



# State of Maryland IT Master Plan (ITMP) Fiscal Year 2019

*Prepared by the  
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## Message from Secretary Michael G. Leahy

The Department of Information Technology (DoIT) serves the citizens of Maryland by empowering all branches of Maryland State government to work more efficiently, effectively, and securely than ever before. We have significantly reduced risk, improved system stability, lowered costs and increased productivity. We've delivered innovative solutions, providing real value and tangible results to our customers and citizens, while reducing our operational budget. We are pleased to present this FY2019 Information Technology Master Plan which outlines our recent accomplishments in delivering tangible results as well as our goals for the next year.

Our Department's most notable accomplishments include:

- Innovation:
  - The Maryland OneStop Portal – A single web site that will allow citizens, residents, and visitors to search all state licenses and permits across multiple agencies.
  - Supported Governor Hogan's initiative to combat the opioid crisis through the development of online resources that help people in crisis.
  - Bridging the digital divide for our rural communities without access to affordable high speed internet service through the prioritization and construction of new infrastructure, and through the modernization of policies and practices that lower barriers to delivering internet services.
  - Development of MDTHINK, a first in the nation technology platform intended to transform the state's ability to deliver vital human services to Marylanders.
  - The introduction of an employee self-service portal and password reset capabilities that both reduced spend and increased throughput.
  - Adopted the Shared Services operational model which will reduce IT spend, improve cybersecurity defenses, and improve IT service delivery.
- Savings and Efficiency
  - DoIT now provides IT services to 31 agencies and 11,000 end users in 440 locations across the state with only 248 people, representing a 500% increase in efficiency.
  - \$16M saved through standardization and consolidation.
  - 12% reduction in third party consulting rates.
  - 20% reduction in Service Desk staffing while increasing responsiveness.
- Cybersecurity
  - 11,000 endpoints encrypted in 6 months.
  - 100,000,000 Blocked threats every month (average). SQL injection attempts, brute-force login attempts, and denial-of-service (DOS) attacks.
  - 50,000 suspicious files blocked at the firewall every month.
  - 50 security investigations per month.
  - 97% Patch compliance and 98% Malware compliance for IT systems housed in DoIT's Enterprise IT environment – a 28% and 35% improvement, respectively, over the compliance levels maintained under the previous operating model (systems maintained by non-DoIT agency IT staff).
  - Greatly improved our response time to day zero threats.
  - Re-baselined dozens of firewalls.
  - Established weekly vulnerability reviews and monthly cybersecurity situational awareness reporting.

- Operational Excellence
  - 100% uptime for our Datacenter.
  - 98% up time for 1,500 miles of fiber network.
  - 119,712 service desk tickets resolved, 98% meeting DoIT's Operating Level Agreements.
  - Introduction of ITIL best practices.
  - Introduction of Metric Driven IT.

These things could not have been achieved without the dedication of our employees who have worked tirelessly in support of the DoIT mission, advancing and protecting the technological needs and information of those we serve, as well as our partners in business and technology roles throughout state government.

Our master plan is firmly rooted the Hogan administration's commitment to the people of Maryland and supports important priorities like restoring and improving Maryland's economy, creating jobs, improving educational opportunities, making government more fiscally responsible, improving state infrastructure, protecting the environment, addressing Maryland's heroin epidemic, and reducing unnecessary and burdensome constraints on Maryland's citizens and business community. We will accomplish this through the enhancement and expansion of our portfolio of services, further reductions in cybersecurity risks across all agencies, and advancements in data governance and management.

On behalf of the Maryland Department of Information Technology, I look forward to our continued work together as we advance the goals and strategies presented in this FY2019 Information Technology Master Plan.

Sincerely,

Michael G. Leahy  
Secretary & State CIO  
The Maryland Department of Information Technology

## Purpose & Guiding Principles

This FY2019 Information Technology Master Plan assists business and technology leaders within state government in making informed decisions that support their technology goals in support of their business and programmatic operations. It also provides vision and direction for the actions that will be undertaken by DoIT through a set of statewide strategies and goals for Maryland's information technology enterprise. Through DoIT's role as an oversight agency and service provider, these strategies and goals have utility and applicability throughout state government.

