Information Technology
Master Plan
(ITMP)
for
Maryland State Archives

Fiscal Year 2016

1.1 ITMP Overview

This ITMP contains the following sections describing the Agency's current and future information technology (IT) initiatives and status:

All sections are required unless exempted by DoIT for this fiscal year.

- Section One - General information
- Section Two - Summary information about the Agency's business functions, major goals and key strategies to achieve those goals
- Section Three - Information about the Agency IT strategic direction
- Section Four - Agency IT portfolio
- Section Five - Agency Six Year Report
- Section Six - Cyber Security compliance matrix

1.2 Section 1 – General Agency Information

1. Agency Name (ACRONYM)
Provide the full Agency name and acronym

Maryland State Archives (MSA)

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5. Plan Date

Provide the date the plan was approved by the Agency Executive Sponsor

1.3 Section 2 – Agency Business Functions, Goals, and Key Strategies

Executive Summary:

Records document the lives of our people, the governments they create, and the rights they enjoy. They tell of our struggles, triumphs, and failures. They define who we are as a society. Of all the materials generated by our government, only a small portion is deemed so important as to be designated for permanent retention. The State Archives is the place where these permanently valuable records are preserved and made accessible over time.

1.4 Section 3 – Agency Strategic Direction

1. Summary of Agency IT Environment

State and local government is faced with a daunting challenge: how do we decide what of the electronic record we should and must be saving whether it is for legal purposes or for the necessary enlightenment of the public over time. Of the data that we decide does not have enduring value, when should it be discarded?

The Maryland State Archives (MSA) is Maryland's historical agency and permanent records repository for government records, "the ultimate repository of the people's records," as one Court Clerk has pointed out. An archives is the conscience of the public, the repository of its collective memory, recording the history of the State.

The Records Management Division of the Department of General Services (RMD) has responsibility for coordinating the records management program for the State, while each agency is individually responsible for the records in their custody and for ensuring that the agency records management program is viable.

MSA and RMD share responsibility for the review and approval of Records Retention and Disposition Schedules (schedules). After records of an agency of State or local government are reviewed or appraised by archivists and records managers, a determination is made for each type of record whether to keep the record and for how long; based on the record's administrative, financial or historical value. The schedules cite if the record can be destroyed after some predetermined time; transferred to the Records Center managed by RMD; or transferred to the MSA for permanent retention.

Although the vast majority of Maryland's permanent records exist in paper form and on microfilm, the past decade has witnessed the rapid growth of electronic records. The same basic issues of appraisal, access, and preservation of information that pertain to paper records also pertain to electronic records. Records once kept in paper or on microfilm now exist on a variety of computer information systems. Many of these are

permanent records, but their electronic form is fragile and easily lost. Developing strategies to preserve electronic records is a challenge to the agencies that manage the information, the information system professionals as well as archivists and records managers.

Satisfactory management of electronic records requires that records be actively managed throughout their life cycle: from creation, through all phases of access and use, to final disposition, whether that is permanent storage or eventual destruction. It is important to understand the distinction between the life cycle of records and the life cycle of information systems that create, manage and use the records and the life cycle of the media on which the records are stored. The life cycle of records often exceeds the life cycle of the information system in which the records are originally created or captured.

Likewise, some storage media will significantly outlast the hardware and software necessary to retrieve and display the records stored on them. To successfully manage and maintain electronic records, it is important to determine if the records will be needed beyond the life of the system where they are currently stored and, if necessary, to plan for the migration of the records to a new system before the current system is retired.

The successful management and preservation of electronic records, however is not something that we can undertake alone. It will take the creative energy of IT professionals, archivists and records managers working together to preserve the essential information of government in a permanent format that is accountable, verifiable, and susceptible to a transparent migration from the media format of today to the media format of tomorrow in the most effective and cost efficient manner possible.

The first step is to carefully examine IT operations with regard to what must be saved permanently as the permanent public record and what form that record should take. The second is to use the state's records scheduling process, as required by law, to make rational decisions about disposition of records.

