

**F50**  
**Department of Information Technology**

***Executive Summary***

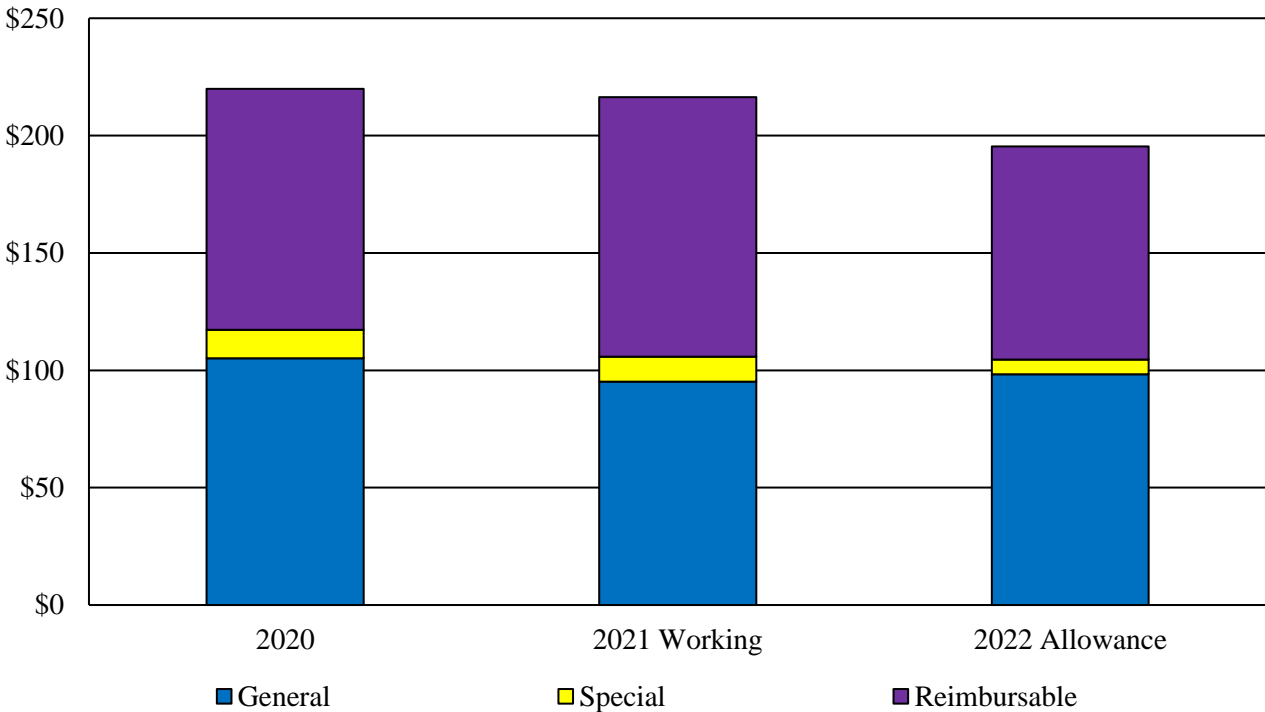
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The Department of Information Technology (DoIT) supports information technology (IT) needs in State agencies. This includes operations, major IT project development, security, web services, application management, and the State’s 700 megahertz first responder radio system.

***Operating Budget Summary***

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**Fiscal 2022 Budget Decreases by \$21 Million, or 9.7%, to \$195.4 Million  
(\$ in Millions)**



Note: The fiscal 2021 appropriation includes general salary increases. The fiscal 2022 allowance includes annual salary review adjustments and annualization of general salary increases.

- The fiscal 2021 working appropriation includes a transfer of \$20.6 million in reimbursable funds from the DoIT Major Information Technology Development Project Fund (MITDPF) to operations for DoIT MITDPF projects. Adjusting for this interdepartmental transfer reduces the working appropriation to \$195.8 million and reduces the decrease in fiscal 2022 to \$0.4 million (0.2%).

## ***Key Observations***

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- ***Shared Service Enterprise IT Support Ramps Up Remote Work:*** To allow employees to work remotely during the COVID-19 pandemic, DoIT increased the share of the workforce working remotely from less than 1% in January 2020 to 59% in January 2021.
- ***Cybersecurity Challenges Continue Unabated:*** Audits continue to identify cybersecurity weaknesses, and the increased numbers of remote workers adds to cybersecurity risks. To address risks, the Administration elevated DoIT’s cybersecurity chief to be the State chief information security officer and created the Maryland Cybersecurity Coordinating Council.
- ***Some Agencies Appear to Be Struggling with Major Information Technology Development Projects:*** While many projects are moving forward as planned, some projects are delayed, federal grants have been lost, and data included with budget materials is being revised.

## **Operating Budget Recommended Actions**

1. Adopt narrative requiring review of State cybersecurity.

## **Updates**

- Legislation transfers Telecommunications Access of Maryland to the Maryland Department of Disabilities.
- Section 42 of the fiscal 2021 Budget Bill restricted funds pending a report concerning personally identifiable information from DoIT and the Office of Legislative Audits (OLA). The OLA report is due on May 2, 2021.
- Section 46 of the fiscal 2021 Budget Bill restricted funds from the Maryland Department of Transportation, the Department of Commerce, DoIT, and the Governor’s Office on Performance Improvement (GOPI) pending the submission of reports from each agency on expanded Geographic Information System data. The reports have been submitted and reviewed by DoIT and GOPI.

**F50**  
**Department of Information Technology**

***Operating Budget Analysis***

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**Program Description**

The Department of Information Technology (DoIT) contains the following programs:

- ***State Chief of Information Technology:*** Responsible for executive direction and major information technology (IT) project oversight. This includes a chief operating officer and a chief data officer as well as enterprise architecture, project management, communication, and legislation.
- ***Security Management:*** Responsible for developing statewide security policies, enforcing policies, and supporting State agencies' security efforts. This includes cyber incident response, cyber risk and strategic analysis, vulnerability detection and assessment, intelligence and investigation, and software assurance.
- ***Application Systems Management:*** Responsibilities include application development, web systems, geographic information systems, and operating statewide systems, such as the Financial Management Information System (FMIS).
- ***Infrastructure:*** Responsibilities include operating networkMaryland, the State's data network, voice systems, and maintaining and supporting shared services day-to-day operations for Executive Branch agencies.
- ***Radio or Statewide Interoperable Communications Division:*** Operates the Maryland First Responders Interoperable Radio System Team (MD FiRST) that is the State's 700 megahertz radio system. The system is used by State, local, and federal first responders.
- ***Chief of Staff:*** Provides departmentwide administrative support.

The department administers the Major Information Technology Development Project Fund (MITDPF). This is a nonlapsing fund that supports large IT initiatives as defined in Sections 3A-301 and 3A-302 of the State Finance and Procurement Article. Major Information Technology Development Projects (MITDP) are projects that meet one or more of the following criteria:

- the estimated total cost of development equals or exceeds \$1 million;
- the project is undertaken to support a critical business function associated with the public health, education, safety, or financial well-being of the citizens of Maryland; and/or

- the Secretary of Information Technology determines that the project requires the special attention and consideration given to a MITDP.

## ***Performance Analysis: Managing for Results***

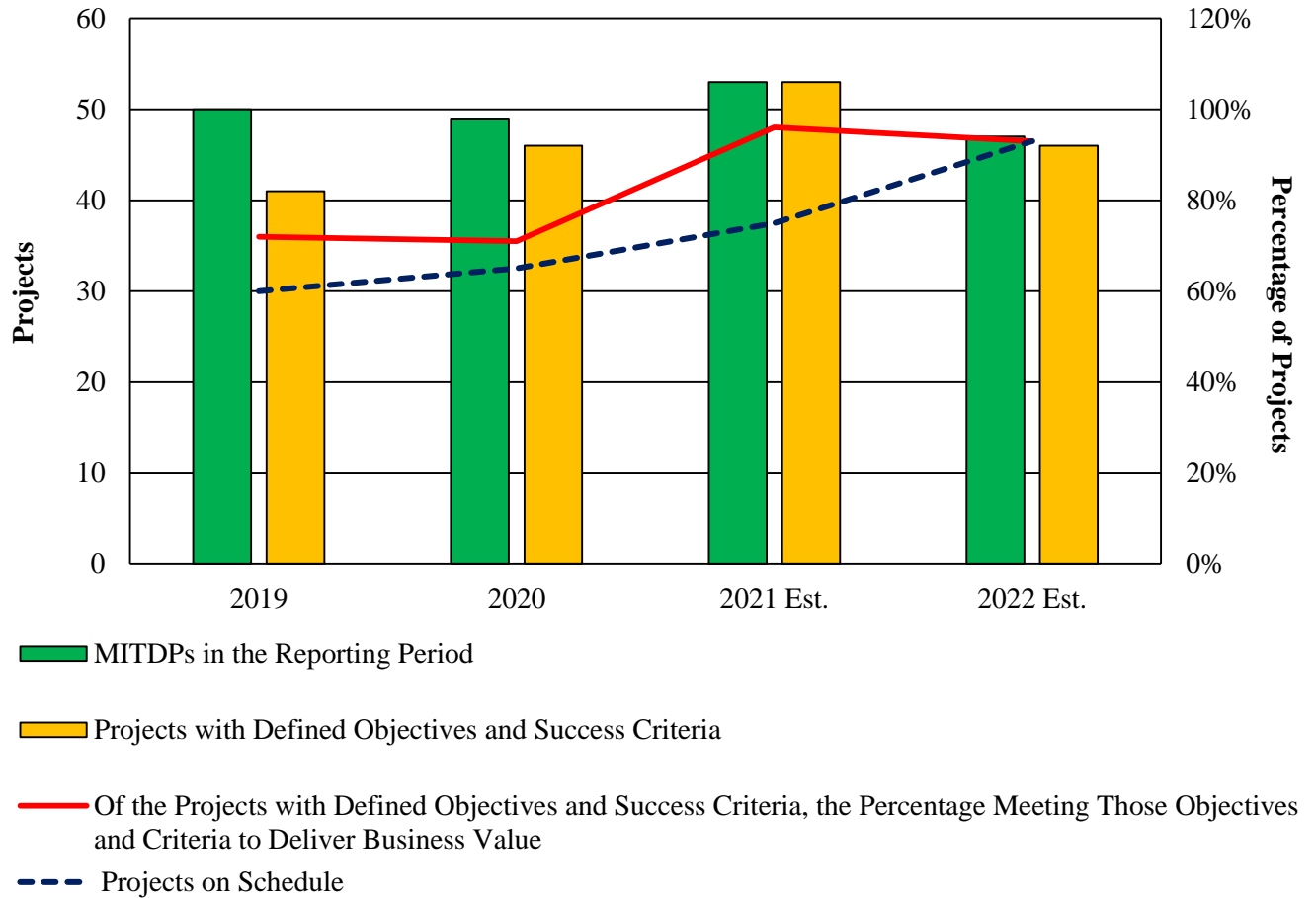
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### **1. Oversight of Major IT Projects**

The fiscal 2022 budget includes \$87 million funded by the MITDPF. DoIT expects to oversee 47 projects in fiscal 2022. The department’s Managing for Results (MFR) goal is that State agency IT systems meet State IT master plan objectives of consolidation, interoperability, and standardization. The objective is that all MITDPs executed by Executive Branch agencies are successful. The department has a series of output measures that examine the extent to which major IT projects remain on schedule and are meeting their defined objectives.

**Exhibit 1** shows that 65% of projects were on time in fiscal 2020. DoIT is now using an Agile approach to develop major IT projects, which is an iterative approach that builds usable components more quickly. Major IT projects should develop defined objectives and success criteria that can measure how well project development is progressing. DoIT has an indicator that measures the number of projects with defined objectives and success criteria and the percent that are meeting them. In fiscal 2020, 46 out of 49 projects had criteria and 71% of them were meeting the criteria.

**Exhibit 1  
Major Information Technology Development Project Indicators  
Fiscal 2019-2022 Est.**



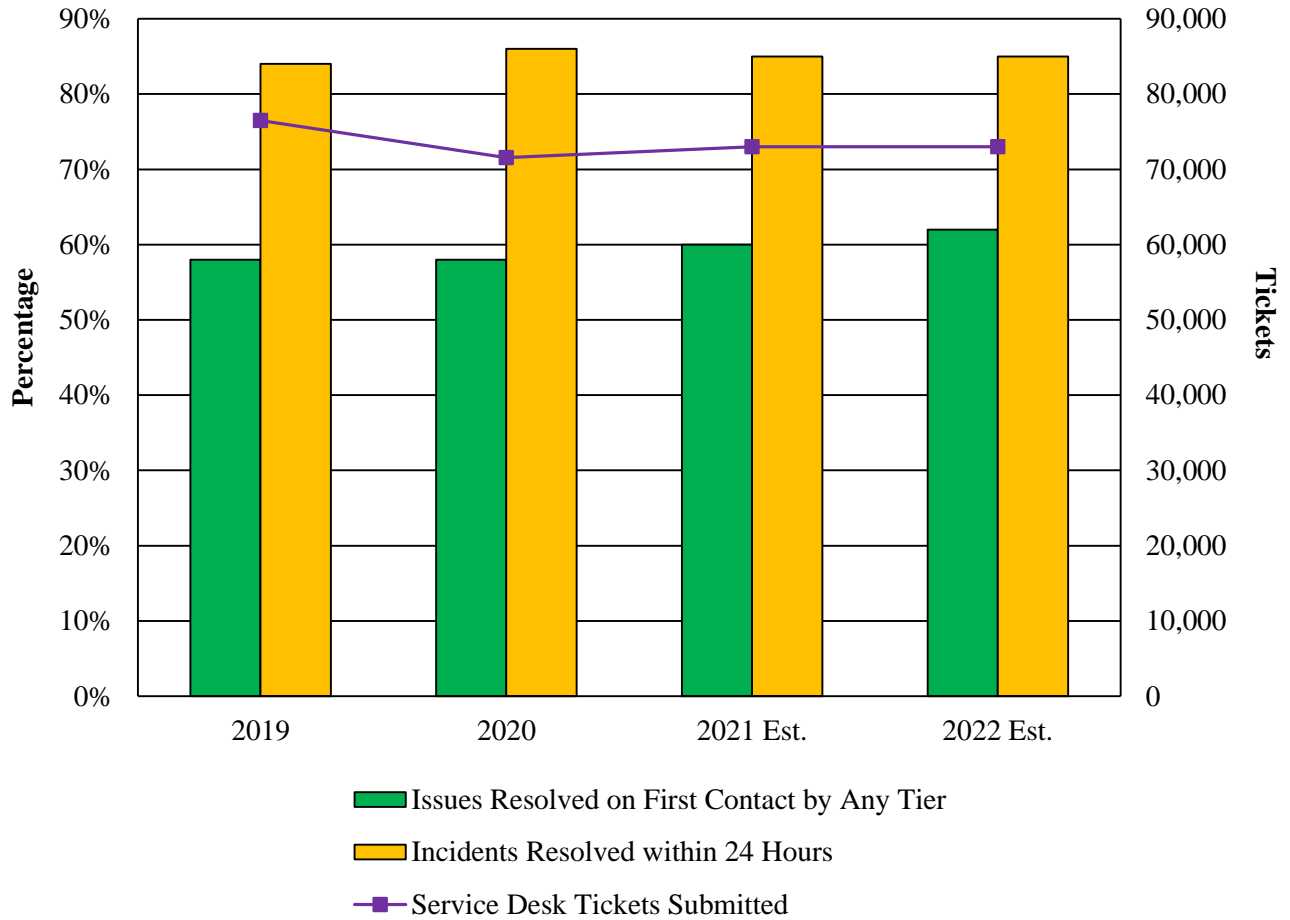
MITDP: Major Information Technology Development Project