In this strategic planning process, DoIT strives to align with the goals and mission objectives of the agencies that we serve, to deliver IT solutions in the most efficient and effective manner possible, and to maintain continuity and predictability while advancing state information technology toward the state of the art. DoIT endeavors to work collaboratively with other entities of state government to leverage the strengths inherent in each IT service organization of state government. The FY2019 Information Technology Master Plan therefore serves as a guide to agencies in selecting technology services that support existing operations, and it also serves as a roadmap to government agencies in fostering innovation and transforming services that government provides.

In developing this FY2019 Information Technology Master Plan, DoIT is guided by the following principles:

- **Alignment with Business Objectives** - Technology strategies have a sound business case and are rooted in the fulfillment of the goals and mission objectives of the people we serve. Technology strategies are therefore informed by two important factors: the non-technological business and strategic objectives of state government, and the standards, risks, and needs of the data related to the business and strategic objectives.
- **Open Data** - Maryland will continue to lead the nation in making public data open and available while maintaining the security of sensitive information. This will be accomplished through the implementation of strong security and governance protocols, and by leveraging modern technologies that support and enable real time decision making.
- **Governance** - Maryland government encompasses an increasingly diverse range of business requirements. Maryland's information technology enterprise supports and coordinates this complexity through sound information technology governance and standards that information technology and business leaders apply to technology decision making.
- **Prevent Redundant Systems, Effort, and Spend** - When feasible, information technology strategies are designed with the statewide information technology enterprise in mind. Information technology solutions, where possible, should aggregate resources, reduce duplication, and increase the state's purchasing power. Also, many agencies throughout Maryland government possess significant information technology investments and subject matter expertise; when practical, DoIT will devise strategies that leverage those investments and subject matter expertise, and will implement policies and standards that standardize security and data management.
- **Risk Management** - Maryland government not only has statutory obligations to secure the information in its custody, but public trust in the state information technology enterprise depends upon the state's ability to keep its information appropriately secured. DoIT will foster a culture that

prioritizes and invests in information security and will apply strategies that reduce risks associated with the evolving security threat landscape.

- **Fostering Competition** – The state leverages open source and vendor agnostic opportunities as its initial option to developing solutions. This approach reduces dependence on monolithic and proprietary platforms that are frequently difficult and expensive to modernize.

The selected goals and strategies build upon core strengths available within IT service organizations throughout Maryland government. This FY2019 master plan provides a foundation for DoIT's partner agencies throughout state government from which these agencies may engage in strategic planning specific to their business and produce a plan that is both fully responsive to their unique needs, while remaining consistent with practices statewide.

## Strategic Framework

DoIT has developed a framework to align strategic goals with the mission objectives of the Hogan administration and the business strategies and information that support them. This framework assists information technology leaders with identifying and validating technology-focused strategies that are fully responsive to the underlying non-technical foundations. It also assists leaders with rationalizing and justifying technology investments.

Technology strategies...	Outcomes...
<b>Align with mission objectives and agency business strategy.</b>	<ul style="list-style-type: none"> <li>- Respond and fulfill the changing needs of state agencies.</li> <li>- Automate business processes in a manner that increases effectiveness and efficiency.</li> <li>- Justify investments by delivering value.</li> </ul>
<b>Adhere to data and information security standards.</b>	<ul style="list-style-type: none"> <li>- Maintain public trust by reducing information security risks.</li> <li>- Improve the accessibility of government services.</li> <li>- Empower decision making through improved consistency and accessibility of information across platforms.</li> </ul>
<b>Apply statewide standards in providing solutions to common business needs.</b>	<ul style="list-style-type: none"> <li>- Support Maryland's statewide vision for information technology.</li> <li>- Reduce redundancy, increase shared use, and increase consistency through a consistent approach to information technology solutions.</li> <li>- Consolidate and leverage existing strengths available within the State information technology enterprise.</li> </ul>
<b>Are structured for consistent and continuous improvement.</b>	<ul style="list-style-type: none"> <li>- Are highly dependable and meet or exceed service level requirements.</li> </ul>

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>- Protect the continuity of business operations.</li> <li>- Maintain relevance to current and future business needs with minimal investment and effort.</li> </ul> |
|--|---|

The goals identified in this FY2019 Information Technology Master plan adhere to the principles described here. Additionally, they provide guidance and oversight so that agency specific technology strategies appropriately balance the unique needs of the agency, while also meeting Maryland's statewide strategic information technology framework.