Drivers and Issues:

Page 21 of the 2013 Joint Chairmen's Report contains the following reporting requirement:

Electronic Record Storage and Report on Proposed Changes to Records Management:

It is the intent of the budget committees that the Maryland State Archives (MSA) pursue to the greatest extent possible the reduction of paper and electronic storage of government records through aggressive implementation of records retention and disposal schedules. Further, the budget committees request MSA, in conjunction with the Department of General Services (DGS), to submit a report to propose changes to records management with the intent to reduce the physical space needed to store records, and to propose legislation, if appropriate, to make these changes.

The MSA response to this reporting requirement contained main or the drives and issues MSA considers essential to our IT planning process as well as a series of

recommendations. The content of that report are as follows:

Executive Summary

The Maryland State Archives (MSA) will continue to utilize the records scheduling and disposition process to encourage agencies to reduce the volume of paper records generated by government and to promote the maintenance of records in an electronic environment. In addition, the MSA's responsibility to preserve and make accessible our most important documents extends to government publications as well. The Archives makes the following policy, regulatory and legislative recommendations:

Records Management

1.   The legislature or the executive should consider mandating that government agencies create, maintain, and manage records electronically by the year 2025.

2.   Agencies should be required to appoint an accountable records management officer with specified skills and authority.

3.   Agencies should be encouraged to contract with records management consultants to quickly and cost effectively bring them into compliance with existing records management laws.

4.   Laws or court rules specifying a particular form or format for records (e.g., paper, microfilm, etc.) should be modified to remove references to particular record formats. In addition, where necessary, legislation should be adopted to clarify that the electronic record is the official record.

5.   Agencies should expend an appropriate level of effort to carry out the records management program.

6.   Records scheduling and disposition should be automated to simplify the development of records schedules and enhance compliance with the statutory requirement periodically to describe and appraise State government records (State Government Article 10 - 634).

7.   Available records management guidance should be updated to reflect current practices.

8.   The Office of Legislative Audits should request a copy of an agency's retention schedule as part of the routine for an entrance meeting of a fiscal compliance audit and note in the report if an up-to-date schedule is not available.

9.   A records management training program, including new employees introductory training, should be developed and offered to State and local government agencies.

10.   All information technology projects should include an information life-cycle management component as part of the functional requirements analysis.

Government Publications

The Archives also makes the following recommendations regarding government

publications:

1.   Develop systems to ensure the permanency of electronic government publications.

2.   Build redundancy into the State's holdings of electronic government publications to ensure the ongoing availability of this material. This redundancy could be accomplished within the State Archives' repository with duplicate electronic copies at multiple sites and by having holdings of electronic government publications at other State government libraries and facilities.

3.   Ensure the longevity of a program for identifying, acquiring, and providing permanent public access to electronic government publications by incorporating it into the proposed program for managing electronic records. This would combine funding and reinvestment in electronic infrastructure for publications and records to achieve fiscal, structural, and managerial efficiencies.

4.   Require for both paper and electronic formats the use of certain traditional, essential features of a publication: a title, the name of the government agency responsible for the publication, the date of publication, and where appropriate, the names of contributors to the publication, all placed in a prominent location on the title page. A cover could be included but is not necessary for an electronic format. Additionally, standard metadata for State government publications should be developed.

5.   Determine if it is necessary to have different but compatible methods for acquiring publications of the executive, legislative, and judicial branches of State government.

6.   Post electronic publications on agency websites in a standard, organized way to make current publications more easily found and accessed. For example, some executive branch agencies have created a publications tag to improve the accessibility of their electronic publications.

7.   Once best practices for publishing and disseminating government publications have been established, update available records management guidance accordingly.

Background

The MSA is the central depository for government records and government publications of permanent value. As a result of increases in population and recordable events, government activities and the breadth of MSA responsibilities for all branches of government - executive, legislative, judicial and all levels - State, county, municipal, the volume of records deposited with MSA has expanded beyond its ability to accept, store and properly maintain them.