Source: Department of Budget and Management

**2. Support Services for State Agencies**

DoIT’s fourth MFR goal is to provide “efficient and high-quality IT services to State agencies.” Among other things, this addresses the State’s consolidated IT operations through the enterprise IT shared services initiative. **Exhibit 2** shows that the service desk received approximately 71,500 tickets in fiscal 2020. The data also show that 58% were resolved by first contact, and 86% of incidents were resolved in 24 hours.

**Exhibit 2  
Agency Services Indicators  
Fiscal 2019-2022**



Source: Department of Budget and Management

**Fiscal 2021**

**Cost Containment**

On July 1, 2020, the Board of Public Works (BPW) approved the following general fund reductions to the fiscal 2021 DoIT budget, as listed in **Exhibit 3**. The largest actions reduced \$5 million in appropriations to major IT projects. BPW also reduced \$3.5 million in restricted funds for DoIT employee salary enhancements.

**Exhibit 3**  
**Cost Containment Reductions Approved by Board of Public Works**  
**Fiscal 2021**  
**(\$ in Thousands)**

<u>Agency</u>	<u>Description</u>	<u>General Funds</u>	<u>Special Funds</u>	<u>Reimb. Funds</u>	<u>Total Funds</u>
MITDPF	Maryland Department of Health (MDH) Computerized Hospital Record and Information System	\$1,000	\$0	\$0	\$1,000
MITDPF	MDH Migration to Cloud	500	0	0	500
MITDPF	Department of Natural Resources Modernization and OneStop	1,000	0	0	1,000
MITDPF	Department of Public Safety and Correctional Services Electronic Patient Health Record Replacement	2,500	0	0	2,500
Operations	Reduce Funds for Salary Enhancements	90	60	3,350	3,500
Operations	Statewide Department of Information Technology Assessments	390	3	14	407
Operations	Unemployment Insurance	7	1	0	8
<b>Total</b>		<b>\$5,487</b>	<b>\$64</b>	<b>\$3,364</b>	<b>\$8,915</b>

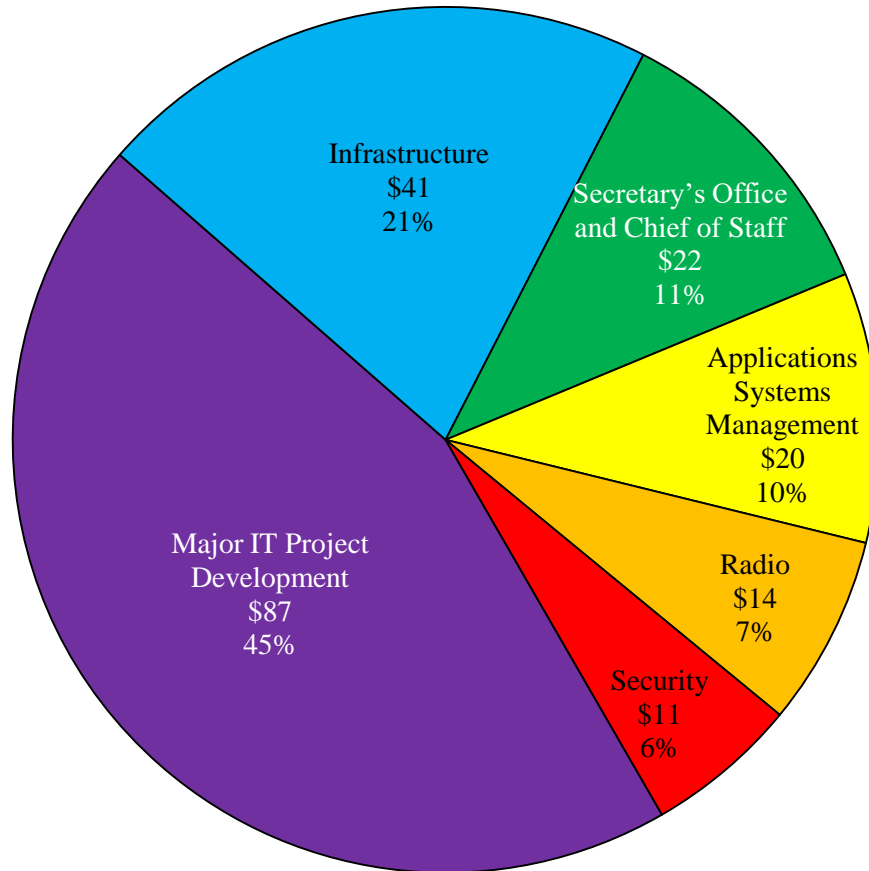
MITDPF: Major Information Technology Development Project Fund

Source: Board of Public Works

**Fiscal 2022 Overview of Agency Spending**

**Exhibit 4** shows that major IT project development and infrastructure account for 66% of DoIT’s spending. Infrastructure includes end user applications and support, local and wide area network support, networkMaryland, and voice communication. These services are included in the enterprise IT shared service services offered by DoIT.

**Exhibit 4**  
**Overview of Agency Spending**  
**Fiscal 2022 Allowance**  
**(\$ in Millions)**



IT: information technology

Note: Includes funds for annual salary review, increasing salaries for four employees in the Chief of Staff's Office.

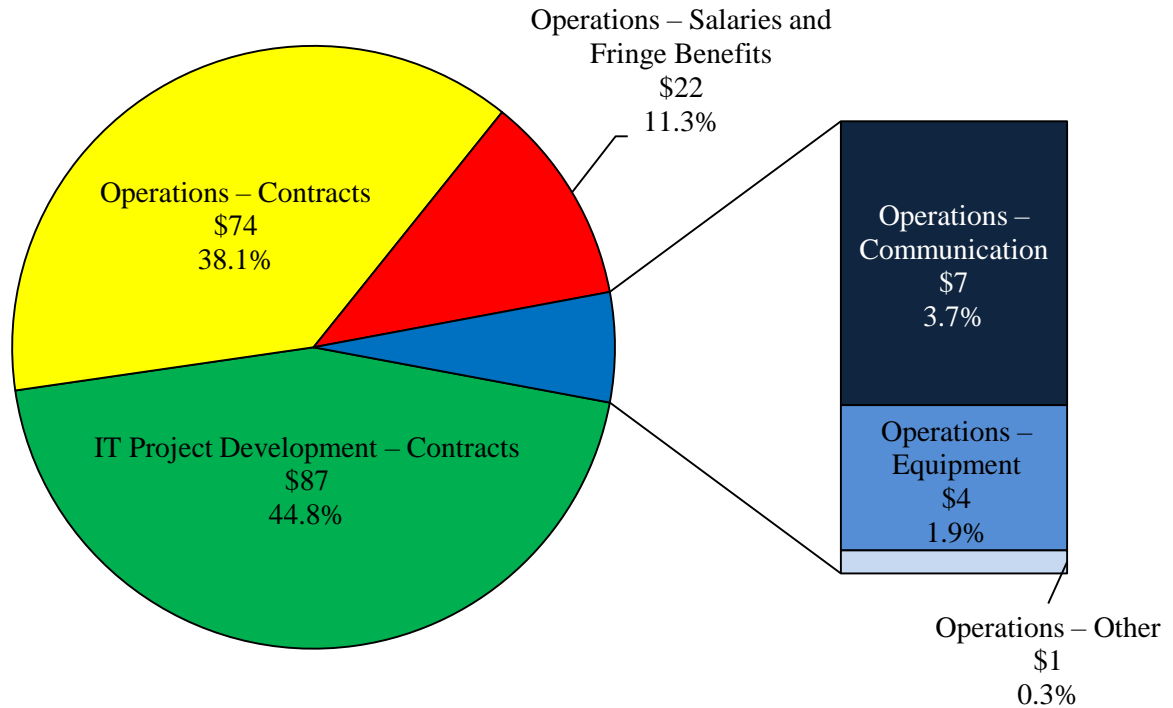
Source: Department of Budget and Management

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The department relies heavily on contracts to provide services. **Exhibit 5** shows that contracts for major IT project development and operations are 84% of spending. This is over seven times as much as salaries and fringe benefits. Operating contracts support applications, web systems, security, and personnel needs.



**Exhibit 5  
Object Spending by Agency  
Fiscal 2022  
(\$ in Millions)**



IT: information technology

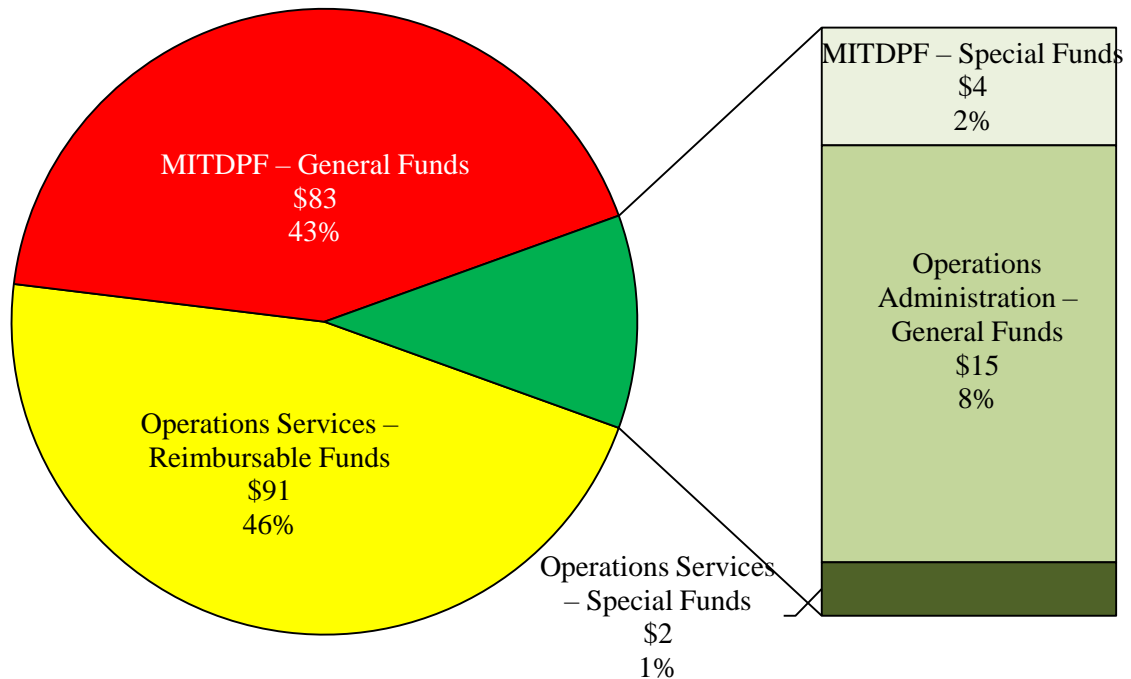
Note: Includes funds for annual salary review increasing salaries for four employees in Chief of Staff’s Office.

Source: Department of Budget and Management

DoIT is two agencies: (1) funding for major IT projects; and (2) operations. Major IT funding is supported by general funds and special funds.<sup>1</sup> Operations includes services (cybersecurity, Applications System Management, infrastructure, and radio) for State agencies and administration. Agency services are funded by reimbursable funds and special funds. Agency services do not receive general funds but are entirely funded by fees-for-services. Administration receives general funds, which avoids State agencies paying for DoIT overhead. **Exhibit 6** shows that the 89% of funding for DoIT is general funds for major IT and reimbursable funds for services. General funds for administration are 8% of the department’s funding.

<sup>1</sup> The source of the special funds is prior general fund appropriations into the MITPDF for projects that that no longer need the funds or have been completed so that the fund can be reappropriated as special funds for new projects.

**Exhibit 6  
Fund Sources by Agency  
Fiscal 2022  
(\$ in Millions)**



MITDPF: Major Information Technology Project Development Fund

Source: Department of Budget and Management

## Proposed Budget Change

**Exhibit 7** shows that the fiscal 2022 allowance is \$195.4 million, which is 9.7% less than the fiscal 2021 working appropriation. Much of the fiscal 2022 reduction is attributable to the transfer of \$20.6 million in reimbursable funds within DoIT. The general funds for major IT projects are appropriated in the MITDPF. DoIT transfers these funds to agencies as they are needed. These transferred funds are reimbursable funds, which are double-budgeted in the State budget. Since the general funds are in DoIT, other agencies only see the reimbursable funds, so from an agency perspective, these funds are not double-budgeted in the agency budgets. Since this transfer from the MITDPF is entirely in DoIT, fiscal 2021 includes the general fund appropriations that capitalize the MITDPF and the reimbursable fund spending of the same agency budget. Removing this \$20.6 million transfer reduces fiscal 2021 spending to \$195.8 million. In this comparison, fiscal 2022 is \$0.4 million (0.2%) less than fiscal 2021.