The strategic framework distinguishes investments between the agency and the enterprise. Agency investments generally perform functions specific to the agency mission, whereas enterprise investments generally involve shared services that provide common utility across multiple agencies. DoIT's objective is to provide enterprise services, published via a service catalog and made commonly available for agency subscription statewide. DoIT strives to ensure that these technologies meet and exceed the level of quality otherwise available in the marketplace. While DoIT welcomes agencies to procure solutions outside of the DoIT provided service catalog, agencies under DoIT oversight will be accountable for justifying the rationale for investments that are potentially redundant to the service catalog. By coordinating services in this way, the State will more effectively leverage statewide IT policies and standards, industry best practices, and limited resources.

## *Current IT Outlay In Maryland*

Over the last two years, DoIT has been consolidating, standardizing and centralizing the IT infrastructure and operations of 31 executive branch agencies. DoIT has spent approximately 80,000 man hours and \$14M. All of these expenses were funded by pre-existing budgets. Highlighted outcomes are presented below.

- DoIT estimates as progress continues the State will save an additional \$16M.
- Over the next 5 years DoIT will have saved the state and estimated \$26M.
- Two years ago DoIT supported 1,200 users with 160 staff members (7 to 1 ratio). Today we support 12,000 end users with 300 fulltime and contractual employees (40 to 1). This translates to a 500% increase in operational efficiency.

## *Strategic Master Plan – Executive Summary*

As stated above, in the most simplistic terms, the goal of information technology (IT) is to automate business processes. IT delivers what people want or need faster, cheaper, and easier while at the same time providing high quality results. Traditionally, State agencies face many significant challenges in delivering on those promises. They range from lack of funding, technology debt, understaffing, skill

gaps, a lack of standardization and loss of knowledge capital. The IT Master Plan details the programs and projects DoIT developed not only to meet these challenges but to expand on successful past efforts.

## FY2018 Accomplishments

DoIT consistently works to enhance the provision of government services. The accomplishments mentioned here include highlights from the preceding twelve months as noteworthy successes in making government information technology services more responsive to citizens, businesses, and entities of state government in alignment with Maryland's strategic vision for information technology.

### MD Safe At Home Program Address Confidentiality Program

The Maryland Safe at Home Address Confidentiality Program (ACP) is administered by the Maryland Office of the Secretary of State (SOS) and provides an important service to victims of domestic violence and human trafficking. The goal of the ACP is to help those individuals who have relocated or are about to relocate to keep their perpetrators from finding them. The SOS approached DoIT with a request to modernize the technology platform used to administer this program. DoIT's solution provided a complete overhaul with an emphasis on information security. The new system utilizes state of the art security techniques and exists on a closed system, secured by multiple layers of access validation. Because the data is highly sensitive, all data is encrypted.

### OneStop Portal

Maryland currently has over one thousand forms online spread across state agency websites. Many of these are only available electronically as a form that is printed, completed, and returned in person or by mail. Maryland's OneStop Portal is an innovative approach to citizen engagement as it provides a single location for locating and submitting forms, license applications, and certification applications across state government. Built with user experience in mind, visitors benefit from intelligent search features and an intuitive, user friendly design. The OneStop Portal is also reducing the cost and burden for state agencies. Through the use of the OneStop Portal's powerful workflow engine, state agencies can now retire proprietary, custom license systems and fold forms and license processing operations into the tools provided by the OneStop Portal.

