scope and cost of the project were appropriate.

We recommend that DoIT

- a. ensure annual ITPRs are submitted by State agencies, and that DoIT reviews and approves them prior to submitting it to DBM and DLS for budget analysis purposes (repeat);
- b. review the methodology and basis for estimated costs and schedules on ITPRs to ensure these estimates appear reasonable and are supported;
- c. obtain and review explanations for significant changes, such as increases in project costs;
- d. require the OPMs to ensure monthly health assessments are provided by State agencies, verify the accuracy of information reported, and provide justifications for the risk ratings (repeat); and
- e. review and approve changes in scope, cost, and schedule, as required by its policy.

Agency Response	
Analysis	Not Factually Accurate
Please provide additional comments as deemed necessary.	<p><i>DoIT asserts that this finding is factually inaccurate. DoIT requires that all MITDP projects submit an updated spend plan and project schedule on a monthly basis as part of the Health Assessment process. If DoIT disagrees with the updates provided by the agency, DoIT documents those findings and informs the agency. If the budget and/or schedule materially changes from what was submitted as part of the annual ITPR process, DoIT requires the agency to submit a project rebaseline. All project rebaselines are reviewed by the EPMO and ultimately approved or denied by the DoIT Secretary.</i></p> <p><i>While we do monitor MITDPs, DoIT has no authority to 1) restrict or deny funding when an agency's project goes over timeline or budget; 2) force an agency to implement recommendations consistent with our monthly health assessment recommendations; 3) take over when an agency's project is failing.</i></p>

Auditor's Comment: DoIT's response asserts that this finding is factually inaccurate. DoIT states that it does not have the statutory authority to deny funding, enforce health assessment recommendations, and take over failing projects. We continue to believe the

Department of Information Technology

Agency Response Form

MITDP statute provides DoIT with the necessary authority as the oversight agency. Nevertheless, DoIT has agreed to implement our recommendations and is seeking changes to statute during the 2024 legislative session.

Recommendation 2a	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	<p><i>DoIT agrees with this recommendation. The DoIT EPMO current process is to review and approve agencies' annual information technology project requests (ITPRs) prior to submitting it to DBM and DLS for budget analysis purposes. This is evidenced by the approval workflow in the PRISM system.</i></p> <p><i>The analysis identified four ITPRs that were not reviewed until after being submitted to DBM, and one ITPR (for MD THINK) that was never prepared. Despite repeated requests for the ITPRs from the appropriate agencies, three of the ITPRs were submitted after requests from DBM, not allowing for timely review, and the MD THINK ITPR was never submitted. Under current statute and processes, DoIT does not have the authority to take any further actions when such situations occur.</i></p> <p><i>As mentioned in response to finding 1, DoIT is seeking legislative changes as well as working with agencies to effect changes to current practice and process. These changes will provide DoIT with additional authority to enforce policy and ensure effective oversight. Along with these changes, DoIT is seeking additional funding to ensure we have adequate staff to fulfill oversight responsibilities to ensure successful MITDPs. It is hoped that these changes will be effective by 6/30/2024.</i></p>		
Recommendation 2b	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	<p><i>DoIT agrees with this recommendation. The DoIT EPMO will enhance current practices to review the methodology and basis for estimated costs and schedules on ITPRs to ensure these estimates appear reasonable and are supported. This will be evidenced by the approval workflow in the PRISM system.</i></p>		
Recommendation 2c	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	<p><i>DoIT agrees with this recommendation. As part of current processes, DoIT EPMO obtains and reviews explanations for significant changes such as increases in project costs as part of the monthly Health Assessment and project rebaselining processes. Unfortunately, DoIT is only able to approve increases in estimated costs that are reported to DoIT or transparent in FMIS. DoIT also is limited in that justification for project cost increases must come from the agency. Current practice does not provide any additional actions by DoIT to enforce that agencies</i></p>		