While the MSA is responsible for retention of permanent State records, DGS provides secure storage of non-permanent records through the State Records Center. Proper retention and retrieval of non-permanent records is critical to the day-to-day operations of the State. Non-permanent records are an integral part of State activities such as civil and criminal litigation, Maryland State Police internal investigations and contractual disputes. Timely disposal of non-permanent records ensures that the cost of maintaining

non-permanent records does not exceed their value to the State.

Records Management

Records document the lives of our people, the governments they create, and the rights they enjoy. They tell of our struggles, triumphs, and failures. They define who we are as a society. Of all the materials generated by our government, only a small portion is deemed so important as to be designated for permanent retention. MSA is the place where these permanently valuable records are preserved and made accessible over time. The MSA collects the records that make transparent government possible, preserves the evidence protecting individual and property rights, and protects Maryland's most essential records from natural and man-made disasters. MSA and DGS work together to establish the appropriate retention of non-permanent records as well.

At present, the majority of Maryland's permanent holdings are paper records representing a small percentage (5% to 10%) of all records created by government. These must be cared for, stored properly, and made accessible to the public. Paper-based records may be managed and maintained by providing appropriate environmental conditions and adequate protection from other hazards. The challenges of management and maintenance are more complex for electronic format records.

Provided that the records are effectively managed, there are many benefits to having records in an electronic format. There are particular advantages to having records exclusively in an electronic format rather than having a record in both paper and electronic formats. Most notably, records in an electronic only format are more easily and more widely accessible and take up less physical storage space.

For this reason, Maryland law, regulation and policy should encourage creating, managing, and maintaining public records in electronic formats whenever practical. Maryland's record management policies should also follow the example of recent Federal initiatives and require that records created in an electronic format are to be managed in an electronic format. So, for example, records created electronically should no longer be printed for the sole purpose of being managed in a paper format, where feasible.

In doing so, Maryland will be following the lead of the Federal Government. President Obama's Presidential Memorandum "Managing Government Records" issued on November 28, 2011, launched an Executive Branch effort to update records management for the digital age to improve performance, promote openness and accountability, minimize cost and increase efficiency. As a part of this effort, the Office of Management and Budget and the National Archives and Records Administration released a Managing Government Records Directive on August 24, 2012. Among other requirements, this directive instructed Federal agencies to manage all permanent electronic records in an electronic format to the fullest extent possible by the end of 2019. Agencies are also encouraged to transition their records from analog to digital format whenever it is

beneficial. The National Archives and Records Administration continues to encourage the management of electronic records in an electronic format by providing guidance including their new guidance on managing emails in an electronic format. Based on the example of the Federal Government, the record scheduling process in Maryland also should be automated through a statewide initiative of the Department of Information Technology, in cooperation with the Records Management Division of the DGS, and the MSA.

The MSA and the Records Management Division of DGS continue to explore ways to use the records scheduling process to identify appropriate records for digitization as well as those that could be created electronically as a means to reduce the need for storage space in the future. However, the critical physical storage needs for the paper records we have now and those that government will continue to generate in the future still must be addressed.

Government Publications

The MSA's responsibility to preserve and make accessible our most important documents extends to government publications as well. As noted in the April 2007 Final Report of the Maryland Digital State Publications Task Force:

Digital state publications document the history and workings of Maryland's government. Now more than ever, transparency in government and the right of citizens to information produced by government agencies are issues that strike at the heart of a free society.

Government publications, particularly those produced by states, may appear prosaic to the casual observer: however, they are essential sources that provide fundamental information about the legal and regulatory systems that affect our daily lives. They provide a historical record of the accomplishments, problems, decisions, and workings of our state. They are used daily by state delegates and senators, judges and clerks, and Maryland state agency employees in the conduct of the people's business, as well as by citizens of the state and indeed the world. State publications are key sources supporting research into public policies that often are tested in states before reaching the federal level. States are the building blocks of government in our federal system, and to ignore state information is to misunderstand a major component of our American democracy.