### MDH Case Management Modernization

The Maryland Department of Health (MDH) and Department of Information Technology (DoIT) collaborated throughout FY2018 to automate multiple paper-driven processes for case management. The initial MDH project was for the Office of Justice Services (OJS), which places individuals in the criminal-justice system for treatment of substance-use disorders (SUDs). With the new case-management system implemented last fall in roughly 90 days, MDH was able to reduce cycle times for these court-ordered SUD placements from ~100 days in FY17 to less than 21 days by November 2017. This 21-day target is a statutory requirement that became effective per the Justice Reinvestment Act (JRA) on October 1. Subsequent to implementing this successful solution for OJS, MDH and DoIT have proceeded with an additional half-dozen projects to modernize case management

for summer-camp applications; pool permits; behavioral-health provider licensure; vital statistics customer service (mainly for birth certificates); and primary-care provider management. The results in each case are savings to taxpayers and vastly better service for MDH customers.

## Opioid Crisis Initiative

The Maryland Department of Information Technology has supported Governor Hogan's efforts to fight opioid addiction in Maryland and played an important role in the Governor's Opioid Operational Command Center by providing consultation and resources to coordinate and analyze data throughout the state. DoIT also commissioned websites for the Governor's Heroin Task Force and developed Maryland's "Before It's Too Late" site, designed to provide vital information and resources to citizens of Maryland who are at risk.

## Rural Broadband

In June, 2017, Governor Hogan signed an executive order creating the Office of Rural Broadband. This office is responsible for implementation of strategies that fulfill Governor Hogan's vision to ensure that all Marylanders have access to affordable internet access by the year 2022. DoIT successfully completed pilot projects in eastern and western Maryland. These pilot projects enhance the availability of internet access throughout critical areas of Garrett and Somerset County. DoIT also streamlined the process for local jurisdictions to gain access to state aerial tower and fiber optic cable resources and supported efforts to streamline Maryland Department of Natural Resources and the Maryland Department of the Environment permitting for construction on state rights of way.

## MD THINK

The federal government awarded \$195M in funding to State of Maryland for the implementation of a groundbreaking first in the nation technology platform intended to transform the state's ability to deliver vital human services to Marylanders. MD THINK is a cloud based data repository that will break down traditional silos and data barriers between state agencies and provide integrated access to programs administered by agencies provide integrated access to programs administered by agencies including DHR, the Department of Health and Mental Hygiene, the Department of Juvenile Services, and the Department of Labor, Licensing, and Regulation. The Department of Information Technology provides oversight of the MD THINK program and provides other mission critical services to the MD THINK program including cloud platforms, independent validation, data governance and management, finance and accounting, and business analysis.

## Project Request Management System

The Project Request Management System (PRMS) modernizes and streamlines the central intake process for solution and major development reporting requests. This includes modernizing the required ITPR form submitted to the Department of Budget and Management (DBM) and the Department of Legislature Services (DLS) required each fiscal year. The PRMS will also allow for tracking of project and documentation progress and providing improved reporting and dashboard features in accordance with DoIT's agile approach to project development.

## CATS+ Expansion

Through a transition to more frequent annual expansion windows and greater, more impactful outreach to the business community, DoIT nearly doubled its CATS+ vendor pool from approximately 350 to 650 new contractors this year. The expansion allows increased competition for State contracts and provides expanded options for State agencies.

## FY2019 Strategic Goals & Strategies

**Goal #1 – Establish a service-centric IT Organization and promote solutions that maximize the benefits of standardized shared services.**

### **Strategy 1.1 – DoIT Shared Services Program**

Starting in fiscal year 2019, DoIT will adopt a Managed Service Provider (MSP) business model to serve our customers. All DoIT functions and capabilities will be clearly defined as a set of IT Services in our service catalog which will clearly articulate the features, benefits, scope, responsibilities, Service Level Agreements (SLA's), and associated costs. Traditionally, State IT departments have been centrally funded by using general funds. Going forward, agencies consuming DoIT IT services will be invoiced based on their usage quarterly and leverage reimbursable funds.