Department of Information Technology

Agency Response Form

	<p><i>comply with current procedure and policy that requires agencies to submit explanations for significant cost changes.</i></p> <p><i>See specific comments in response to recommendation 2e related to MD THINK MITDP that was noted in the auditor analysis.</i></p>		
Recommendation 2d	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	<p><i>DoIT agrees with this recommendation. As part of established processes, the DoIT EPMO reviews the accuracy of information in the monthly health reports (using available information, e.g., FMIS reports) as part of the monthly Health Assessment process.</i></p> <p><i>DoIT agrees to implement certain enhancements to this process, as recommended by OLA. Specifically, the EPMO will provide a rating (such as green, yellow, red) for each category and will include a justification for rating when there is a disagreement with the rating the agency provided.</i></p> <p><i>The auditor analysis identified instances where the monthly health assessment had not been prepared. While DoIT requests these health assessments, they must be provided by the agency. DoIT has no authority to take additional actions when monthly health assessments are not submitted.</i></p>		
Recommendation 2e	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	<p><i>DoIT agrees with this recommendation. As part of the current process, the DoIT EPMO reviews and approves changes in scope, cost, and schedule, as part of the monthly Health Assessment and project rebaselining processes.</i></p> <p><i>Specific to MDTHINK, "DoIT did not approve the increase in estimated cost to complete for MDTHINK and MMIS II as required by its policy and was unable to explain the projected cost increases for these two MITPDs that increased by a combined \$1.04 billion (271%) between 2018 and 2022." In these instances, the projected cost increases were not able to be explained because they did not go through the appropriate approval process, were not transparent in FMIS, and not reported to DoIT at year-end close (hence the forensic audit).</i></p>		

Department of Information Technology

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Finding 3

DoIT did not have an effective process to evaluate oversight project managers (OPMs) hired through vendors to oversee MITDPs.

We recommend that DoIT

- ensure performance evaluations adequately demonstrate that OPMs were satisfactorily performing their job duties (such as including specific comments that justify the ratings) and meeting expectations;
- develop written definitions and criteria, similar to DBM *Guidelines* noted above, that define each performance area and rating category to ensure evaluations are an effective tool to monitor the OPMs in an observable, measurable, and objective manner; and
- retain the performance evaluations and take corrective action when OPMs performance is unsatisfactory.

Agency Response			
Analysis	Additional Comment		
Please provide additional comments as deemed necessary.	<i>OLA's assessment on whether the Performance Evaluation Form (PEF) process is an effective process is subjective. While OLA has pointed out areas where the PEF process could be improved, there is no evidence to indicate that the process has not been effective in evaluating OPM performance.</i>		
Recommendation 3a	Agree	Estimated Completion Date:	4/1/2024
Please provide details of corrective action or explain disagreement.	<i>DoIT agrees to enhance the PEF process to include adding critical job duties necessary to monitor the overall health of assigned MITDPs. These enhancements to the PEF process were made and will be effective 4/1/2024</i>		
Recommendation 3b	Agree	Estimated Completion Date:	4/1/2024
Please provide details of corrective action or explain disagreement.	<i>DoIT agrees to add specific criteria that defines performance areas and rating categories to monitor OPMs in an observable, measurable and objective manner. These enhancements to the PEF process were made and will be effective 4/1/2024</i>		
Recommendation 3c	Agree	Estimated Completion Date:	Complete
Please provide details of corrective action or explain disagreement.	<i>DoIT agrees that performance evaluations should be retained and that corrective action should be taken when an OPMs performance is unsatisfactory. DoIT EPMO currently has a process in place to retain the performance evaluations and take corrective action when necessary.</i>		

Department of Information Technology

Agency Response Form

Finding 4

DoIT could not support cost data included in its annual report submitted to the Governor, DBM, and General Assembly; and did not always include changes in schedule, cost, and other identified problems with MITDPs, as required by State law.

We recommend that DoIT

- a. ensure that its annual reports include accurate estimated costs to complete (repeat) and retain documentation to support the amounts reported; and
- b. accurately report known or anticipated changes in schedule, cost, and scope and provide a summary of problems identified by an external review, as required by State law.