In the past two decades, state agencies have increasingly transitioned away from the once-traditional print format to the point where 80% of state publications received by the State Publications Depository and Distribution Program (SPDDP) are also available online. Although state government agencies have posted many digital publications on their public web sites, the "shelf life" of such publications is limited as the web sites change. Unless copies are saved- either in digital or print form- digital publications effectively cease to exist when they are removed from agency web sites.

The Report includes a valuable diagram that defines the class of material known as Maryland government publications. The diagram, Hierarchy of Government Publications,

organizes the various types of government publications by their importance, from most important to ephemeral, i.e., least important. The essential material is highlighted and labeled Core Collection.

Current Challenges

For nearly two decades following its establishment in 1953, Maryland's Records Management Program served as a model program for the nation. By the mid-1970s, the dramatic growth in State government activity during the twentieth century had resulted in an exponential surge in the volume of government records being produced and needing to be managed. Beginning in the 1980's the number of records management professionals within agencies began to diminish to the point where today these resources are very much lacking. The number and variety of records also grew exponentially. These developments produced new challenges with which the State was not equipped to cope.

Traditional modes of distributing government publications and otherwise making them known and available to the public have been disrupted. Ironically, along with the deficiencies in the State's electronic publishing practices is the growing trend of the public to access this material on the web. Currently, there is no effective or efficient system, method, or program for identifying, acquiring, and providing permanent public access to Maryland government publications, either in print or electronic format.

Records Management

Records Scheduling Process

Records scheduling forms and processes were developed nearly 40 years ago to function in a paper-based environment where both the number of government offices and the quantity of records needing to be managed were relatively small. These forms and processes have not been adapted to the current environment where the number of government agencies, the quantity of records being created, and the challenges of new records technologies have increased significantly.

Compliance

State law and regulation mandate that every agency have a program for the effective management of records, that all records created or received by an agency in the normal course of business be covered by a records retention and disposition schedule, and that schedules be reviewed every two years. Currently, there is no effective mechanism to determine or ensure compliance.

Although the basic requirements exist in both statute and regulation to maintain a robust records management program, there are no consequences to agencies failing to do so. The Office of Legislative Audits should require Maryland agencies to provide updated Record Retention and Disposition Schedules as part of the initiation routine (entrance meeting) of fiscal compliance auditing, noting in the audit report whether the agency can

certify that the schedule is complete and current.

Accountability

While regulations require that each agency have a records officer, this requirement often goes unfulfilled or is assigned to an employee of insufficient authority and training. An agency records officer should have some degree of training in the necessary records management policies, processes, practices, and tools to enable effective coordination with the DGS Records Management Division and MSA in evaluating record material. The records officer must also be in a position to ensure that agency personnel are complying with the approved records retention and disposal schedules, and that the agency has an effective emergency response and Continuity of Operations (COOP) plan.

Transparency, Privacy and Cyber Security

Data protection and identity theft are becoming more problematic for records management professionals in the electronic age. The use of social media has created additional challenges to traditional records management practices. All agencies must attempt to reconcile the demand for transparency with expectations that personal information will be protected. The role of the records officer must expand to ensure that certain information about individuals is not retained and is addressed through records retention schedules and the process of records destruction. A responsible cyber security officer, who may or may not be the records officer, should be designated in each agency.

The Public Information Act does an excellent job of defining the restrictions on Maryland government records. It establishes that, unless there is a law or regulation restricting the access to government records, the records are openly available to the public. There are a number of laws that restrict access to specific types of records or specific types of information for reasons of privacy. Currently, most of these restrictions never expire. However, at some point in their lifecycle all permanent records become so aged that unrestricted access no longer poses any threat to individual privacy. At that point, such restrictions only serve to inhibit historical or genealogical research into records.

Existing Code and Regulations

Some existing code and regulation include language that may present an obstacle to an agency transitioning from paper to electronic records by appearing to mandate that records be created and/or maintained in a paper format. For example, the Registers of Wills are interested in transitioning many of their probate records from a paper format to an electronic format. However, in reviewing relevant legislation, the Registers of Wills Association has found some potential obstacles to this transition. To cite a single instance, Annotated Code of Maryland Estates and Trusts Article § 2-208 states that the Register "shall receive, file, and store safely every original paper and record left in his custody." For this and other statutes, the Register of Wills Association is considering whether the language needs to be changed before a Register is legally authorized to scan and destroy paper records, leaving only the electronic version as the official record.