This approach has a number of advantages:

- Customers will have visibility and control over their IT spend. Agencies will be billed only for what they use.
- It vastly simplifies IT budget forecasting.
- It provides an incentive for agencies reduced resource consumption (such as data storage) which will result in reduced IT spend and improved cybersecurity.
- Funds exceeding DoIT's immediate operational budget will be deposited into a non-expiring MITDP fund to pay for operational overhead costs.
- It encourages IT systems standardization which drives down the IT costs for subscribing agencies and provides customers with a dependable roadmap of systems functions and requirements.

Under the MSP model, there will be three client types: Fully Managed, Enterprise, and Standalone Services.

1. **Fully Managed Client** - DoIT provides for all IT needs and is essentially the agencies IT department. DoIT takes on all responsibility for IT strategy, infrastructure, applications, operations, support, standards, networking, cyber security, upgrades, license compliance and hardware/software refreshes. This option has the lowest cost for each service provided, highest level of service, and strongest possible cybersecurity defense.
2. **Enterprise Client** – DoIT provides all IT infrastructure services, operational, support and some cybersecurity responsibilities. Agencies manage their own application portfolio and development resources. Customers enjoy the lowest costs and highest level of services. However, this is

inherently less secure than a fully managed client. This is because the application layer is outside of DoIT's control but remains a major cybersecurity attack vector. As such, the cybersecurity risk will be higher than that of a Fully Managed client.

3. **Standalone Client** – Agencies subscribe to one or more DoIT provided services such as VoIP, E-mail or server hosting. These services will meet or exceed solutions provided by the private industry in scope, quality and price. Additionally, signing up for these services will be far quicker and require less initial investment than following the usual RFP process. However, due to technological, logistical, and/or financial considerations, Standalone clients will not enjoy the same pricing and terms as the Fully Managed and Enterprise clients. Additionally, not all DoIT services are available as a standalone option.

### **Strategy 1.2 – Global Innovation Program**

DoIT is uniquely positioned to provide applications and services that benefit many agencies at the same time with similar business processes. These projects represent those efforts.

- **Maryland OneStop Portal** – A single web site that will allow citizens, residents and visitors to search all State licenses and permits across multiple agencies. It will empower users to find critical information such as documentation requirements, costs, approval time, expected completion time, permit license process information, and state contact info.
- **IT Asset Management** – The IT Asset Management (ITAM) Project will create a comprehensive ITAM program comprised of policies, procedures, and tools that will meet regulatory, security, and license compliance requirements and provide a unified framework for administrators and customers to navigate and record each step of the Asset Management Lifecycle for IT hardware, software, data and other assets. Asset management results in better decisions. Aligning management of IT resources with strategic policies and direction will support the long-term success of the Agency's mission, goals and objectives.
- **Virtual Desktop Infrastructure (VDI)** - VDI is virtualization technology that hosts a desktop operating system on a centralized server in a data center. Users access this environment via their desktop web browsers. VDI has the potential to save the state millions of dollars in hardware upgrades, improve cyber security and overall service quality. Additionally, it may be the only way in which the state can meet the January 2020 date of upgrading thousands of Windows 7 PCs.
- **Grant Tracking** – DoIT is working with our partner agencies to develop a single system for the tracking of grant funding. This will reduce the number of grant applications from four to one.

## Goal #2 – Provide, protect, and support information technology components that enhance effectiveness and enable government to provide better services to the people we serve.

### **Strategy 2.1 – Modernization-Standardization-Consolidation (ModStaC) Program**

The IT ModStaC Program will be comprised of a number of projects that will focus on Standardization, Consolidation, and Modernization of the systems under DoIT's care. Strong IT fundamentals, while not necessarily exciting, have huge, immediate benefits for the state. This program will reduce cost and operational overhead while at the same time improve service quality and strengthen cyber security defense across 31 agencies.