Agency Response			
Analysis	Additional Comment		
Please provide additional comments as deemed necessary.	The cost data that DoIT includes in its annual reports is supported by the cost information provided by other agencies, as well as the FMIS reports DoIT has access to. These reports do represent a point in time and any changes that occur after report submission will not be captured until the next reporting cycle. For example, if an agency is applying expenditures to a prior fiscal year after year-end-close the expenses will not tie to the annual report from that fiscal year..		
Recommendation 4a	Agree	Estimated Completion Date:	Complete
Please provide details of corrective action or explain disagreement.	DoIT agrees the annual reports submitted by DoIT should include accurate estimated costs, as of the date submitted, to complete projects, and that DoIT should retain documentation to support the amounts reported. DoIT already has a process in place that accomplishes this. DoIT reports estimated cost to complete submitted by the agencies through the annual ITPR process, monthly spend plan submissions and the project rebaselining process. DoIT currently retains the documentation to support amounts reported, including FMIS reports provided by the applicable agencies.		
Recommendation 4b	Agree	Estimated Completion Date:	Complete
Please provide details of corrective action or explain disagreement.	DoIT agrees that reports should be accurate and report known or anticipated changes in schedule, cost, and scope and should provide a summary of problems identified by an external review. DoIT already has a process in place that accomplishes this. DoIT submits known and anticipated changes in schedule, cost, and scope as part of the annual ITPR process and mid and end of year reporting processes.		

Department of Information Technology

Agency Response Form

Auditor's Comment: While DoIT agrees with our recommendations, its response indicates that it already has processes in place to accomplish our recommendations. However, at the time of our review, the processes were not effective.

Department of Information Technology

Agency Response Form

MD THINK

Finding 5

DoIT could not adequately explain or justify the increase in MD THINK costs from the initial \$166.4 million to \$588.8 million and delays in the system implementation, which as of November 2023 was estimated to be approximately three years behind the initial project completion date.

We recommend that DoIT, in accordance with State law, and in conjunction with the MD THINK Executive Committee,

- a. monitor the project to ensure that costs, functionality, and delivery dates are consistent with the terms of the contracts or adequately justified if significant variances are necessary; and
- b. ensure the project is fully implemented or take immediate corrective actions.

Agency Response			
Analysis	Not Factually Accurate		
Please provide additional comments as deemed necessary.	DoIT has consistently and repeatedly requested justification for cost overruns and schedule delays from MDThink. DoIT has documented these requests as well as the escalations to the MDThink Executive Steering Committee. DoIT cannot provide information to OLA which it did not receive.		
Recommendation 5a	Disagree	Estimated Completion Date:	N/A
Please provide details of corrective action or explain disagreement.	DoIT disagrees with this recommendation. The role of DoIT oversight is to track spending relative to the ITPRs submitted to DBM. Individual agencies are responsible for contract compliance.		
Recommendation 5b	Disagree	Estimated Completion Date:	N/A
Please provide details of corrective action or explain disagreement.	DoIT disagrees with this recommendation as DoIT is not responsible for the implementation of the MDThink MITDP. As stated in response to Finding #1, DoIT is not empowered to assess the capacity of an agency to oversee a project, though this is a legislative change we are seeking. DoIT does not manage the resources (human, financial, etc.) deployed to this project and therefore does not have influence over the day-to-day operations or project activities. According to the MD THINK Executive Order, this responsibility lies with the operator, DHS.		

Auditor's Comment: DoIT's response indicates that it had consistently and repeatedly requested justification for cost overruns and schedule delays from MD THINK. Additionally, DoIT disagrees with the recommendations and states that it is not responsible for the implementation of MD THINK. However, since DoIT is a member of

Department of Information Technology

Agency Response Form

the MD THINK Steering Committee, in conjunction with its routine oversight responsibilities for MITDPs, we believe DoIT can implement the recommended corrective actions for this critical project.

Department of Information Technology

Agency Response Form

Finding 6

DoIT did not ensure that Independent Verification and Validation assessments (IV&V) findings were resolved timely by DHS and the MD THINK Executive Committee.

We recommend that DoIT ensure critical findings from IV&V project assessment reports for MD THINK are resolved timely, including those noted above.