**Exhibit 7**  
**Proposed Budget**  
**Department of Information Technology**  
**(\$ in Thousands)**

<b>How Much It Grows:</b>	<b>General Fund</b>	<b>Special Fund</b>	<b>Reimbursable Fund</b>	<b>Total</b>
Fiscal 2020 Actual	\$105,172	\$12,061	\$102,749	\$219,982
Fiscal 2021 Working Appropriation	95,201	10,613	110,517	216,331
Fiscal 2022 Allowance	<u>98,283</u>	<u>6,259</u>	<u>90,816</u>	<u>195,358</u>
Fiscal 2021-2022 Amount Change	\$3,082	-\$4,354	-\$19,701	-\$20,973
Fiscal 2021-2022 Percent Change	3.2%	-41.0%	-17.8%	-9.7%

<b>Where It Goes:</b>	<b>Change</b>
<b>Personnel Expenses</b>	
Turnover adjustments.....	\$236
Annualize fiscal 2021 general salary increase .....	185
Increments and other compensation.....	127
Unemployment compensation.....	42
Annual salary review .....	22
Reclassifications.....	3
Employee pensions .....	-31
Employee and retiree health insurance .....	-361
Abolished/transferred positions .....	-365
<b>Major Information Technology Development Projects and Oversight</b>	
Major Information Technology Development Project Fund (MITDPF).....	1,207
Fiscal 2021 reimbursable funds transferred from MITDPF for agency projects .....	-20,570
<b>Infrastructure and Applications Systems Management</b>	
Increased maintenance for larger workforce.....	592
Additional software licenses for larger workforce.....	432
Expand to second Tierpoint location for data center colocation services to support data centers, Voice over Internet Protocol, and establish second firewall for enterprise services .....	180
Migrate endpoint protection to new vendor with other bundled services .....	-212
Consolidate web system application and support tools to reduce redundancies.....	-239
Equipment replacement.....	-300
Anticipated savings from rebid Network Managed Services contract.....	-914
<b>Cybersecurity</b>	
Security Operations Center firewalls, storage supporting security tools, and program cost minimizing by remediation to include only planning.....	-3,000
<b>Radio Operations</b>	
Maryland FiRST maintenance contracts, equipment repairs, and consulting.....	541

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<b>Where It Goes:</b>	<b><u>Change</u></b>
Other radio operating costs such as eliminating contractual position and electricity .....	-90
<b>Overhead and Other Operations</b>	
Secretary’s office outside consulting .....	1,034
Department of Information Technology shared services IT support allocation.....	404
Annapolis Data Center allocation .....	301
Telephone costs.....	-93
Travel .....	-142
<b>Other Changes</b> .....	39
<b>Total</b>	<b>-\$20,973</b>

FiRST: First Responder Interoperability Radio Team  
IT: information technology

Note: Numbers may not sum to total due to rounding.

The largest changes relate to cybersecurity and major IT project development. With respect to cybersecurity, DoIT’s appropriation for the Security Operations Center is reduced from \$10 million to \$7 million. DoIT advises that it has benefitted from large purchases in fiscal 2020 and 2021 such as firewalls and storage supporting security tools. DoIT will also employ cost minimization activities such as limiting many remediation activities to only include planning.

MITDPF is funded according to projected cash flow needs. Adding new projects increases appropriations, while completing projects reduces appropriations. It is common for appropriations to change by millions of dollars depending on project spending needs. Fiscal 2022 appropriations increase by \$1.2 million. The MITDPF is discussed in detail later in this section.

***Personnel Data***

	<b><u>FY 20</u></b>	<b><u>FY 21</u></b>	<b><u>FY 22</u></b>	<b><u>FY 21-22</u></b>
	<b><u>Actual</u></b>	<b><u>Working</u></b>	<b><u>Allowance</u></b>	<b><u>Change</u></b>
Regular Positions	220.60	189.60	185.00	-4.60
Contractual FTEs	<u>1.72</u>	<u>1.20</u>	<u>0.00</u>	<u>-1.20</u>
<b>Total Personnel</b>	<b>222.32</b>	<b>190.80</b>	<b>185.00</b>	<b>-5.80</b>

***Vacancy Data: Regular Positions***

Turnover and Necessary Vacancies, Excluding New Positions	15.11	8.17%
Positions and Percentage Vacant as of 12/31/20	29.60	15.61%
Vacancies Above Turnover	14.49	

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The allowance abolishes 4.60 regular positions and the full-time-equivalent of 1.20 contractual positions. The contractual positions support the radio program, which manages MD FiRST. DoIT advises that the four counties (Calvert, Charles, Prince George’s, and St. Mary’s) are planned to be operational in August 2021, and the final county (Montgomery) is planned to be operational in October 2021. The program is now fully staffed with regular positions, and the contractual positions are no longer needed. **Exhibit 8** shows the positions removed from DoIT’s budget since the end of fiscal 2020.

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**Exhibit 8**  
**Position Reductions**  
**Fiscal 2021-2022**  
**(\$ in Thousands)**

<u>Fiscal Year</u>	<u>Positions Reduced</u>	<u>Annual Salaries and Fringe Benefits</u>	<u>Comment</u>
2021	10.00	\$648	Administration abolishes long-term vacant positions. Legislature abolishes positions and restricts salaries to fund salary plan that enhances information technology position salaries to address turnover and vacancies. Restricted funds are deleted in July 1, 2020, Board of Public Works reductions.
2021	15.00	1,520	Chapter 586 of 2020 transfers Telecommunications Access of Maryland to the Maryland Department of Disabilities.
2021	6.00	450	
<b>Subtotal</b>	<b>31.00</b>	<b>\$2,619</b>	
2022	4.60	\$335	Administration abolishes long-term vacant positions.
<b>Total</b>	<b>35.60</b>	<b>\$2,954</b>	

Source: Department of Budget and Management; Department of Legislative Services

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### **Annual Salary Review**

DoIT continues to have vacancies well over the budget turnover. In January 2021, there were almost 30 vacant positions, while the budget turnover rate assumed 15 vacant positions. DoIT has consistently had high vacancy rates. The high vacancy rate is attributable to a salary structure that is below the industry average. This has led to high employee churn as employees get experience with DoIT and move on to higher-paying positions.

DoIT advises that it is working with the Department of Budget and Management (DBM) on an annual salary review (ASR) for its positions. This is a process whereby DBM compares the salary of State positions with comparable non-State positions. If there is a substantial gap, State positions are

reclassified to reduce the gap. The budget includes \$1 million to reclassify positions (the same level as fiscal 2021).

The fiscal 2022 DBM Personnel Statewide program budget includes an ASR for fiscal staff. This provides approximately \$23,000 for four DoIT employees. The funds will be transferred into the DoIT budget by budget amendment early in fiscal 2022.

### **MITDPF and Major IT Project Expenditures**

Chapters 467 and 468 of 2002 created the MITDPF. The law requires that all general funds appropriated for major IT projects be held in the fund. DoIT is responsible for major IT project oversight and releasing funds.

### **DoIT Transitions MITDP Approach to Scaled Agile Framework**

The major IT project development approach that DoIT is using is changing from Waterfall to Agile. Waterfall begins with thoroughly planning all aspects of a project. At the end of the planning period, a functional review document is prepared. This document has detailed specifications that can be used in a request for proposals (RFP) when bidding the project. The vendor then implements the project based on these specifications. It is not unusual for a project to take two years to plan and three years to implement. There are 10 phases to the Waterfall approach.

By contrast, the Agile approach does not complete planning prior to beginning to build the software. Instead, a high-level plan rather than a detailed plan of all requirements is developed. Projects are divided into a number of tracks. These are usually implemented simultaneously. Each track is broken down so that there are a number of sequential parts to build. The parts are planned and then built over a two-week period called a sprint. This is tested, and another part is planned. After a series of sprints, there is a program increment (a usable component). There should be a usable component every six months. This approach uses the plan-do-check-act approach, which is a repetitive four-stage model for continuous improvement in business process management that is repeated until the project is done. Waterfall is being phased out, and all new projects are using Agile. DoIT's MFR indicators note that 82% of major IT projects developed in fiscal 2020 used the Agile approach.

### **MITDPF-funded Projects**

**Exhibit 9** shows fund transactions for the MITDPF for fiscal 2019 through the proposed budget in fiscal 2022. Fiscal 2022 includes \$83 million in general fund appropriations, \$4.3 million in special fund appropriations, and \$0.3 million in interest earnings. As previously mentioned, cost containment reduced general fund appropriations by \$5 million in fiscal 2021.

**Exhibit 9**  
**Major Information Technology Development Project Fund**  
**Fiscal 2019-2022**  
**(\$ in Thousands)**

	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
<b>Opening Fund Balance</b>	<b>\$79,113</b>	<b>\$114,154</b>	<b>\$145,655</b>	<b>\$0</b>
<b>Revenues</b>				
General Fund	\$67,601	\$61,302	\$82,426	\$82,983
General Fund – Deficiency Appropriation	0	28,179	0	0
Special Fund – Carryover to Reappropriate Funds	4,864	3,900	4,111	2,800
Special Fund – Resource Sharing Agreement Revenues <sup>1</sup>	0	0	4,539	1,500
Resource Sharing Agreement Revenues <sup>1</sup>	3,100	1,548	0	0
Investment Interest	2,744	2,330	300	300
Transfers from Other Agencies	2,341	2,000	0	0
Cost Containment Reductions	0	0	-5,000	0
<b>Total Available Revenues</b>	<b>\$159,762</b>	<b>\$213,414</b>	<b>\$232,031</b>	<b>\$87,583</b>
<b>Expenditures</b>				
Transferred to Agencies	-\$41,708	-\$108,573	-\$187,105	-\$87,283
<b>Adjustments</b>				
Available Fund Balance to Be Appropriated in Subsequent Year	-\$3,900	-\$4,111	\$0	\$0
Fiscal 2020 Transfer Not Posted Prior to Closing <sup>2</sup>	0	44,926	-44,926	0
<b>End-of-year Fund Balance</b>	<b>\$114,154</b>	<b>\$145,655</b>	<b>\$0</b>	<b>\$300</b>

<sup>1</sup> Since fiscal 2021, Resource Sharing Agreement (RSA) revenues are appropriated as special funds into the Major Information Technology Development Project Fund (MITDPF). SB 240, which is departmental legislation proposed by the Maryland Department of Transportation (MDOT), proposes to have RSA revenues from MDOT facilities deposited into the Transportation Trust Fund instead of the MITDPF. These revenues total \$547,206 in fiscal 2022.

<sup>2</sup> The fiscal 2020 End-of-year Report on the MITDPF notes that the end-of-fiscal 2020 fund balance is \$100,729,204. The Department of Information Technology advises that \$44,926,055 in fiscal 2020 transfers were not posted prior to the fiscal 2020 closeout. Thus, R\*STARS lists a closing fiscal 2020 cash balance of \$145,655,269.

Source: Department of Information Technology; Department of Budget and Management; Department of Legislative Services

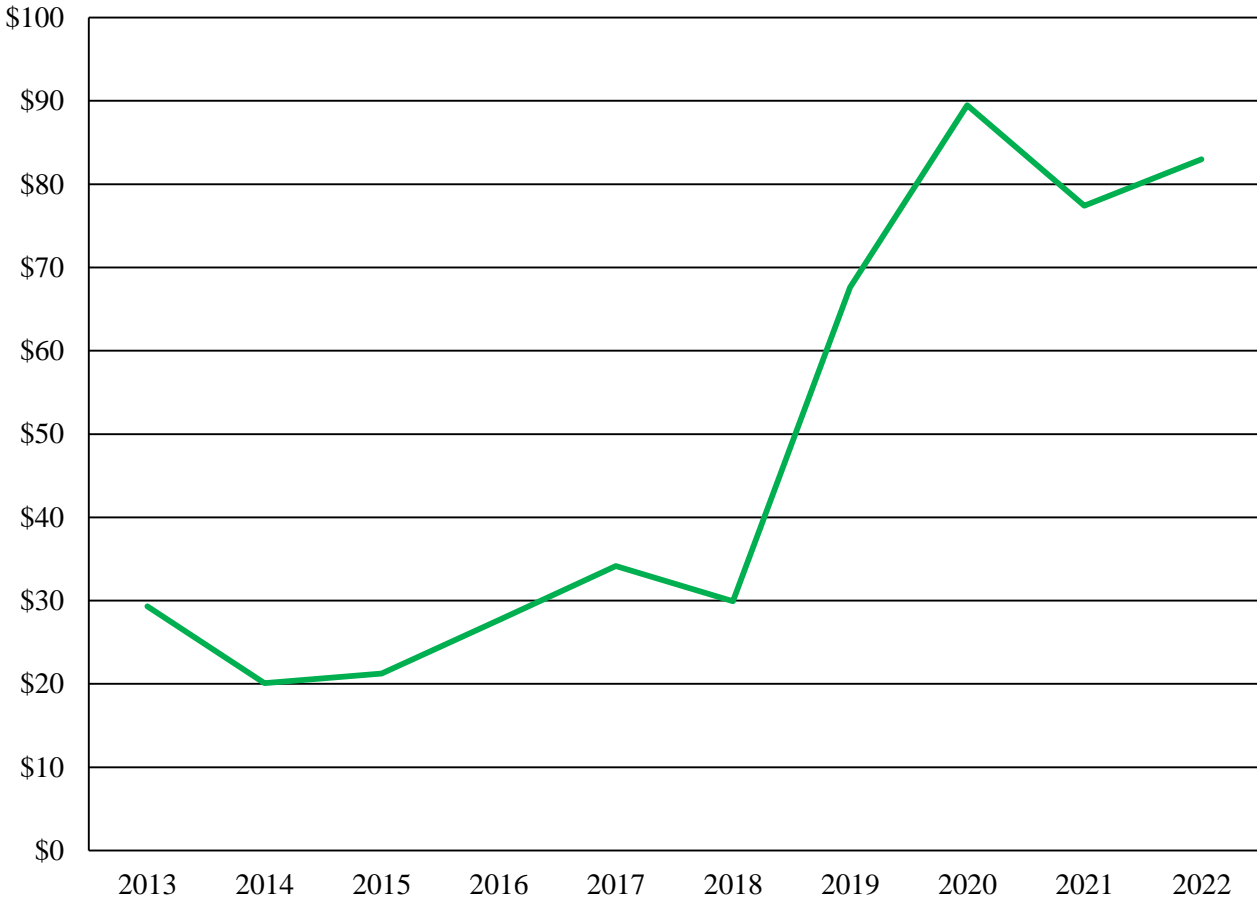
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State support for major IT projects has increased substantially in recent years, as shown in **Exhibit 10**. Appropriations into the MITDPF increase from \$86.1 million in fiscal 2021 to \$87.3 million in fiscal 2022, after adjusting for the \$5 million cost containment reduction in fiscal 2021. The fiscal 2022 allowance funds 27 projects. There is a complete list and discussion of these projects in **Appendix 2**. Seven projects receive funding in excess of \$5 million in fiscal 2022 for a total of \$61.2 million. These projects are:

- \$16.4 million for the Comptroller’s Integrated Tax System (ITS);
- \$12.4 million for the Medicaid Management Information System, also known as Medicaid Enterprise System Modular Transformation (MMT);
- \$8 million for the Department of General Services’ (DGS) eMaryland Marketplace Advantage;
- \$7.6 million for the Governor’s Grants Office Statewide Grants System;
- \$6.2 million for the Department of Public Safety and Correctional Services’ Electronic Patient Health Record Replacement (EPHR) system;
- \$5.4 million for the Maryland Department of Human Services’ (DHS) Shared Human Services project; and
- \$5.2 million for Maryland Department of Health’s (MDH) Integrated Electronic Vital Records Registration System.



**Exhibit 10**  
**General Fund Appropriations into the MITDPF**  
**Fiscal 2013-2022**  
**(\$ in Millions)**



MITDPF: Major Information Technology Development Project Fund

Note: Includes reversions, cost containment reductions, and deficiencies.

Source: Department of Information Technology; Department of Budget and Management; Department of Legislative Services

As part of the budget process, the department regularly cancels funds if the projects are no longer needed and reappropriates them as special funds to support other projects. Generally, these projects are operational and no longer in development. Revenues deposited into the MITDPF from resource sharing agreements have been appropriated as special funds since fiscal 2021. **Exhibit 11** shows the sources of the \$4.3 million special fund appropriation.

**Exhibit 11**  
**Resource Sharing Agreement Revenues and**  
**Canceled Funds Appropriated as Special Funds**  
**Fiscal 2022**  
**(\$ in Thousands)**

<u>Agency</u>	<u>Amount</u>
<b>Revenues from Projects</b>	
Department of Information Technology (DoIT) Project Management Oversight	\$2,393
Department of Budget and Management (DBM) Enterprise Budget System	150
DBM Statewide Personnel System	257
<i>Subtotal</i>	<b><i>\$2,800</i></b>
<b>Revenues from Resource Sharing Agreements</b>	
Maryland Department of Transportation Revenue Sharing Agreements	\$547
DoIT Revenue Sharing Agreements	953
<i>Subtotal</i>	<b><i>\$1,500</i></b>
<b>Total</b>	<b>\$4,300</b>

Source: Department of Information Technology; Department of Budget and Management

**Major IT Project Recommendations and Discussion**

***MDH’s COVID-LINK Oversight:*** In response to the COVID-19 pandemic, the State instituted contact tracing operations. Contact tracing is the process by which health officials identify persons with an infectious disease and other persons with whom they have come in contact. This project establishes a system for contact tracing. This project has been fast-tracked, and no Information Technology Project Request has been submitted to DoIT. The project is funded with \$28.1 million in federal funds. The budget includes general funds for oversight. **The department should be prepared to brief the committees on the status of this project.**

***Maryland State Department of Education (MSDE) and Interagency Commission on School Construction (IAC) Business Management System (BMS):*** This project procures and establishes a configurable, online business management system that will contain, route, and save the documents and information related to IAC’s many business processes. It is intended to streamline and enhance agency business processes and operational efficiencies. BMS is described as the central and most important component of the Integrated Master Facilities Asset Library mandated by the General Assembly in 2018. There are a number of risks associated with this project. The project is technically difficult in that it must route transactions through multiple funding programs and through staff from a variety of agencies. Procuring a solution that meets these requirements as IAC business processes change may be

challenging. IAC was a stand-alone agency until 2018 and is now under MSDE, so organizational structure may also complicate effective project management. There have also been delays, as the project was to begin in August 2020, the RFP was withdrawn in November 2020, and the project is being rebid. **DoIT should be prepared to brief the committees on the BMS project delays, risks, and its plans to ensure success for this project.**

**Comptroller’s Office’s ITS:** The Comptroller’s Office’s ITS replaces legacy tax (State of Maryland Tax system) and collection (Computer Assisted Collection System) systems. In addition to modernizing the legacy system, ITS integrates the tax processing system with a data warehouse to provide enhanced reporting. Fiscal 2023 appropriations are estimated at \$14.8 million in general funds and \$12.8 million in special funds. Planned project costs are projected to be \$166.8 million through fiscal 2025. Beyond that, the Comptroller is reporting \$7.25 million for system related costs in fiscal 2026 and anticipates similar costs for each of the next two years of operations. The source of special funds is local governments, which also receive a share of State income taxes. This phase of the project was first funded in fiscal 2016. The project did not receive funding in fiscal 2018 because prior year appropriations were not being spent as development was not moving as quickly as anticipated. The project is now funded annually. The fiscal 2021 *Joint Chairmen’s Report* (JCR) included committee narrative in the Comptroller’s Office requiring quarterly reporting on the project to the General Assembly. **It is recommended that this narrative be adopted again for fiscal 2022 in the Comptroller’s Office budget.**

**DHS Shared Human Services Platform or Maryland Total Human-services Integrated Network (MD THINK):** MD THINK is a shared human services platform. The objective is to keep individual data in one system instead of numerous silos throughout State government. Total costs reported in the Governor’s budget books are \$448 million, consisting of \$111 million in general funds and \$338 million in federal funds. However, DHS and DBM indicate that total project costs may be more than \$10 million lower than what is reflected in the budget books. The Maryland Health Benefit Exchange has successfully moved onto the platform, and the child welfare portion of the Child, Juvenile, and Adult Management System (CJAMS) has been deployed statewide. This deployment took nine months. Other components of the CJAMS platform are delayed but are still planned to be deployed statewide late in fiscal 2021. Eligibility and Enrollment (E&E) implementation has been delayed in part due to the COVID-19 pandemic but is expected to go live late in fiscal 2021. The Child Support Management System (CSMS) is also behind schedule, with pilot deployment now planned for fiscal 2022. The schedule has a number of major components, such as the nonchild welfare portions of CJAMS, E&E, and CSMS all planned to progress from pilot to statewide rollout in five months or less throughout calendar 2021. **In the DHS Administration budget, the Department of Legislative Services (DLS) is recommending narrative requesting periodic project updates and restrictive language requiring a cost estimate report. DoIT should be prepared to brief the committees on actions taken to minimize the risks associated with implementing so many large components over a short period of time and process changes to ensure that spending data reported with the budget is accurate.**

**Department of Public Safety and Correctional Services (DPSCS) Computerized Criminal History Replacement:** This replaces the two legacy mainframe systems, which includes the Arrest Disposition Reporting systems. The new system should eliminate redundant data entry, reduce errors,

integrate data to allow improved information sharing, and improve reporting. This project was initially funded in fiscal 2017. At the time, the total project cost was \$7.35 million, of which \$370,000 was general funds and \$6.98 million was federal funds, resulting in a 95% federal fund share. Federal funds expired on September 30, 2019, and the State was unable to get an extension.<sup>2</sup> In January 2020, a vendor award was anticipated in the third quarter of fiscal 2020, and appropriations were anticipated beyond fiscal 2021. Vendor approval is now anticipated at the end of fiscal 2021, and fiscal 2022 and 2023 costs total \$6 million. This is an example of DPSCS struggling to complete a project. DPSCS may need additional resources from DoIT, and DPSCS has a history of high vacancies, which exacerbates its struggles with implementing major IT projects. **DoIT should brief the committees on the delays that led to this loss of federal funds and steps taken to improve DPSCS’s ability to implement major IT projects.**

***State Board of Elections (SBE) Agency Election Management System (AEMS) and Pollbook Project:*** AEMS replaces a legacy election management system to integrate with the new voting system and other systems, such as voter and candidate systems. The Pollbook Project implements a new pollbook system, which is used for voter registration and related voter functions. These projects have been delayed in the past. **In the SBE budget, DLS recommends that narrative requiring periodic status reports be adopted again.** Although the cost of the Pollbook Project is still approximately \$30 million, the distribution of funding has shifted. Documents submitted with the fiscal 2021 budget estimated \$9 million in general fund and \$21 million in local special fund appropriations, while documents submitted with the fiscal 2022 budget estimated \$3 million in general fund and \$26 million in local special fund appropriations. **DLS recommends narrative concerning local cost sharing in the SBE analysis.**

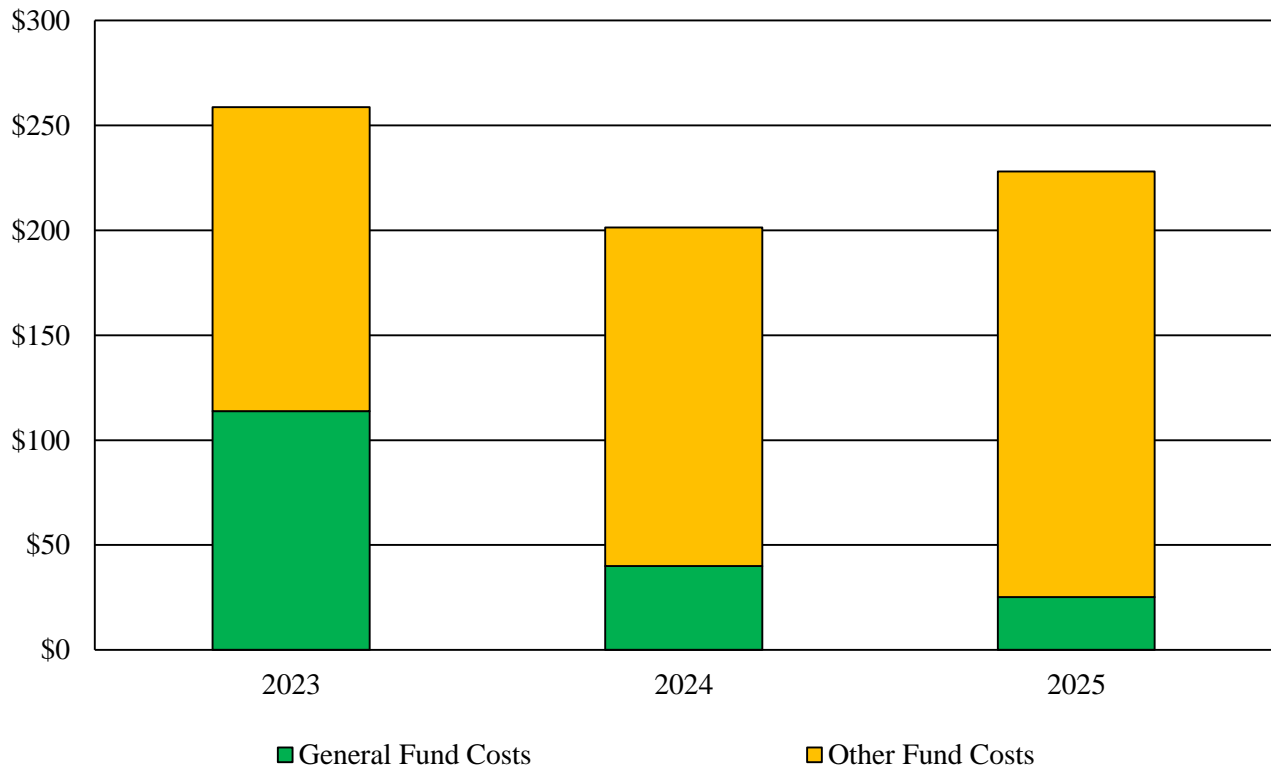
### **Out-year Forecast**

Major IT projects require substantial financial commitments and take years to complete. **Exhibit 12** shows the expected out-year costs of major IT projects. In fiscal 2023, \$259 million in total appropriations and \$114 million in general fund appropriations are expected. Large anticipated fiscal 2023 general fund expenditures include \$19 million for MDH’s Electronic Health Records, \$15 million for the Comptroller’s ITS, \$13 million for DHS’ MMT, \$12 million for MDH’s Migration to the Cloud, and \$9 million for DPSCS’ EPHR.

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<sup>2</sup> Appendix N of the fiscal 2022 *Budget Highlights* show that actual federal spending for this project totaled \$562,385.

**Exhibit 12**  
**Major Information Technology Development Project Fund**  
**Projected Out-year Expenditures**  
**Fiscal 2023-2025**  
**(\$ in Millions)**



Source: *Budget Highlights* Appendix N, Department of Budget and Management

Reduced general fund costs in fiscal 2024 are largely attributable to projects at the end of their development cycle. DLS anticipates that new projects will be added and more will be known about the cost of projects currently being planned. Examples of projects being planned that could have substantial implementation costs include replacing the State’s accounting system FMIS or IAC BMS. New projects and moving projects from planning to implementation should lead to increased general fund expenditures in fiscal 2024 and 2025 beyond what is currently projected. The average general fund appropriation over the last five years has been \$70 million, which suggests that additional costs could be substantial. For the long-term general fund forecast, DLS assumes a floor of \$70 million.