- **Data Center Consolidation** – The intent of this project is to move our client agencies backend IT infrastructure to a modern, highly secured, highly redundant Data Center. Redundant servers will be retired, patching and AV scanning standardized, and physical servers will be transformed to virtual servers.
- **Active Directory Consolidation** – A project to develop a single source of truth for all AD information. A shared AD infrastructure enables user mobility, common user provisioning processes, consolidated reporting, unified management of devices, and improve security.
- **VoIP** – The State currently supports 25 PBX phone systems well past their useful life. This technology will be replaced over the next 5 year with a Voice over IP (VoIP) technology which has been successfully piloted at DoIT, the Maryland Department of Aging, and the Maryland Central Collections Unit.
- **AS400 Migration** – DoIT has begun work with the Maryland Department of General Services to migrate their applications off of their AS400 system on to more easily support, modern technology. Work will then continue to the Maryland Department of Labor, Licensing, and Regulation AS400 system after.
- **Windows OS Upgrades** – This project is to upgrade all Windows 2008 servers and Windows 7 workstations to newer versions. Both Windows Server 2008 and Windows 7 reach their end of life period in January 2020 and will no longer receive security patches provided by the software vendor. The State has two years to upgrade hundreds of servers and thousands of workstations across the State. This is complicated by the fact that many mission critical applications running on the old operating system are unable to run on the supported versions of the Windows Server OS. All agencies need to create remediation plans in order to protect the state's critical data and systems.

## Goal #3 - Promote the responsible collection and use of information to enable data driven decision-making.

### **Strategy 3.1 – Standardize report formats and automate data collection and storage specific to reporting requirements to simplify publication production and provide up to date information in real time.**

Data reporting currently lacks continuity of format and is not uniformly accessible to stakeholders, including those within state government and the public. The state will enhance its processes and tools to make information across the state more useful and consistent, to allow for the measurement of data in real time, and to democratize the data such that it can be efficiently accessed and utilized by all

appropriate parties. This is accomplished through a structured approach to data governance and data stewardship that DoIT will create and foster.

**Data Governance** is the bridge that connects business with technology. It refers to the organizational structures, rules, rights, obligations, and accountabilities of the custodians and users of information in the performance of data driven functions. The governance function will foster a culture that approaches information management from an enterprise viewpoint. It will provide the policy structure that enables data architects to proactively structure the storage, processing, and delivery of data in ways that address data quality and availability across platforms throughout the state. Because the data in the State's custody is a precious public asset, governance also provides a framework from which information security functions categorize and assure the protection of private information, while ensuring the transparency and availability of data that should be publicly accessible.

**Data Stewardship** is the implementation and ongoing management of the practices established by data governance. Data custodians ensure that systems are developed in a manner that is interoperable with the data governance policies and structures. It provides for the operation and security of data repositories, assurance of data quality and availability, and implements tools that allow for the use and management of content. Where data governance is a collaboration between business and technology stakeholders, data stewardship is a coordinated effort between application owners, data custodians, and enterprise technology providers who are united by the protocols set forth by data governance.

### ***Strategy 3.2 – Maryland Open Government Reporting***

Maryland's data assets are a valuable public resource. Consistent with this value, Maryland has led the nation in making data open and available. The Maryland Open Data portal incorporates a wealth of information from agencies throughout Maryland government. This information is presented in its raw format. While this is a tremendous strength particularly for data analysts, the vast tables and rows of information unfortunately provides only limited direct benefit to the consumer of that information.

DoIT envisions a platform that includes legislatively mandated reports. Where practical, this information may be presented in real-time or near real-time, organized in a format that provides continuity and accessibility to the consumer. This platform would connect with back end databases to provide data that is measurable and transparent, thus providing more timely and effective outcomes that arise from the use of these reports.

### ***The Future Vision***

Information technology has become a critical asset in the Maryland government's mission. It is used daily by thousands of citizens, businesses, and state employees in the performance and receipt of government services. By statute, DoIT has the authority and responsibility to engage in pilot and prototype projects to evaluate new trends and emerging technologies that present opportunities to

transform and enhance government services. This section highlights a number of these technologies that DoIT is presently evaluating.