Agency Response	
Analysis	Not Factually Accurate
Please provide additional comments as deemed necessary.	<p><i>DoIT disagrees with the finding. DoIT's statutory oversight role requires DoIT to monitor and provide guidance. The agencies are ultimately responsible for the project and related project management. To assist agencies, DoIT has established the IV&V process as part of a Major IT project. The MITDP Enterprise Program Management Office Standards Manual provides guidance to agencies, by indicating "It is expected that the agreed upon determinations communicated in IV&V reporting will be used by agency project management to implement efficient and effective processes, pursue risk reduction and enable project success." In this instance, there was a Steering Committee, along with the agency, that was established to manage the MD THINK project. DoIT would have been responsible for ensuring the IV&V findings and recommendations, and current status, were properly communicated with both entities responsible for the project. It was up to both entities to ensure actions were taken to resolve issues and implement recommendations. DoIT was available for questions, assistance and guidance if requested from the responsible entities.</i></p> <p><i>"<u>DoIT did not ensure</u>" is factually inaccurate. DoIT's statutory oversight role requires DoIT to monitor and provide guidance. Consistent with that role, OLA's analysis indicates that "<u>The IV&V contractor provided periodic reports to DoIT and the other State agencies on the MD THINK Executive Committee that detail issues that impact the progress of the project.</u>" Furthermore, the MITDP Enterprise Program Management Office Standards Manual indicates "<u>It is expected that the agreed upon determinations communicated in IV&V reporting will be used by agency project management to implement efficient and effective processes, pursue risk reduction and enable project success.</u>"</i></p> <p><i>DoIT ensured that IV&V was in place, that findings were communicated and "<u>continuously review[ed] IV&V results and implementation of recommended actions to assess project changes and continuation</u>" per policy.</i></p>

Department of Information Technology

Agency Response Form

Recommendation 6	Disagree	Estimated Completion Date:	N/A
Please provide details of corrective action or explain disagreement.	<i>DoIT does not have the authority to compel the “<u>agency project management to implement efficient and effective processes, pursue risk reduction and enable project success</u>”, it can only set the expectation that participating agencies comply with the MITDP policy. It is incumbent on the participating agency to comply as a good steward of the major IT Development project.</i>		

Auditor’s Comment: DoIT disagrees with our finding and recommendation based on its belief of its statutory oversight role to monitor and provide guidance. However, since DoIT is a member of the MD THINK Steering Committee, in conjunction with its routine oversight responsibilities for MITDPs, we believe DoIT can implement the recommended corrective actions for this critical project. Since DoIT is ultimately responsible for initiating and overseeing the IV&V process, we believe this includes ensuring IV&V findings are resolved timely.

Department of Information Technology

Agency Response Form

eMaryland Marketplace Advantage

Finding 7

DoIT did not provide effective oversight during the development and implementation of eMMA resulting in significant delays and changes to the cost and scope of the project.

We recommend that DoIT provide significant oversight and direction over eMMA. In particular, DoIT should ensure

- a. eMMA is completed in accordance with the most recently approved schedule and budget;**
- b. issues identified by the monthly health assessments and the IV&Vs are resolved, including developing an overall project schedule with defined tasks and a standardized method of tracking percentage of completion is used; and**
- c. based on its own IT project expertise, proactively identify other actions intended to encourage vendor resolution of the current eMMA issues and ensure DGS complies with the terms of its contract.**

Agency Response			
Analysis	Not Factually Accurate		
Please provide additional comments as deemed necessary.	<p><i>DOIT disagrees with the finding. “<u>DoIT did not provide effective oversight during the development and implementation of eMMA</u>” is factually inaccurate.</i></p> <p><i>DoIT provided oversight during the development and implementation of eMMA, but is not able to force project teams to listen to or implement oversight recommendations. The team's project management plan resulted in significant delays and changes to the cost and scope of the project</i></p> <p><i>Oversight does not have the authority or mandate to provide project management of major projects, as that responsibility and authority rests with the agency. The OLA Analysis points to, and leverages, observations that Oversight itself reported (no overall integrated schedule, the lack of an Executive Steering Team, etc.). As such, DoIT asserts that it did effectively monitor and report on the eMMA project. Oversight does not have the authority to compel other agencies to comply with MITDP policies or force an agency to form an Executive Steering Committee.</i></p>		
Recommendation 7a	Disagree	Estimated Completion Date:	N/A