These statutory obstacles are not unique to the Registers of Wills. Maryland Rule 16-505 directs the District Court that paper records can be destroyed "provided that the records have been photographed, photocopied or microphotographed" and that a "master security negative" be retained. It is not clear whether digitizing paper records would meet the requirements set forth by this rule for destroying the original paper records.

The above examples are meant to be only illustrative and the necessary legislative and scheduling changes are minor. There may be other areas of law or regulation that may need clarification or amendment.

Maryland Government Publications

Maryland government reports and other publications increasingly are published in electronic format. Many are issued only in an electronic format. In fact, most electronic publications of Maryland government could, right now, replace paper to improve the accessibility of this material and reduce the expense of distributing and properly storing print editions. A few titles, mostly legal publications such as the Annotated Code of Maryland, still need to be collected in a print edition because the designated official version is print. With the adoption of the Uniform Legal Electronic Materials Act (ULEMA), an official version of this material, too, could in the near future be available in electronic edition.

Acquisition

Currently, most electronic State government publications must be acquired through a laborious process. Even when web harvesting programs are used, the results of the harvests must be sifted through manually to identify publications already acquired from those still needed by the Archives.

Cataloging and Metadata

Along with the change in format from predominantly print to electronic, have come other changes to publication practices. Until recently, print publications were prepared by State government print shops, where standard publication practices were known and observed. With the growth of desktop publishing, features of a publication essential to evaluating its content have been lost.

Distribution and Preservation

Traditional modes of distributing publications and otherwise making them known and available to the public have also been disrupted. Ironically, along with the deficiencies in the State's electronic publishing practices is the growing trend of the public to access this material on the web. Currently, there is no effective or efficient system, method, or program for identifying, acquiring, preserving, and providing permanent public access to Maryland government publications, either in print or electronic format.

Accomplishments

MSA has been attempting to deal with the many issues associated with a shift from paper-based to electronic records. The Archives already has initiated several efforts to improve the records management procedures for the State. Most notably:

Encouraging Migration to Electronic Records through the Scheduling Process

When Archives and DGS staff receive proposed records retention and disposition schedules, a standard part of the review process is to seek opportunities in which records can be maintained in an electronic format. Archives and DGS staff can then advise and inform agencies on the potential opportunities to maintain records in an electronic only format rather than in both paper and electronic formats. Recently MSA and DGS assisted the State Department of Assessments and Taxation, the Maryland Sentencing Commission, the Department of Health and Mental Hygiene Laboratories Administration, the Department of Labor, Licensing, Regulation Office of the Commissioner, Public Service Commission and the State Highway Administration to incorporate these concepts into their agency records schedules and procedures.

Encouraging Operational Migration to Electronic Records

Since 1996, the Archives has been involved in cooperative efforts with the Judiciary to migrate targeted current operations to electronic formats. First with plats.net and later with the much more ambitious mdlandrec.net, the Archives and the Judiciary have eliminated the need to create, maintain, preserve, and make accessible more than 100,000 land record volumes to date. These land records, which exist only in digital form, would, if in paper form, require 50,000 cubic feet of permanent archival storage space.

In recent months, the Archives began a cooperative effort with the Registers of Wills, the Comptroller, and Family Search to digitize the State's probate records in Archives custody. This will not only make these materials more easily accessible to a far wider audience, but also may make possible the disposal of many thousands of cubic feet of paper records.

Training and Education

The MSA has taken a leading role in promulgating the Intergovernmental Preparedness for Essential Records (IPER) training throughout the State. The course was created by the Council of State Archivists and revised by MSA staff. There are two courses, Essential Records and Records Emergency Preparedness Response. The courses help agencies identify their essential records, protect those records, and know how to respond in the event of an emergency. Archives staff have been regularly offering this training since 2011 and, to date, have trained over 250 people.