### Aerial Imaging

In alignment with Governor Hogan's focus on strengthening public safety, homeland security, and infrastructure, DoIT and the Maryland Department of Transportation (MDOT) are collaborating together to pilot emerging technologies that utilize satellite imagery capable of identifying land displacement. DoIT sees potentially broad applicability for this technology as an additional layer of support to strengthen Maryland's current inspection and monitoring capabilities.

### Artificial Intelligence

Artificial intelligence (AI) represents a paradigm shift from the traditional computational tasks commonly associated with computing, whereby technology performs functions commonly associated with human cognitive skills. The scope of artificial intelligence has evolved since its advent in the twentieth century. While AI is certainly not a new concept, the advent of commercially viable narrow AI applications such as human speech recognition and processing, machine learning, and deep learning present opportunities to enhance government services. DoIT intends to explore AI tools that automate the knowledge based work presently done by humans.

### Blockchain

A blockchain is a decentralized ledger of transactions. The decentralized nature of the ledger assures that the transactions can be trusted. Blockchain has become recognized for their use in transfers of value. However, a multitude of applications also exist outside of the economic and financial space. DoIT is actively researching the impact that blockchain will have in financial and title transfers, and also is actively seeking ways this emerging technology could enable cutting edge approaches to information security.

### Broadband Access for All

DoIT has actively supported Governor Hogan's effort to make affordable high speed internet access available to all Marylanders by the year 2022, and played a crucial role in accelerating local jurisdictions' projects in eastern and western Maryland. Many of the homes and businesses that remain unserved at this time are due to their remote location, as the scarcity of demand in underserved communities presents a difficult economic model for private industry. DoIT is exploring emerging technologies in global satellite mesh networks and next generation cellular and wireless technologies, and is also exploring innovative approaches to supporting wireline implementations, to bridge this digital divide.

### Data Centric Enterprise

Since the advent of the digital age, the data landscape of Maryland state government has become complex. The current paradigm for information is centered upon applications delivering a specific governmental function, resulting in a fragmented and decentralized model for the storage of information. Platforms in use throughout the state vary in size, scope, and level of technical debt. This

legacy is disrupted by recent evolutions in technology that place information directly in the hands of users and decision makers. The challenges and opportunities experienced in Maryland are common among many large enterprises in both the public and private sectors. DoIT is prioritizing the exploration of emerging technologies designed to respond to these challenges and opportunities and intends to incorporate the most successful technologies and approaches into its data governance and stewardship strategies.

### Enhanced Citizen Access

Technology is present in the everyday lives of the people we serve. Citizens often experience real time access and interaction in performing everyday tasks from shopping to the consumption of news and information. Unfortunately, government frequently lags behind in many aspects of this digital revolution. Over the past three years, the Maryland Department of Technology has made achievements toward delivering a modern experience. DoIT is now building on previous successes like our award winning Maryland.gov website, with new initiatives to make it faster and easier for Marylanders to receive the government services and information they require. Projects like Maryland's OneStop licensing portal are examples of this forward momentum and are fulfilling DoIT's commitment to create user experiences similar to or better than those commonly available in the marketplace.

### Digital Identification

Building on recent successes with Maryland's coordinated OneStop licensing portal, the Maryland Department of Information Technology is exploring emerging technologies that have the potential to provide a digital identity for citizens. This digital identity could be utilized for conducting business across multiple agencies throughout the state of Maryland, and could potentially become an open access platform, allowing citizens to make their digital identity available for use in place of traditional methods of identification, while ensuring the highest levels of privacy and security.

### IT as a Service

In the past, DoIT had served the state primarily as a governance and oversight body, with individual government agencies responsible for most aspects of their information technology operations. Governor Hogan called upon executive branch agencies to serve the people better, and use resources more wisely. DoIT's strategic vision to fulfill the Governor's vision is to coordinate information technology across the state, with strengths and resources shared across agencies for the benefit of all. In so doing, the state enhances citizen service delivery, increases security, and improves the stewardship of our public resources. Since that time, DoIT has established a catalog of enterprise services available to agencies, statewide. DoIT is committed to strengthening this portfolio of services and is continuously working with other state agencies and private industry to identify new and better approaches.

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