Department of Information Technology

Agency Response Form

<p>Please provide details of corrective action or explain disagreement.</p>	<p><i>OLA is requesting that DoIT overstep its oversight role. Oversight does not have the authority or mandate to direct or ensure “<u>eMMA is completed in accordance with the most recently approved schedule and budget</u>”. The oversight function involves monitoring the eMMA project tasks completed in relation to the most recently approved schedule and budget, and providing recommendations and suggestions for improvements as well as to question when tasks are not completed on time or within budget to help identify and suggest corrective actions for the responsible agency and its project team.</i></p> <p><i>Furthermore, it is important to identify that schedules and budgets will have changes as technology products are dynamic and require flexibility with scope change so that the new and best information is considered when determining the best path forward for end users, state employees, and is the best use of taxpayer dollars. In the case of eMMA, we are currently performing a discovery sprint of the current implementation and data reversion plans to determine the best path forward to support the needs of DGS and all state agencies.</i></p>		
<p>Recommendation 7b</p>	<p>Disagree</p>	<p>Estimated Completion Date:</p>	<p>N/A</p>
<p>Please provide details of corrective action or explain disagreement.</p>	<p><i>DoIT agrees that an overall project schedule with defined tasks should be maintained with a standardized method of tracking percentage of completion. DoIT has a procedure already in place that addresses this recommendation, as DoIT EPMO already monitors and reports on whether “<u>an overall project schedule with defined tasks is maintained and a standardized method of tracking percentage of completion is used</u>”.</i></p> <p><i>As noted in the response to 7a, OLA’s recommendation is out of scope of DoIT’s oversight role. While DoIT provides oversight and can monitor and track scheduled tasks, DoIT does not have the authority to mandate that another agency take certain actions. It is up to the responsible agency to ensure that issues identified by the monthly health assessments and IV&Vs are resolved.</i></p>		
<p>Recommendation 7c</p>	<p>Disagree</p>	<p>Estimated Completion Date:</p>	<p>N/A</p>
<p>Please provide details of corrective action or explain disagreement.</p>	<p><i>Oversight has no authority to directly interact with agency contractual parties (vendors) to resolve current eMMA issues. Oversight, specifically IV&V, already monitors, provides recommendations for solutions and corrective actions to remediate issues, and reports on compliance with the terms of the contract. DGS is the agency that holds the contracts related to eMMA and is responsible for contract management/compliance functions.</i></p>		

Department of Information Technology

Agency Response Form

Auditor's Comment: DoIT disagrees with our finding and recommendations based on its belief that it is not able to force project teams to listen to or implement oversight recommendations. Additionally, DoIT believes that its oversight responsibilities do not include having the authority to compel State agencies to comply with MITDP policies. However, as previously noted we believe that current State law provides sufficient authority for DoIT to implement the recommended corrective actions for this critical project.

Department of Information Technology

Agency Response Form

networkMaryland

Finding 8 (Policy Issue)

DoIT used the networkMaryland contract to award significant work unrelated to networkMaryland without considering a competitive procurement process.

We recommend that DoIT

- modify the networkMaryland contract to clearly define the scope and extent of all services provided;
- obtain retroactive approval from BPW for the current staff augmentation and cybersecurity remediation work orders; and
- for any additional work and in the spirit of its counsel's legal advice, solicit secondary competition amongst approved CATS+ contractors for staff augmentation and cybersecurity remediation services to maximize competition and help ensure it receives the most advantageous contract terms.