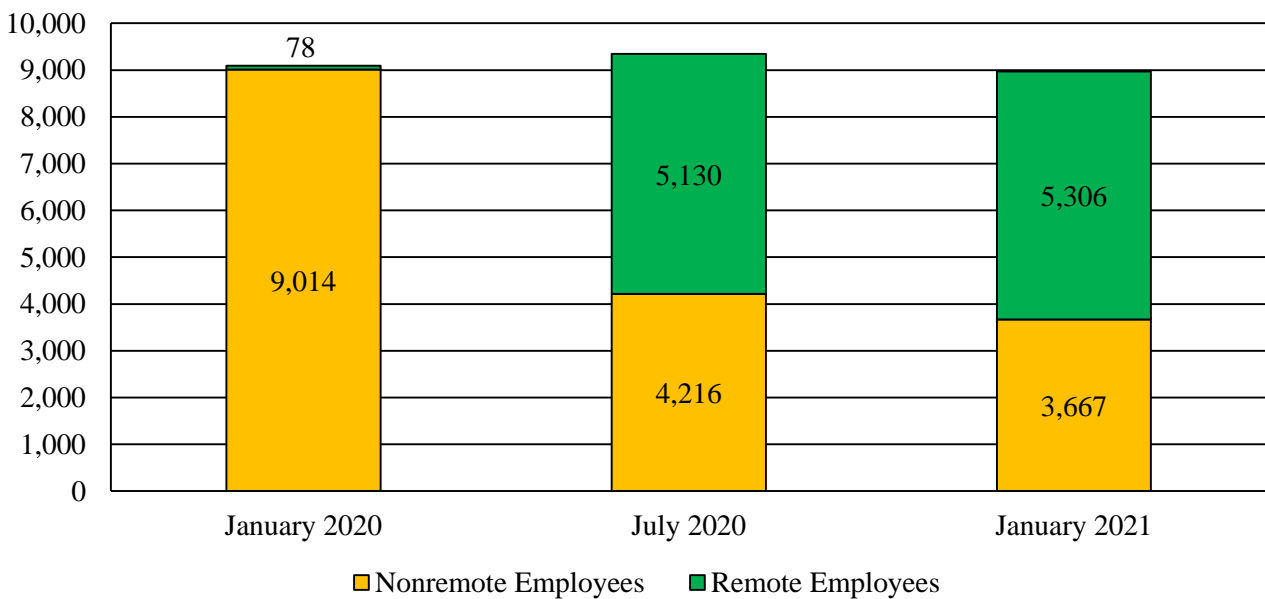
## Issues

### 1. Shared Services IT Support and the COVID-19 Pandemic Response

DoIT’s shared services IT support supports day-to-day agency IT operations for Executive Branch agencies. The services that DoIT supports include Internet connections, application software, security, help desks, servers, and hardware. This supports approximately 9,500 State employees in almost 30 agencies, such as the Governor’s Office, the Office of the State Prosecutor, DGS, the Maryland Department of Agriculture, and the Department of Juvenile Services.

In response to the pandemic, DoIT moved shared services IT support employees to remote work. **Exhibit 13** shows that the number of employees on remote work<sup>3</sup> increased from 78 (0.9%) in January 2020 to 5,130 (54.9%) in July 2020. The share of remote workers increased to 59.1% in January 2021. DoIT advises that all users were added to its platform for remote work over a weekend in April 2020.

**Exhibit 13**  
**Remote and Nonremote Shared Services IT Support Employees**  
**January 2020 to January 2021**



IT: information technology

Source: Department of Information Technology; Department of Budget and Management

<sup>3</sup> A remote worker is a worker that can link their hardware, such as a laptop or tablet, into their agency’s systems and work from home at least 50% of the work done remotely. This includes regular and contractual employees.

Before the COVID-19 pandemic, DoIT used a Virtual Private Network (VPN) to connect employees to DoIT’s network when remote access was required. In response to the remote work requirements, the department expanded its platform so that all employees supported by DoIT could access the network, either as a direct connection from a State device (laptop) or web-based access from an employee’s personal device. Accessing resources is similar although the connection is materially different due to the additional security needed when allowing a personal device to access State resources. DoIT also assisted agencies that do not subscribe to DoIT’s shared services with the acquisition of laptop computers, which was supported by federal Coronavirus Aid, Relief, and Economic Security Act funding. DoIT did not migrate those agencies to its VPN platform, as these agencies had their own VPN solutions which they built upon.

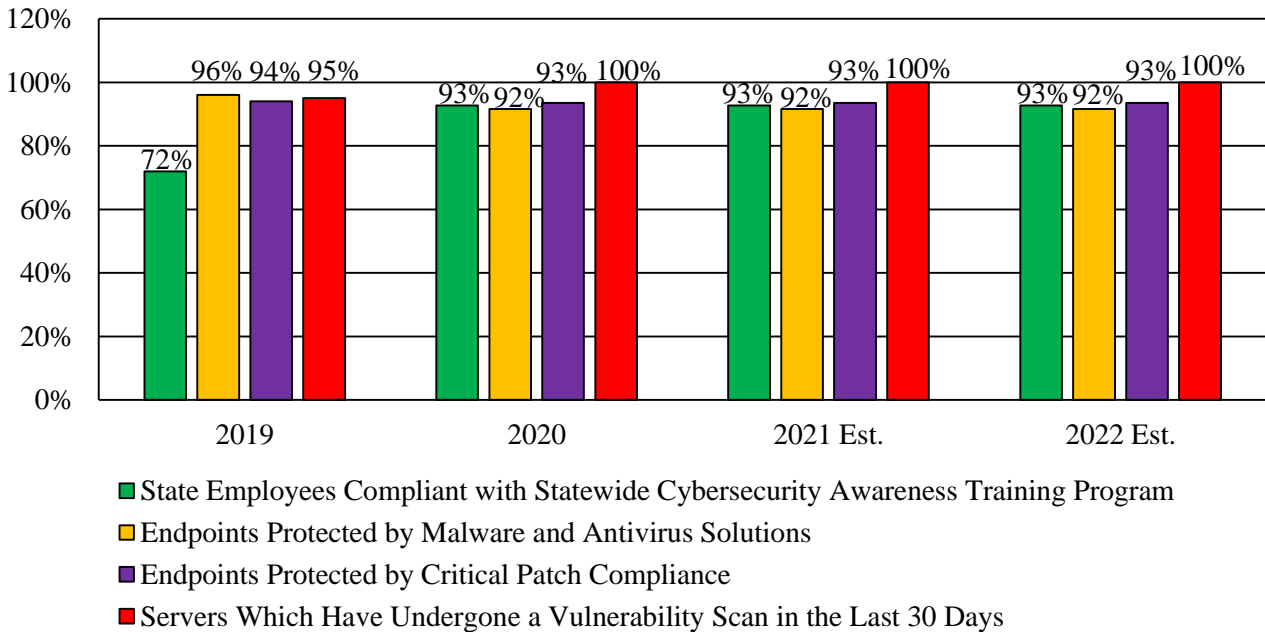
The primary costs associated with expanding remote work were the cost to expand the VPN platform (\$191,500) and for 4,200 laptops to facilitate remote work (\$3.3 million). Significant competition for laptop devices meant receipt was between April and June 2020.

DoIT’s move to remote work has created a number of cybersecurity issues, with the most critical being a lack of a consistent remote access solution. The nature of the pandemic was that DoIT needed to move quickly. While this effectively ramped up remote work, the current solutions may not be ideal for the long-term. In response, DoIT approached the Maryland Emergency Management Agency (MEMA) to modify a federal cybersecurity grant from its original purpose. The updated objective of the grant funds is to perform an assessment of remote access solutions, with a focus on virtual desktop access solutions. DoIT is in the final stages of vendor selection and expects this project to provide a solution that meets the requirements of most units while reducing cybersecurity risk by minimizing network boundaries and consolidating the existing tools.

## **2. Cybersecurity Challenges Continue Unabated**

Cybersecurity is a major concern for the State. The media routinely reports cybersecurity breaches, but many incidents are unreported. The State gives DoIT the lead responsibility in this area and in recent years, the State has made efforts to identify weaknesses and make improvements. These efforts include scrutinizing practices through audits and requesting improved performance measures. The budget committees have also encouraged DoIT to manage a robust cybersecurity program by requiring improved performance indicators and appropriately deploying sufficient resources. In response, DoIT has updated its performance indicators. **Exhibit 14**, for example, shows that the number of employees compliant with cybersecurity awareness training increased from 72% in fiscal 2019 to 93% in fiscal 2020.

**Exhibit 14  
Cybersecurity Indicators  
Fiscal 2019-2022 Est.**



Source: Department of Budget and Management

In recognition of the importance of cybersecurity, the Governor issued an executive order in June 2019 that created a State chief information security officer (SCISO) that is appointed by the Governor and reports to the Secretary of Information Technology. SCISO is also DoIT’s Chief Information Security Officer, who supervises the Office of Security Management. The office is responsible for the direction, coordination, and implementation of the overall cybersecurity strategy and policy for the Executive Branch, which includes:

- establishing standards to categorize all information and information systems collected or maintained by agencies;
- establishing guidelines and security requirements governing the types of information and information systems included in each category;
- determining whether a system should be allowed to continue to operate or be connected to State systems, including networkMaryland;
- management of security awareness training for employees; and



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- assisting in the development of data management, governance, and specification standards to promote standardization and reduce risk.

The order also created the Maryland Cybersecurity Coordinating Council (MCCC). The council includes the agency head or senior staff member designated by the agency head from (1) the Governor’s Office of Homeland Security; (2) DBM; (3) DGS; (4) DHS; (5) DPSCS; (6) MDH; (7) the Military Department; (8) MEMA; (9) the Department of State Police; and (10) the Maryland Department of Transportation (MDOT).

As required, DoIT has developed cybersecurity policies for State agencies. The department’s cybersecurity program is guided by CIA principles, which are commonly recommended by cybersecurity professionals. These objectives are also defined in the Federal Information Security Management Act. CIA stands for:

- ***Confidentiality:*** keeping unauthorized individuals from obtaining data;
- ***Integrity:*** keeping data in its original form when stored, processed, or transmitted; and
- ***Availability:*** keeping systems open so that they can be accessed when needed.

The policies are informed by standards developed by the National Institute of Standards and Technology as the framework behind the planning, procurement, development, and implementation of State IT and telecommunications systems. DoIT’s policies are available online. Areas covered include email, data security, social media, contingency planning, and configuration management. DoIT offers a substantial amount of guidance for State agencies. In June 2019, DoIT released version 1.2 of the *State of Maryland Information Security Manual*, which summarizes State cybersecurity policies.

Historically, State IT has been decentralized. In response to a request to review cybersecurity practices in the fiscal 2019 JCR, DoIT acknowledged that there are difficulties in securing multiple data centers. A concern about DoIT’s role is that DoIT can make policies but cannot make agencies adhere to those policies. Creating MCCC with SCISO as chair raises DoIT’s visibility. However, it is unclear exactly how this will lead to improved cybersecurity practices. **The department should brief the committees on the role of the new SCISO. MCCC has now been operating for over a year. DoIT should be prepared to brief the committees on how MCCC has improved the State’s coordination of and response to cybersecurity threats.**

### **Findings from State Agency Audits**

Through its audits, the Office of Legislative Audits (OLA) identifies findings that, if addressed, can reduce cybersecurity risks. **Exhibit 15** shows the most common findings since calendar 2015. The audit findings are put into three broad categories: (1) personally identifiable information (PII); (2) inadequate personnel controls; and (3) inadequate technical controls. PII raises privacy concerns and is the most common finding, both in total findings and in fiscal 2020 findings, so it is in its own category. The other two categories involve managing personnel and systems.

**Exhibit 15**  
**Audit Instances**  
**Audits Released Calendar 2015-2020**

<u>Type of Audit Finding</u>	<u>Average Findings 2015-2019</u>	<u>Findings 2020</u>	<u>Total Findings</u>
Personally Identifiable Information	8	9	51
<b>Inadequate Personnel Controls</b>			
Unnecessary User/File Access	4	2	24
Administration Rights	4	2	22
Excessive Network Level Access	3	1	14
<b>Subtotal</b>	<b>11</b>	<b>5</b>	<b>60</b>
<b>Inadequate Technical Controls</b>			
Anti-malware Missing or Outdated	5	2	28
Software Not Updated or Not Used	5	1	25
No or Inadequate SOC Review	4	5	23
Log/Monitor Security Events	4	5	23
Intrusion Detection Prevention System Problems	3	4	21
Firewall Deficiencies	3	2	17
No or Inadequate Disaster Recovery Plan	1	0	6
<b>Subtotal</b>	<b>25</b>	<b>19</b>	<b>143</b>
Other Findings	5	0	23
<b>Total</b>	<b>49</b>	<b>33</b>	<b>277</b>

SOC: System and Organizations Control

Note: Average number of findings do not sum due to rounding.

Source: Office of Legislative Audits

**SolarWinds Breach Is an Example of Inadequate Personnel Controls**

SolarWinds is a large corporation that develops software for businesses and governments to manage their networks, systems, and IT infrastructure. SolarWinds customers include 425 of the U.S. Fortune 500 corporations, the top 10 U.S. telecommunications companies, the top 5 U.S. accounting firms, all branches of the U.S. military, federal agencies, and hundreds of universities and colleges. Media reports note that a hacker group gained access to U.S. government systems and then used that access to produce and distribute trojanized updates to the software’s users. One estimate suggests that the breach may have affected 18,000 SolarWinds customers. The attack highlights a

number of vulnerabilities, including software supply chain attacks and personnel controls. According to Brandon Wales, acting chief of the federal Cybersecurity and Infrastructure Security Agency, “what made SolarWinds so devastating was that SolarWinds devices are normally configured to have broad administrative rights on a network.” Specifically, if a malicious actor gained access to the SolarWinds Orion platform that actor would gain access to administrative privileges to the Windows server on which the platform was running. These broad rights allow hackers tremendous access. Lowering these access privileges reduces the damage that a malicious actor could do. In response, the new CEO of SolarWinds, Sudhakar Ramakrishna, has said that instead of having administrative privileges, SolarWinds will move to least privileged access. Although this risk can be diminished by further hardening inside a network (more of the technical controls), this can be difficult to do once a hacker is inside a system.