Agency Response			
Analysis	Factually Inaccurate		
Please provide additional comments as deemed necessary.	<i>DoIT finds the analysis related to this finding factually inaccurate. OLA states "DoIT management advised us that had it used the CATS+ master contract for staff augmentation work, BPW approval would be required for work orders greater than \$200,000 in accordance with State procurement regulations which would have resulted in additional time before the work could proceed." While the process outlined in that statement is true, it is not the reason DoIT did not use the CATS+ contract. In fact, due to the critical nature and urgency of the cybersecurity remediation activities, DoIT relied on existing contracts that had the expertise required to remediate the cyber assessment findings. Furthermore, the contracts utilized allowed for the scope associated with the work orders issued off of the NMS contract. This was not the case for the cybersecurity assessments, as utilizing this contract would have created a conflict of interest. It is for that reason that DoIT issued an emergency contract for the assessments. While the recommendation by OLA may be to conduct a competitive procurement (which we are doing for future remediation activities), the use of the Network Managed Services (NMS) contract was not out of scope.</i>		
Recommendation 8a	Disagree	Estimated Completion Date:	N/A
Please provide details of corrective action or explain disagreement.	<i>The Network Managed Services contract ("networkMaryland") clearly defines the scope and extent of all services provided. None of the work orders issued off the contract were considered out of scope.</i>		

Department of Information Technology

Agency Response Form

Recommendation 8b	Disagree	Estimated Completion Date:	N/A
Please provide details of corrective action or explain disagreement.	<i>Retroactive approval from BPW for the current staff augmentation and cybersecurity remediation work orders issued off of the NMS contract is not required by law or BPW regulations, as none of the work orders issued off the contract were considered out of scope. Furthermore, when the ceiling modification for the NMS contract was submitted and approved by the BPW in June 2023, the justification for the ceiling increase included the cyber remediation and MDH cyber incident response.</i>		
Recommendation 8c	Agree	Estimated Completion Date:	08/31/2024
Please provide details of corrective action or explain disagreement.	<p><i>DoIT agrees with this recommendation, as we already informed OLA that the related procurement was in process. The Request for Proposal (RFP) for both cybersecurity assessments and remediation activities is currently in evaluation. Anticipated award is July/August 2024.</i></p> <p><i>DoIT will solicit secondary competition amongst approved CATS+ contractors for future staff augmentation needs, unrelated to cybersecurity services, to maximize competition and help ensure it receives the most advantageous contract terms.</i></p>		

Auditor's Comment: DoIT's response states that it disagrees with the factual accuracy of the finding and two of the three recommendations. DoIT contends the networkMaryland contract allowed for the use of cybersecurity remediation activities and staff augmentation services. However, we continue to believe that the contract did not clearly define the scope and extent of all services provided. Additionally, for transparency purposes, we continue to believe that obtaining retroactive approval from the Board of Public Works for the cybersecurity remediation activities and staff augmentation services work orders is appropriate given that the primary purpose of the contract was to maintain the network.

Department of Information Technology

Agency Response Form

Finding 9

DoIT did not adequately monitor work orders for agency staff augmentation services under the networkMaryland contract and documentation of certain work orders could not be provided.

We recommend that DoIT

- ensure labor hours billed for staff augmentation work orders for other State agencies are accurate prior to approving invoices for payment,
- ensure approved work order documentation is maintained, and
- ensure subcontractors are approved and qualified.

Agency Response			
Analysis	Factually Accurate		
Please provide additional comments as deemed necessary.			
Recommendation 9a	Agree	Estimated Completion Date:	Complete
Please provide details of corrective action or explain disagreement.	<i>This responsibility should have been at the agency level, as the agency oversees the contractor's work and would be aware of the services provided and related hours worked. Effective July 1, 2023, all invoices related to work orders for other State agencies will be reviewed, approved and processed by the respective agencies. It will be their responsibility to ensure labor hours billed for staff augmentation are accurate prior to approving invoices for payment.</i>		
Recommendation 9b	Agree	Estimated Completion Date:	03/31/2024
Please provide details of corrective action or explain disagreement.	<i>DoIT will put procedures in place to ensure that approved work order documentation is maintained.</i>		
Recommendation 9c	Agree	Estimated Completion Date:	03/31/2024
Please provide details of corrective action or explain disagreement.	<i>DoIT will put procedures in place that the contract manager will ensure that all subcontractors are approved and qualified per the terms of the contract.</i>		

Department of Information Technology

Agency Response Form

Finding 10

DoIT issued work orders to the networkMaryland vendor for cybersecurity remediation services totaling approximately \$25 million that were not sufficiently detailed and did not adequately ensure that all \$11.5 million invoiced by the vendor was related to work performed on behalf of DoIT work orders.