## **Common and Evolving Threats Intensified by COVID-19**

The Center for Digital Government recently issued a report on *5 Cybersecurity Threats Intensified by COVID-19 and How to Address Them*. The threats related to Maryland are:

- ***Outdated and Siloed Security Technology Creates Gaps for Cybercriminals to Discover and Exploit:*** Maryland has decentralized IT networks, as many agencies manage their own operations. This is exacerbated by quickly moving staff to remote work, which increased the number of different platforms used;
- ***Ransomware Attacks Targeting Remote Workers Are on the Rise:*** The Executive Branch has seen an unprecedented increase in the number of remote workers. DBM data show that 46% of all Executive Branch and 59% of DoIT shared services employees worked remotely in January 2021. Even after the pandemic is over, it seems unlikely that the State will revert to having relatively few employees work remotely; and
- ***Cybercriminals Are Looking to the Cloud for New Ways to Breach Networks:*** While large providers of cloud services have extensive internal resources to protect data once they are in the cloud, data may be at risk as it travels from endpoint devices to and from its destination.

## **Conclusion**

Maintaining the integrity, confidentiality, and accessibility of State networks is a challenge. The State has a decentralized IT network that is commonly viewed as complicating cybersecurity defenses. OLA audits identified 33 cybersecurity finding in calendar 2020. These cybersecurity findings include vulnerable PII, inadequate personnel controls, and inadequate technical controls. Adding to this challenge is an increased number of Executive Branch remote workers, which increased from less than 1% in January 2020 to almost 50% in January 2021. There are concerns that threats from cybercriminals are evolving to target remote workers. **To better understand cybersecurity threats and the State’s response to these threats, DLS recommends narrative to request DoIT to submit a cybersecurity report.**

## ***Operating Budget Recommended Actions***

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1. Adopt the following narrative:

**Review of State Cybersecurity:** The committees are concerned about cybersecurity risks to State networks and systems. Maintaining the integrity, confidentiality, and accessibility of State networks is a challenge. The State has a decentralized information technology network that is commonly viewed as complicating cybersecurity defenses. The Office of Legislative Audits identified 33 cybersecurity findings in calendar 2020. These cybersecurity findings include vulnerable personally identifiable information, inadequate personnel controls, and inadequate technical controls. Adding to this challenge is an increased number of remote workers, which increased from less than 1% in January 2020 to almost 50% in January 2021. There are concerns that threats from cybercriminals are evolving to target remote workers. The Department of Information Technology (DoIT) should report to the committees on cybersecurity risks and the State’s response to those risks. The report should include (1) recent audit findings, how the State has responded to these findings, and what needs to be done to reduce findings in future audits; (2) the role of the State Chief Information Security Officer (SCISO) and Maryland Cybersecurity Coordinating Council (MCCC) in addressing cybersecurity risks, including what has been achieved since the 2019 executive order creating SCISO and MCCC; (3) how remote work has increased risks and what the State’s response is to those risks; and (4) how cybersecurity risks are evolving and how the State response will need to evolve to address those risks.

<b>Information Request</b>	<b>Author</b>	<b>Due Date</b>
Review of State Cybersecurity	DoIT	November 19, 2021

## ***Updates***

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### **1. Chapter 586 of 2020 Moves Telecommunications Access of Maryland from DoIT to the Maryland Department of Disabilities**

Telecommunications Access of Maryland (TAM) provides telecommunications relay service for Maryland’s hearing- and speech-disabled citizens. The program also provides assistance with telephone equipment for financially qualifying citizens with a variety of needs. The program is funded by the Universal Services Trust Fund, which receives revenue from fees collected by the Comptroller through a surcharge on individuals’ phone bills as determined by the Public Service Commission. Chapter 586 of 2020 moved TAM from DoIT to the Maryland Department of Disabilities (MDOD), and a budget amendment transferred TAM and 6 regular positions into MDOD.

### **2. Restricted Funds Pending a Report Regarding Multiple Personally Identifiable Information Audit Findings in Fiscal 2019**

Commonly accepted cybersecurity standards are guided by CIA, which stands for confidentiality, integrity, and availability. Protecting PII is a key element of confidentiality. Not all State agencies are properly protecting PII. Audit reports from calendar 2019 identified repeat PII findings in DBM, MSDE, and the Office of the State Treasurer. Section 42 of the fiscal 2021 Budget Bill required that these agencies report their plans to correct outstanding PII issues to SCISO. SCISO should in turn review these plans and report to OLA about these agencies’ plans, and OLA should review SCISO’s findings and report on the commitment to resolving these repeat findings to the budget committees and Joint Audit and Evaluation Committee. The report from OLA is due on May 2, 2021.

### **3. Restricted Funds Pending a Report Regarding Expanded Geographic Information System Data**

Section 46 of the fiscal 2021 Budget Bill restricted \$250,000 of MDOT’s special fund appropriation and required that MDOT provide Geographic Information System (GIS) data and maps for its capital projects and State Highway Administration (SHA) access permits. The section also restricted \$250,000 in general funds from the Department of Commerce (Commerce) and DoIT, as well as \$125,000 in general funds from the Governor’s Office on Performance Improvement (GOPI). The section required that Commerce develop and make available GIS data and maps showing tax credits. DoIT and GOPI are required to review MDOT and Commerce’s GIS data and maps.

GIS is a framework that provides the ability to capture, analyze, and display data in a geographic or spatial context in relation to other spatial data. GIS applications are the computer-based tools which enable a user to view, analyze and edit spatial and nonspatial data, as well as provide interactive searches and visualization of the data, in the form of interactive online and static maps, dashboards, and storyboards.

## **Maryland Department of Transportation Response**

The section asks MDOT to make available GIS data and maps for its capital projects and SHA access permits. MDOT's capital projects are listed in its six-year *Consolidated Transportation Program (CTP)*. SHA maintains and publishes a GIS layer with an online interactive map on the State's GIS Open Data Portal after each CTP is released with the operating budget. MDOT advises that it is expanding SHA's model to include all transportation modes in one complete MDOT GIS database and online interactive map. This should be completed in March 2021. In subsequent years, MDOT anticipates updating the GIS portal each February. A link to the SHA map can be found here: [MDOT SHA Consolidated Transportation Program \(CTP\) \(arcgis.com\)](https://arcgis.com).

Access Management is a set of techniques that SHA uses to control access to its State-maintained roadways, which ensures that roadways remain safe. There are commercial, industrial, and residential subdivision access permits. This process is tied to local government planning, including zoning and development reviews. Developers must begin the process by obtaining local approval prior to submitting requests to SHA Access Management. The local planning offices forward submissions to SHA for review. The current Access Permit system does not have a GIS component, though it does include locational information. This locational information should be sufficient to apply to GIS applications. MDOT advises that it is exploring a process that maps each permit manually. MDOT uses Esri's ArcGIS online (AGOL) software. AGOL is an industry standard GIS software application that is also used by DLS. Although transferring locational data into AGOL will take effort, MDOT advises that it anticipates having a GIS map for SHA's ongoing or active access permits available to the public by July 2021.

## **Department of Commerce Response**

Commerce currently administers 18 tax credits. The department does not collect GIS data for its tax credits and does not have any staff dedicated to GIS. In its response, Commerce provided maps for 12 tax credits from fiscal 2016 to 2019. The maps were created by DoIT's GIS staff. The value of certified tax credits reflects the year in which Commerce certified a tax credit and may not reflect the year for which a tax credit was awarded as tax credits may be certified on a fiscal, calendar, or tax year basis. The maps developed for this report are hosted on the State's mapping and GIS data portal MD iMAP, and can be accessed through Commerce's website.

Limited mapping, or no mapping, is provided for the remaining tax credits because of data limitations. The design of some tax credits limits the department's ability to collect and maintain certain tax credit data, and Commerce cannot provide GIS maps for these tax credits because it does not have the necessary data. The types of tax credits for which Commerce cannot provide GIS maps include place-based tax credits, and tax credits that attract investment from outside of Maryland.

DoIT and GOPI advise that they have worked with MDOT and Commerce on this response.

**Appendix 1**  
**2020 Joint Chairmen’s Report Responses from Agency**

The 2020 *Joint Chairmen’s Report* (JCR) requested that the Department of Information Technology (DoIT) prepare two reports. Electronic copies of the full JCR responses can be found on the Department of Legislative Services Library website.

- ***Total Statewide Costs of the Department of Human Services’ Maryland Total Human-services Integrated Network:*** The budget data provided in Appendix N of the fiscal 2021 Budget Books did not include all the costs borne by the project. The report was required to provide all costs incurred. This project is discussed in the Major Information Technology Development Project Fund Recommendations and Discussion section of the budget discussion and Appendix 2.
- ***Device as a Service (DaaS) Procurement:*** The committees asked that DoIT report on the costs and benefits of DaaS to manage hardware and associated software. A preliminary estimate showed that some life-cycle cost savings were possible. The number of choices were limited, and hardware could only be replaced at the end of the contract. Moving to this model would be done over a period of years, since the age and useful life of hardware varies.

**Appendix 2**  
**Maryland Information Technology Development Project Fund**  
**Fiscal 2022**  
**(\$ in Thousands)**

**Agency:** Department of Budget and Management (DBM) **Allowance:** \$0

**Project Name:** Financial Management Information System (FMIS) Transformation

**Description:** Replace the current accounting system of record, which was implemented in the mid-1990s. The system incorporates two functions, procurement and accounting. The system is inflexible and expensive to maintain. In a separate project, the State is upgrading its procurement system to provide a flexible system that provides management data and is integrated with the accounting system.

**Status:** Key stakeholders such as DBM, the Department of Information Technology (DoIT) and the Maryland Department of Transportation (MDOT), the State Treasurer’s Office, and the Comptroller’s Office are beginning initiation to develop strategic goals, success factors, acquisition strategy, and other policies. Agencies will use internal resources in fiscal 2022. Preliminary estimates are that total costs will exceed \$100 million.

**Recommendation:** No funds are requested.

**Agency:** Maryland Department of Health (MDH) **Allowance:** \$50 GF

**Project Name:** COVIDLINK Oversight

**Description:** In response to the COVID-19 pandemic, the State instituted contact tracing operations. Contact tracing is the process by which health officials identify persons with infectious diseases and other persons with whom they have come in contact. This project establishes a system for contact tracing.

**Status:** This project has been fast-tracked, and no Information Technology Project Request has been submitted. The project is funded with \$28.1 million in federal funds. The general fund appropriation supports oversight.

**Recommendation:** Approve

**Agency:** MDH and Board of Nursing (BON) **Allowance:** \$25 GF

**Project Name:** License and Regulatory Management System

**Description:** An Enterprise Licensing and Regulatory Management Solution capable of the management of every aspect of licensing and discipline. These capabilities include software licenses and support, systems analysis, development, implementation, and support services for the Health Occupation Boards.

**Status:** There are discussions between BON and DoIT regarding use of the OneStop portal as the new BON licensure platform. Demonstrations of the OneStop portal have been provided and requirements are under review. While the discussions do continue, no progress on the project has occurred. There are concerns about future of project funding, particularly considering that both large boards have elected to pursue their own solutions for licensing. While a relatively small dollar amount is required to complete the project, buy-in and project leadership at this point remains uncertain. This appropriation supports oversight. Special funds are expected to fund project development.

**Recommendation:** Approve



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**Agency:** Interagency Committee for School Construction (IAC) **Allowance:** \$1,050 GF

**Project Name:** Business Management System

**Description:** This project procures and establishes a configurable, online business management system that will contain, route, and save the documents and information related to the IAC’s many business processes. It is intended to streamline and enhance agency business processes and operational efficiencies.

**Status:** The project start date was originally August 2020. However, due to procurement delays and the cancellation of the most recent request for proposals (RFP) in November 2020, this project will not enter procurement until February 2021. If the implementation schedule remains as in this proposal, the project would be completed by September 2022. High risk is organizational culture, since IAC was a stand-alone agency until 2018 and is now under the Maryland State Department of Education (MSDE). IAC’s unusual structure also makes technical issues a high risk. The project is technically difficult in that it must route transactions through multiple funding programs and through staff from a variety of agencies. Procuring a solution that meets these requirements as IAC business processes change may be challenging. Fiscal 2022 is the first appropriation for this project. The estimated fiscal 2023 appropriation in \$600,000 with another \$1.7 million planned in fiscal 2024 and 2025.

**Recommendation:** Approve

**Agency:** MSDE **Allowance:** \$1,995 GF

**Project Name:** Replacement Educator Information System (EIS)

**Description:** Develop an Educator Information System (EIS) for issuance, renewal, reinstatement, endorsement, suspension and revocation, and maintenance of educator certificates in Maryland. This system must interface with national, State, local, and private organizations. Users will access certification data, upload materials, check certification statuses, run canned reports, and process educator certificates.

**Status:** In fiscal 2021, the project awarded a contract and initiated implementation. The vendor submitted first drafts of the implementation and data migration plans, provisioned the development and test environments, and deployed the base licensing system. MSDE is reviewing documents for concurrence and performing gap analyses on deployed modules. The project is planning to complete data migration in calendar 2021, while iteratively performing system and integration testing in advance of user acceptance testing. This is the only planned appropriation for this project.

**Recommendation:** Approve

## **Ongoing Projects**

**Agency:** Comptroller **Allowance:** \$16,420 GF

**Project Name:** Integrated Tax System

**Description:** Replace current State of Maryland Tax, Computer Aided Collection System, and other systems. Objectives are to integrate systems for efficiency, to simplify taxpayer compliance, reduce wait times, and improve security, including disaster recovery.