We recommend that DoIT

- a. ensure all future cybersecurity remediation work orders and deliverables are clearly defined and estimated costs correlate to deliverables;
- b. ensure labor hours billed are accurate for work completed and properly supported; and
- c. in conjunction with legal counsel, consider the recovery of funds previously paid for inadequate work product, to the extent practicable.

Agency Response			
Analysis	Additional Comment		
Please provide additional comments as deemed necessary.	<p><i>As noted below in our responses, DoIT recognizes that there may not have been clearly defined specifications in the scope of work or deliverables to correlate to costs. The need to quickly implement remediation efforts is likely the explanation for why the appropriate details, etc. were not in the original work orders. Additionally, the need to revise work orders to further define and update solutions as they evolved over time led to changes in scope and certain inefficiencies. With recent turnover, an evaluation was performed on remediation efforts to date and whether to continue with current work orders. The decision to cancel prior work orders and issue new work orders is evidence of DoIT's realization that work orders needed clearer scope and deliverables and that it would be most appropriate to pause, assess where DoIT's cybersecurity level is, and reissue work orders with clearer and better specifications and defined deliverables that appropriately match to costs to be billed.</i></p>		
Recommendation 10a	Agree	Estimated Completion Date:	Completed
Please provide details of corrective action or explain disagreement.	<p><i>Effective immediately, all future cybersecurity remediation work orders and deliverables will be clearly defined and DoIT will ensure that estimated costs correlate to deliverables.</i></p> <p><i>The Request for Proposal (RFP) for both cybersecurity assessments and cybersecurity services is currently in evaluation.</i></p>		
Recommendation 10b	Agree	Estimated Completion Date:	Complete

Department of Information Technology

Agency Response Form

<p>Please provide details of corrective action or explain disagreement.</p>	<p><i>For all future invoices submitted, DoIT will ensure that labor hours billed are accurate for work completed and properly supported.</i></p> <p><i>However, as it relates to this finding, DoIT believes the necessary backup documentation was provided by the NMS vendor to support the labor hours billed for the invoices audited by OLA. When originally approving invoices received, DoIT received certain supporting documentation (such as timesheets) and deliverables (such as status reports) that were considered sufficient to support amounts billed for work performed on DoIT work orders. As a result of the concerns raised by OLA, DoIT requested and received additional documentation from the NMS vendor to support the work performed that further supported this conclusion. Many of the vendor's resources worked full-time on the specific DoIT Work Orders or were designated as dedicated staff augmentation for DoIT, working at the direction of and supervised by DoIT managers.</i></p> <p><i>Additionally, as noted in the OLA analysis, the related work orders may not have included clearly defined specifications in the scope of work or deliverables to correlate to costs which may have resulted in what appears as vague or non-descriptive timesheet entries. Going forward, as noted in the response to Recommendation 10a, work orders will include clearly defined specifications and deliverables and DoIT will require more detailed descriptions of work performed by contractor staff providing services on our work orders.</i></p>		
<p>Recommendation 10c</p>	<p>Agree</p>	<p>Estimated Completion Date:</p>	<p>Complete</p>
<p>Please provide details of corrective action or explain disagreement.</p>	<p><i>As a general practice, DoIT does, in conjunction with legal counsel, consider recovery of funds previously paid when it is determined that a contractor has produced an inadequate work product.</i></p> <p><i>However, there are no further actions to be taken, as DoIT is not aware of inadequate work products received as related to the work orders referenced in the auditor's analysis. As previously mentioned, all work/deliverables were previously reviewed and approved by DoIT Executive leadership.</i></p>		

Department of Information Technology

Agency Response Form

Information Systems Security and Control and Enterprise Services

The Office of Legislative Audits (OLA) has determined that the Information Systems Security and Control and Enterprise Services section, including findings 11 through 14 related to “cybersecurity,” as defined by the State Finance and Procurement Article, Section 3.5-301(b) of the Annotated Code of Maryland, and therefore are subject to redaction from the publicly available audit report in accordance with the State Government Article 2-1224(i). Although the specifics of the following findings, including the analysis, related recommendations, along with DoIT’s responses, have been redacted from this report copy, DoIT’s responses indicated agreement with the findings and related recommendations.