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**Status:** Currently, the project has a contract with a vendor to provide information technology management consulting services. Project includes risks, such resource availability (resources within the Comptroller’s Office do not have skill sets required) and interdependencies (linked to systems being modernized). The Alcohol Tax release was implemented in the first quarter of fiscal 2021, and the corporate tax release is scheduled for the third quarter of fiscal 2021. Costs are shared with local governments. Fiscal 2023 appropriations are estimated at \$14.8 million in general funds and \$12.8 million in special funds. Project costs are projected to be \$166.8 million. Beyond that, the Comptroller is reporting \$7.25 million for system-related costs in fiscal 2026 and anticipates similar costs for each of the next two years of operations.

**Recommendation:** Approve and recommend narrative requiring Comptroller’s Office to report project status to the budget committees.

**Agency:** Department of General Services **Allowance:** \$8,000 GF

**Project Name:** eMaryland Marketplace Advantage (eMMA) eProcurement Solution

**Description:** Replace current eMaryland Marketplace procurement system with a cloud-based software as a service system.

**Status:** The release transferring vendor data to eMMA is complete for all agency stakeholders. Releases to aid the system with data conversion and supporting contract management will be deployed in fiscal 2021. These releases will support only the State FMIS agencies as MDOT continues to work through design preparations for the MDOT FMIS business units. Implementation of eMMA for MDOT is on hold as MDOT evaluates a suitable middleware to provide a seamless integration between eMMA and the MDOT legacy systems. The project has initiated the design phase for procure-to-pay, which is the final release for the State FMIS agencies. The final planned appropriation is \$3.8 million in fiscal 2023.

**Recommendation:** Approve

**Agency:** Department of Human Services (DHS) **Allowance:** \$5,425 GF

**Project Name:** Shared Human Services Platform

**Description:** Integrate human services systems among State agencies. MDH, the Department of Juvenile Services, and the Maryland Health Benefit Exchange (MHBE) are collaborating with DHS. The objective is to provide a streamlined application process for customers and workers.

**Status:** MHBE has successfully moved onto the platform and the child welfare portion of Child, Juvenile, and Adult Management System has been deployed statewide. Eligibility and enrollment implementation has been delayed due to the COVID-19 pandemic but is expected to go live late in fiscal 2021. The Child Support Management System (CSMS) is also behind schedule, with deployment now planned for fiscal 2022. Risks include interdependencies, organizational culture, implementation, and the large scope of this project. Federal funds totaling \$10.5 million are also budgeted in fiscal 2020. Total costs are \$448 million, \$111 million general funds and \$338 million federal funds.

**Recommendation:** Approve and recommend narrative and restrictive language requiring reporting to budget committees by DHS.

**Agency:** Department of Natural Resources (DNR) **Allowance:** \$3,500 GF

**Project Name:** Modernization and OneStop Integration

**Description:** Implement a web-based platform that is integrated with internal and external systems. The current system is not integrated, which leads to manual entry, duplicative reporting, and incorrect reports.

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**Status:** The project started in fiscal 2021 and is in the planning phase. A list of functional requirements has been developed for review and validation by DNR stakeholders. The vendor is also developing the first round of forms and workflows for agency review. The final appropriation, which totals \$7.3 million, is expected in fiscal 2023.

**Recommendation:** Approve

**Agency:** DoIT

**Allowance:** \$4,500 GF

**Project Name:** Maryland OneStop Portal

**Allowance:** 2,800 SF

**Description:** Develop a portal that directs internet searches to the appropriate online form.

**Status:** MDH, the Maryland Higher Education Commission, the Department of Commerce, the Secretary of State, DNR, the Maryland Department of Agriculture, and the Department of Housing and Community Development’s Economic Recovery Initiatives have forms integrated into the system. The COVID-19 pandemic has increased the need to bring paper processes online. Funding is planned through fiscal 2023, which projects \$7 million in appropriations. Appropriations for the OneStop Portal increase by \$900,000 in fiscal 2022 and \$3.5 million in fiscal 2023. DoIT advises that the increases are the result of additional customer agency requests to join the platform. Additionally, customer agencies often expand the number of forms from the initial request after experiencing the success of the initial forms.

**Recommendation:** Approve

**Agency:** DoIT

**Allowance:** \$50 GF

**Project Name:** Statewide Voice over Internet Protocol (VoIP) Transition

**Description:** Migrate the State’s telephone system into VoIP. This replaces older Time Division Multiplexing technology. Hardware, such as private branch exchange (PBX) equipment, and software will be replaced.

**Status:** This project does not have any high risks. During the first two quarters of fiscal 2021 the project installed twice as many phones as the first two quarters of fiscal 2020. Local area network upgrades are being handled by two teams, each simultaneously working on a group of sites. The accelerated pace of migrations, which started in fourth quarter of fiscal 2020, is expected to continue through fourth quarter of fiscal 2021. No additional appropriations are expected. The proposed funds support oversight.

**Recommendation:** Approve

**Agency:** Department of Public Safety and Correctional Services (DPSCS)

**Allowance:** \$2,146 GF

**Project Name:** Computerized Criminal History (CCH) Replacement Phase II

**Description:** The 30-year-old legacy system, which includes the Ident/Index and Arrest Disposition Reporting mainframe systems, will be replaced with an enhanced solution that allows for the provisioning of timely, updated offender information to Local Law Enforcement, Community Supervision Programs, and other DPSCS constituents. The new system will provide effective monitoring, rehabilitation, and case management of offenders within these programs, providing timesaving processes that eliminate manual processes while providing consolidated information within a single data system.

**Status:** The project has been delayed. No funds were appropriated beyond fiscal 2021. DPSCS’s federal grant was reverted due to the project’s delays. A mainframe solution was initially envisioned. Now a cloud-based solution is being pursued. The project completed technical reviews of proposals submitted in response to the RFP for the replacement CCH. Best and Final Offers have been requested, and DPSCS is in the final stages of selecting a contractor. The final appropriation, totaling \$4 million, is anticipated in fiscal 2023.

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**Recommendation:** Approve

**Agency:** DPSCS

**Allowance:** \$6,186 GF

**Project Name:** Electronic Patient Health Record Replacement (EPHR)

**Description:** EPHR will replace an outdated system with a comprehensive health records system that interacts with inpatient, social work, and mental health systems, to provide comprehensive, primary, secondary, and specialty health services.

**Status:** DPSCS awarded a contract for implementation services. A notice to proceed has been issued. The project teams are defining milestones for the first phase of the project. In fiscal 2021, the project anticipates beginning development and integration activities, which is followed by data migration activities. Fiscal 2023 expected costs total \$8.9 million.

**Recommendation:** Approve

**Agency:** DPSCS

**Allowance:** \$50 GF

**Project Name:** Maryland Automated Finger Printing Identification System

**Description:** Upgrade the current fingerprint identification system with a system that has fewer parts to monitor and requires less security upgrades. The current system has not been supported since June 2019, but the vendor has agreed to support the system until the new system is in place.

**Status:** This project has been delayed. The current system has not been supported since June 2019, but the vendor has agreed to support the system until the new system is in place. The project missed the fiscal 2021 first quarter go-live milestone, but four of five modules have since successfully been deployed to production. The remaining module (Cogent Mug Shot) has encountered delays relating to infrastructure configuration readiness. The contract is deliverables-based, thus, no additional costs are being incurred as a result of the contractor's delays. This final appropriation is for oversight.

**Recommendation:** Approve

**Agency:** Governor's Grants Office

**Allowance:** \$7,614 GF

**Project Name:** Statewide Grants System

**Description:** There is no centralized system for grant tracking and reporting grants. The system will integrate existing statewide accounting and personnel systems to report on the use of grant funds.

**Status:** The project is in planning with requirements gathering, procurement, and staffing-related tasks progressing as expected. The project team developed and published a statewide grants management survey to gather preliminary system requirements and gauge interest for early adoption among participating agencies. The requirements gathering process started with grouping agencies into cohorts to facilitate implementation planning. The request for proposal was released in October 2020 and contract award for the solution is expected by the end of fiscal 2021. Estimated fiscal 2023 costs are \$6.8 million and total costs are \$27.6 million.

**Recommendation:** Approve

**Agency:** Maryland Department of the Environment (MDE)

**Allowance:** \$25 GF

**Project Name:** Environmental Permit Tracking System Modernization

**Description:** Enhance permit tracking by adding a component that allows access through the Internet.

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**Status:** The project team completed implementation and released the system into production in November 2020. The existing legacy system will be designated as read only until November 2021. The team is investigating potential enhancements to the payment portal and Geographic Information System mapping integration. No additional costs are anticipated. This appropriation supports oversight.

**Recommendation:** Approve

**Agency:** MDE

**Allowance:** \$25 GF

**Project Name:** Lead Rental Certification and Accreditation

**Description:** Migrate decentralized legacy systems and databases into a web-based relational database.

**Status:** The project team has completed the accreditation module framework and the workflow analysis supporting the inspection, certification, and enforcement modules. The project team is focused on the accreditation module screen customization. This customization is anticipated to be complete in fiscal 2021. Fiscal 2023 anticipated appropriations are \$265,700 in general funds and \$290,700 in special funds. This appropriation supports oversight.

**Recommendation:** Approve

**Agency:** MDH

**Allowance:** \$2,162 GF

**Project Name:** Electronic Health Records (EHR)

**Description:** Replace a legacy Computerized Hospital Record and Information System. The current system is over 25 years old. Goal is to procure a commercial off-the-shelf product. EHR system should improve operational efficiency, hospital planning, evaluation and accreditation, patient care and safety, and data security.

**Status:** The COVID-19 pandemic caused the project to experience limited access to the State hospitals thus leading to delays in some remaining infrastructure upgrades. The project anticipates the infrastructure work to be completed by June 2021. An RFP for the EHR system was released and proposals for an EHR Software as a Service solution are in evaluation. Notice to proceed anticipated in early calendar 2021. The final planned appropriation is \$18.5 million in fiscal 2023. Total costs reported by DBM increased from \$15.7 million with fiscal 2021 documentation to \$33.9 million with fiscal 2022 documentation.

**Recommendation:** Approve

**Agency:** MDH

**Allowance:** \$5,174 GF

**Project Name:** Integrated Electronic Vital Records Registration System

**Description:** Replace legacy paper and electronic system with a system that will allow eligible professionals, hospitals, and health departments to submit data electronically. It should include improved pharmacy and medical records. It modifies a California system that is integrated into the Maryland Total Human-services Integrated Network (MD THINK).

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**Status:** University of California, San Diego (UCSD) is customizing software. Pilot program to support REAL ID is implemented. A pilot for migrating the legacy birth system is underway. To protect against the impacts of catastrophic failures of the old systems while the new systems are being developed, the legacy birth and death systems have been replicated on MD THINK. MDH anticipates completing the new birth system, work order management, the Motor Vehicles Administration Real ID support effort, and the first release of the fetal death record system in calendar 2021. Work that will continue into calendar 2022 includes a new integrated death record system and marriage/divorce records system. High risks include resource availability (UCSD staff has high turnover, which causes delays) and supportability (no source code for legacy birth system). Fiscal 2023 appropriations are estimated to be \$3.5 million with no appropriations anticipated after fiscal 2023.

**Recommendation:** Approve

**Agency:** MDH

**Allowance:** \$2,277 GF

**Project Name:** Long-Term Supports and Services Tracking System (LTSS)

**Description:** Implement an integrated care management system to track long-term care services as well as develop a standardized assessment and in-home services verification tool. The system is key to the State’s strategy to support home and community services for vulnerable Medicaid recipients.

**Status:** Recent software enhancements include new features for the Rare and Expensive Medical Case system and improvements to existing functionality. LTSS also completed its portion of the Eligibility and Enrollment interface with the MD THINK system and has begun a multi-year implementation of Waiver Model functionality. Fiscal 2022 is 90% funded by federal funds. The fiscal 2023 general fund appropriation is expected to be \$6.8 million with another \$20.1 million in federal funds.

**Recommendation:** Approve

**Agency:** MDH

**Allowance:** \$12,351 GF

**Project Name:** Medicaid Enterprise System Modular Transformation

**Description:** Procurement of a modern Medicaid Management Information System to replace current system, which is antiquated and inflexible. Three key goals are real time adjudication of claims, a new financial management system to automate the federal fund claims process, and improved reporting capability. Project will cover all aspects of the Medicaid program such as pharmacy, provider management, claims processing, decision support as well as migration to the (MD THINK) cloud solution.

**Status:** The project is transitioning to a new project manager in calendar 2021. The program development map is being updated to refine the scope of modules, adding modules, and revise timelines. Modules added in fiscal 2020 include Dental Administrative Services Organization, Utilization Control Agent, and Non-emergency Medical Transportation Administrative Services Organization. Customer Relationship Management has been implemented. Behavior Health Administrative Services was implemented in January 2020 but due to challenges, functionality has been rolled back and defects are being resolved. General fund spending is expected to be approximately \$12 million annually through fiscal 2025.

**Recommendation:** Approve

**Agency:** MDH

**Allowance:** \$50 GF

**Project Name:** Migrate MDH Headquarters Data Center to the Cloud

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**Description:** Migrate all systems in the MDH data center into the cloud, including systems that support Medicaid, the Behavioral Health Administration, the Developmental Disabilities Administration, and certain boards. The cloud solution will need to comply with State and federal privacy laws and security policies.

**Status:** The project started the migration of MDH data, server software, and applications to the new hosting environment. Procurement of Disaster Recovery (DR) resources at a secondary hosting facility has been completed, which will give MDH with the large-scale DR capability it has been lacking. Planned activities for the next year include implementation of the DR site, migration of entire virtual server and data storage systems from the legacy MDH Datacenter to cloud resources, migration of physical server systems and applications from the legacy MDH Datacenter to cloud resources, and retirement of the legacy MDH Datacenter. Fiscal 2022 appropriations support planning. Another \$18.9 million is anticipated in fiscal 2023 and 2024.

**Recommendation:** Approve

**Agency:** MDH **Allowance:** \$1,797 GF  
**Project Name:** Statewide VoIP Transition **Allowance:** 1,500 SF  
**Description:** Migrate MDH’s telephone system into VoIP. MDH currently uses PBX-based telecom technology that is at the end of its life. MDH has a total of 5,500 phones in 18 facilities with 16 of those sites using end-of-life PBX systems. Hardware, such as PBX equipment, and software will be replaced.

**Status:** MDH is testing requirements and researching vendors. When completed, this will move the phones at all 18 sites to a cloud-based VoIP environment. Fiscal 2023 costs are anticipated to be \$3.3 million.

**Recommendation:** Approve

**Agency:** Maryland Institute for Emergency Medical Services Systems **Allowance:** \$25 GF  
(MIEMSS)  
**Project Name:** Communications System Upgrade  
**Description:** Upgrading its statewide Emergency Medical Services Communications System, replacing the legacy analog system with a fully Internet protocol (IP)-based system. MIEMSS’ goal is to have a reliable, next generation communications system built on a uniform platform that is IP-based, uses proven and scalable technology, and integrates with the State’s public safety answering points.

**Status:** The COVID-19 pandemic impacted the project by limiting access to buildings and towers for the installation of equipment and delayed statement of work execution by hospital leadership. A decision to pause work is under review as challenges to coordinate facility contacts and access continues. Phase 2, equipment delivery, scheduled for January 2021, is also under review as verification to access paths for hospitals is necessary for delivery. The project is funded with special funds. This appropriation supports oversight. No additional general funds are anticipated.

**Recommendation:** Approve

**Agency:** Department of State Police **Allowance:** \$25 GF  
**Project Name:** Automated Licensing and Registration Tracking System  
**Description:** Automate and streamline the process by which a citizen requests approval to purchase a firearm.

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**Status:** The Professional Licensing system, including nine license types, is scheduled to be completed by January 2021. The following licenses have been completed since the end of fiscal 2020; Security Guard and Agency, Private Investigator and Agency, Security Systems Technician and Agency, Special Police, Railroad Police, and the application for Bulletproof Armor. The project team started the development of the electronic Machine Gun Registration and is on target to have the functionality in production before the Annual Machine Gun registration deadline of May 2021. Once this is completed, the project team will start automation of the Regulated Firearm Dealer Registration process. The appropriations support oversight. No additional appropriations are anticipated.

**Recommendation:** Approve

**Agency:** Office of the Public Defender (OPD)

**Allowance:** \$25 GF

**Project Name:** Case Management Replacement

**Description:** Replace obsolete system with new web-based system.

**Status:** The project is successfully rolling out E-Defender across the agency. Configuration of division and district modules and data conversion tasks are progressing as planned and are scheduled for completion in fiscal 2021. The project is planning to complete integration with the Judicial Informational Services application and begin the operations and maintenance phase in fiscal 2021. Versions of other applications in use by OPD that are required to perform case management-related tasks such as word processing, mail, calendaring, reporting, and data exchange will be integrated with E-Defender. Fiscal 2022 appropriations support oversight.

**Recommendation:** Approve.

**Agency:** State Board of Elections (SBE)

**Allowance:** \$1,335 GF

**Project Name:** Pollbook Project

**Description:** Procure and implement a new pollbook system, which is used for voter registration and related voter functions. The 2022 election will be the fifteenth year using hardware with a 10-year life. New functions are needed that are not available in the current system.

**Status:** The new pollbook system request for proposal was released in November 2020 with an anticipated award in early fiscal 2022. The executive steering committee is now established, and the team created focus groups and developed a Local Board of Elections (LBE) engagement plan to help the transition to new pollbook devices. The project team is developing the product roadmap, pollbook guide, and communication dashboard to support the upcoming project implementation activities. System development costs are shared between the State and LBEs, while hardware costs will be supported only by the LBEs. The fiscal 2023 general fund appropriation is expected to be approximately \$662,000. However local costs from fiscal 2022 to 2024 total \$25.4 million.

**Recommendation:** Approve and recommend narrative regarding local cost sharing and project updates to the budget committees by SBE.

**Agency:** SBE

**Allowance:** \$700 GF

**Project Name:** Agency Election Management System (AEMS)

**Description:** Replace legacy election management system that was developed in 1985. Integrate with the new voting system and other systems, such as voter and candidate systems. Will link existing data from MDVOTERS and conform to the DoIT and SBE security policies and standards.



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**Status:** SBE completed and validated User Acceptance Testing (UAT) testing prior to the election. The new AEMS was successfully implemented in a UAT environment and used for parallel testing during the November general election while the legacy system operated in production and provided election results. The AEMS project team has completed the following modules since July 2020; Ballot Definition Report Module, Election Results Module, Write-In Module, Picking Winner Module, Candidate ID Module, and Ballot Style Import by Style and Precinct Module. The new system is currently scheduled to be released to production in March 2021 as part of the existing MDVOTERS system. Fiscal 2022 is the final planned appropriation. There is a local match equivalent to the State appropriation.

**Recommendation:** Adopt with narrative regarding project updates.

<b>Total General Funds</b>	<b>\$82,983</b>
<b>Total Special Funds</b>	<b>\$4,300</b>
<b>Total Funds</b>	<b>\$87,283</b>

**Appendix 3**  
**Maryland OneStop Portal**  
**Major Information Technology Project**  
**Department of Information Technology**

<b>New/Ongoing:</b> Ongoing								
<b>Start Date:</b> November 2017					<b>Est. Completion Date:</b> June 2023			
<b>Implementation Strategy:</b> Agile								
<b>(\$ in Millions)</b>	<b>Prior Year</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Remainder</b>	<b>Total</b>
<b>GF</b>	\$8,968	\$5,300	\$4,500	\$7,000	\$0	\$0	\$0	<b>\$25,768</b>
<b>SF</b>	0	2,000	2,800		0	0	0	<b>\$4,800</b>
<b>FF</b>	0	0	0	0	0	0	0	<b>\$0</b>
<b>Total</b>	<b>\$8,968</b>	<b>\$7,300</b>	<b>\$7,300</b>	<b>\$7,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$30,568</b>

- **Project Summary:** This project provides a consolidated, easy-to-find portal for State-issued licenses, permits, and forms. The Department of Information Technology (DoIT) works with agencies to bring their processes online.
- **Need:** Before this project was implemented, DoIT estimated that Maryland had over 1,000 forms online spread across State agency websites. Many of these forms are only available to download, complete manually on paper, and return via U.S. mail. There was no interagency coordination for such a common processes as license processing so license processing tasks are duplicated many times throughout the State government apparatus.
- **Observations and Milestones:** Maryland Department of Health, the Maryland Higher Education Commission, the Department of Commerce, the Secretary of State, the Department of Natural Resources, the Maryland Department of Agriculture, and the Department of Housing and Community Development’s Economic Recovery Initiatives have forms integrated into the system.
- **Changes:** Appropriations for the OneStop Portal increase by \$900,000 in fiscal 2022 and \$3.5 million in fiscal 2023. DoIT advises that the increases are the result of additional customer agency requests to join the platform.
- **Concerns:** OneStop continues to experience an unresolved payment integration risk. Several forms within the project scope require a payment. No decision has been made about a payment mechanism, either through current or future contracts, to support the creation of new forms.
- **Other Comments:** This project consolidates State operations on the web. As needs have been identified, scope of this project has increased to accommodate additional applications joining the platform. It seems likely that new needs will be identified over the next year and added to the platform.

**Appendix 4**  
**Statewide Voice over Internet Protocol (VoIP) Transition**  
**Major Information Technology Project**  
**Department of Information Technology (DoIT)**

<b>New/Ongoing:</b> Ongoing								
<b>Start Date:</b> April 2016					<b>Est. Completion Date:</b> June 2022			
<b>Implementation Strategy:</b> n/a								
<b>(\$ in Millions)</b>	<b>Prior Year</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Remainder</b>	<b>Total</b>
<b>GF</b>	\$19,509	\$0	\$50	\$0	\$0	\$0	\$0	<b>\$19,459</b>
<b>SF</b>	0	0	0	0	0	0	0	<b>\$0</b>
<b>FF</b>	3,193	0	0	0	0	0	0	<b>\$3,193</b>
<b>Total</b>	<b>\$22,702</b>	<b>\$0</b>	<b>\$50</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$22,752</b>

- Project Summary:** This is an infrastructure project that migrates the State’s telephone system into VoIP. VoIP converts your voice into a digital signal, allowing you to make a call directly from a computer, a VoIP phone, or other data-driven devices. This replaces older Time Division Multiplexing technology. Hardware, such as private branch exchange (PBX) equipment, and software will be replaced. DoIT manages PBXs at 30 locations throughout the state.
- Need:** Most of the current PBXs are at the end of manufacturer support and need to be replaced or upgraded. This upgrades the technology to integrate voice and data technologies into one network.
- Observations and Milestones:** During the first two quarters of fiscal 2021, the project installed twice as many phones as the first two quarters of fiscal 2020. Local area network upgrades are being handled by two teams, each simultaneously working on a group of sites. The accelerated pace of migrations, which started in fourth quarter of fiscal 2020, is expected to continue through fourth quarter of fiscal 2021.
- Other Comments:** The Maryland Department of Health (MDH) is also transitioning to VoIP. MDH has stated that it has unique programmatic requirements for a VoIP system solution that must support the various agency business units. At the time this project was brought to DoIT’s attention, DoIT was in the beginning stages of rolling out the Department of Human Services’ (DHS) locations. Due to the progress that has been made with the DHS rollout, DoIT has started to have conversations with MDH relating to consolidating these projects. DoIT anticipates that future requests for VoIP services will be managed through an intake process to ensure that DoIT provides guidance on identifying an appropriate solution to the agency request. **There are more PBXs that will need to be replaced, which could add to out-years costs not currently planned.**

**Appendix 5**  
**Object/Fund Difference Report**  
**Department of Information Technology**

<u>Object/Fund</u>	<u>FY 20 Actual</u>	<u>FY 21 Working Appropriation</u>	<u>FY 22 Allowance</u>	<u>FY 21 - FY 22 Amount Change</u>	<u>Percent Change</u>
<b>Positions</b>					
01 Regular	220.60	189.60	185.00	-4.60	-2.4%
02 Contractual	1.72	1.20	0.00	-1.20	-100.0%
<b>Total Positions</b>	<b>222.32</b>	<b>190.80</b>	<b>185.00</b>	<b>-5.80</b>	<b>-3.0%</b>
<b>Objects</b>					
01 Salaries and Wages	\$ 21,725,403	\$ 22,382,450	\$ 22,032,979	-\$ 349,471	-1.6%
02 Technical and Spec. Fees	132,341	46,377	0	-46,377	-100.0%
03 Communication	6,995,876	7,274,528	7,194,083	-80,445	-1.1%
04 Travel	75,852	230,780	89,690	-141,090	-61.1%
06 Fuel and Utilities	25,582	83,422	53,000	-30,422	-36.5%
07 Motor Vehicles	9,565	2,193	2,193	0	0%
08 Contractual Services	179,937,300	178,143,155	161,465,513	-16,677,642	-9.4%
09 Supplies and Materials	42,899	77,000	31,000	-46,000	-59.7%
10 Equipment – Replacement	9,213,049	4,580,510	2,731,000	-1,849,510	-40.4%
11 Equipment – Additional	1,351,562	2,900,585	955,000	-1,945,585	-67.1%
13 Fixed Charges	472,500	417,649	404,449	-13,200	-3.2%
<b>Total Objects</b>	<b>\$ 219,981,929</b>	<b>\$ 216,138,649</b>	<b>\$ 194,958,907</b>	<b>-\$ 21,179,742</b>	<b>-9.8%</b>
<b>Funds</b>					
01 General Fund	\$ 105,172,205	\$ 95,169,984	\$ 98,198,390	\$ 3,028,406	3.2%
03 Special Fund	12,060,934	10,608,877	6,259,081	-4,349,796	-41.0%
09 Reimbursable Fund	102,748,790	110,359,788	90,501,436	-19,858,352	-18.0%
<b>Total Funds</b>	<b>\$ 219,981,929</b>	<b>\$ 216,138,649</b>	<b>\$ 194,958,907</b>	<b>-\$ 21,179,742</b>	<b>-9.8%</b>

Note: The fiscal 2021 appropriation does not include general salary increases. The fiscal 2022 allowance does not include annual salary review adjustments and annualization of general salary increases.

**Appendix 6  
Fiscal Summary  
Department of Information Technology**

<u>Program/Unit</u>	<u>FY 20 Actual</u>	<u>FY 21 Wrk Approp</u>	<u>FY 22 Allowance</u>	<u>Change</u>	<u>FY 21 - FY 22 % Change</u>
0A Major IT Development Project Fund	\$ 89,481,689	\$ 86,075,954	\$ 87,282,869	\$ 1,206,915	1.4%
0B Office of Information Technology	130,500,240	130,062,695	107,676,038	-22,386,657	-17.2%
<b>Total Expenditures</b>	<b>\$ 219,981,929</b>	<b>\$ 216,138,649</b>	<b>\$ 194,958,907</b>	<b>-\$ 21,179,742</b>	<b>-9.8%</b>
General Fund	\$ 105,172,205	\$ 95,169,984	\$ 98,198,390	\$ 3,028,406	3.2%
Special Fund	12,060,934	10,608,877	6,259,081	-4,349,796	-41.0%
<b>Total Appropriations</b>	<b>\$ 117,233,139</b>	<b>\$ 105,778,861</b>	<b>\$ 104,457,471</b>	<b>-\$ 1,321,390</b>	<b>-1.2%</b>
Reimbursable Fund	\$ 102,748,790	\$ 110,359,788	\$ 90,501,436	-\$ 19,858,352	-18.0%
<b>Total Funds</b>	<b>\$ 219,981,929</b>	<b>\$ 216,138,649</b>	<b>\$ 194,958,907</b>	<b>-\$ 21,179,742</b>	<b>-9.8%</b>

Note: The fiscal 2021 appropriation does not include general salary increases. The fiscal 2022 allowance does not include annual salary review adjustments and annualization of general salary increases.