Finding 11

Redacted cybersecurity-related finding.

Agency Response has been redacted by OLA.

Finding 12

Redacted cybersecurity-related finding.

Agency Response has been redacted by OLA.

Finding 13

Redacted cybersecurity-related finding.

Agency Response has been redacted by OLA.

Finding 14

Redacted cybersecurity-related finding.

Agency Response has been redacted by OLA.

Department of Information Technology

Agency Response Form

Enterprise Technology Support Services (ETSS)

Finding 15

DoIT did not have formal written agreements with 57 of the 130 State and local entities receiving ETSS and did not recover \$4.8 million from nine entities with agreements for services provided.

We recommend that DoIT

- a. enter into formal MOUs with all agencies for which it provides ETSS. The MOU should clarify DoIT and agency responsibilities, specific services to be provided by each, and a mechanism to provide for the cost of these services (repeat); and
- b. ensure amounts due from agencies are timely recovered, including those noted above.

Agency Response			
Analysis	Factually Accurate		
Please provide additional comments as deemed necessary.			
Recommendation 15a	Agree	Estimated Completion Date:	09/30/2024
Please provide details of corrective action or explain disagreement.	<p><i>As explained to OLA and referenced in the finding analysis, DoIT created a formal MOU in 2020 that clarifies DoIT and agency responsibilities, specific services provided by each, and the mechanism to provide for the cost of these services. This MOU was distributed to all agencies in 2020 and again in 2021. The outstanding MOUs are due to refusal to sign. DoIT will continue to work with these agencies to obtain a signed MOU with all agencies. DoIT will be revising the MOU over the next six (6) months and working with the new Administration to ensure formal MOUs are in place for all agencies for which DoIT provides ETSS.</i></p> <p><i>It is also important to note that the previous finding from 2020 noted that, as of February 2019, DoIT was providing services to 29 State agencies. As noted in the current analysis, DoIT is currently providing enterprise technology support services to 130 State and local entities. This is a testament to how much DOIT has grown since the last OLA fiscal audit. DoIT is constantly evaluating the governance structure to ensure there are sufficient policies and procedures in place to govern DoIT operations.</i></p>		
Recommendation 15b	Agree	Estimated Completion Date:	07/31/2024

Department of Information Technology

Agency Response Form

Please provide details of corrective action or explain disagreement.	<p><i>DoIT Fiscal has implemented policies relating to outstanding accounts receivable to provide for appropriate escalation of past due balances to enforce the timely recovery of accounts receivables. To date, DoIT has \$1.4M in outstanding receivables that are over 90 days past due, of which approximately \$800K is from FY22.</i></p> <p><i>DoIT will follow the policies put in place to collect the outstanding balance by fiscal year end.</i></p>
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Equipment

Finding 16

DoIT did not adequately control its equipment inventory and did not maintain accurate detail records.

We recommend that DoIT comply with the requirements of the DGS *Inventory Control Manual* by

- a. conducting annual independent physical inventories (repeat), and
- b. ensuring property is properly reported to DGS on the annual report of fixed assets and investigating the aforementioned difference and submitting a corrected annual report to DGS.

Agency Response			
Analysis	Factually Accurate		
Please provide additional comments as deemed necessary.			
Recommendation 16a	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	DoIT will ensure independent and documented annual physical inventories are conducted as required. The results will be reconciled to the related detail records. Any discrepancies will be investigated, and missing items will be reported to DGS, as appropriate.		
Recommendation 16b	Agree	Estimated Completion Date:	06/30/2024
Please provide details of corrective action or explain disagreement.	DoIT will ensure property is properly reported to DGS on the Annual Report of Fixed assets and investigate the aforementioned difference and submit a corrected Annual Report to DGS. DoIT will ensure that any necessary corrected Annual Reports are submitted to DGS for fiscal years 2022 and 2023 as well.		

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