MSA is hosting a conference featuring the United States Government Printing Office's FDsys, a complete system of national prominence for acquiring, preserving, and providing permanent public access to electronic federal government reports and other publications. This will give invitees from all three branches of Maryland State government an

opportunity to learn about best practices, both technical and managerial, for creating and maintaining a repository of electronic government publications.

DGS regularly provides in-house and on-the-spot consulting to State, county and local employees on the retention schedule approval process, appropriate retention schedule language, and proper packing and storage of public records.

Resources for Records Management Guidance

DGS and MSA have generated a number of records management guidance resources for government agencies, including an updated records management guidance webpage: http://msa.maryland.gov/msa/intromsa/html/record_mgmt/welcome.html.

New documentation providing direction on electronic records, such as standards for digitization of paper records, is also being generated. Additionally, MSA is developing a new collection policy to aid agencies in identifying which records have permanent value. The DGS Records Management Division is working on revising their records management guidance manual, complete with sample retention schedules.

Improving Procedures for Transfer of Electronic Records

MSA and DGS are improving their infrastructures for the transfer of electronic permanent and non-permanent records and transitioning from a manual to an automated process.

Simplifying the Retention Schedule Process

MSA and DGS Records Management Division are working together to streamline the records retention and disposition schedule process.

Conclusion

While acknowledging digitization is not going to be accomplished without significant costs of its own and does nothing directly to reduce the need to find appropriate space to house current and future permanently valuable records in paper form, the Archives heartily endorses the effort to move away from paper in the creation of public records. Maryland law and regulation should encourage creating, managing, and maintaining public records in electronic formats whenever practical. Maryland's record management policies should also follow the example of recent Federal initiatives and require that records created in an electronic format are to be managed in an electronic format.

Electronic Records Management

"…The challenge is to determine which types of electronic records must be retained and for how long, as well as how to best preserve them and make them available…"

For presentation purposes we have grouped the drivers and issues into two categories:

statewide and inter-agency specific.

Statewide

When viewed in the context of the statewide Information Technology Master Plan, some of the drivers and issues are as follows:

Platform – lack of standard platforms that support archival transfer of data

Disaster Recovery – The Archives can (and in many cases does) provide a reliable depository for essential agency records. Agencies should be encouraged to explore this opportunity.

In the standards arena, agencies should be encouraged to incorporate information life cycle management into their systems development initiatives and generally to their information technology practices. Most agencies lack the capacity for adequate information life cycle management planning. Few recognize or accept any responsibility for adhering to the laws and regulations related to record retention and disposition particularly as it relates to electronic records.

Thus, effective records management is a significant issue facing perhaps every agency of state and local government. Inadequate records management programs means, among other things, that there is no reliable inventory of records upon which the Archives can base good planning for the accessioning of permanent record material.

Also, while we have fundamentally shifted from a paper-based records world to an information technology environment, the processes and procedures for identifying and effectively migrating permanent electronic record material to the Archives has not yet matured. Indeed, there are many systems still being developed today that lack the ability to migrate data into an archival form and format for efficient transfer to the Archives. We speculate that many systems even lack the ability to migrate data forward into replacement systems when current applications and hardware become obsolete.

Some other problems related to records management:
- Agencies tend to think of records in terms of paper files or series of paper files. Therefore, record retention programs tend not to include vitally important electronic record series
- Agencies have tried to hold onto records they designate as permanent
- Many record series are not considered by an agency to be a records series. Examples
  - Access Log Files
  - Security Log Files
  - Voice Mail

- o Email
- o Databases

Some issues related to data:

- Collection and transfer
    - o Open standards for transfer and retention need development and frequent updating
    - o Proprietary applications must include data migration / export function
- Conversion, assurance, consolidation and integration
- Integrity - - monitoring and audit data flow
- Security
- Correction and expungement
- Delivery and sharing
- As well as shielding and restricting
- Certification

Inter-Agency Specific Drivers and Issues

Some inter-agency specific drivers and issues are summarized below:

- **Interoperability constraints.** Collecting all of the electronic data designated for permanent retention presents a myriad of issues with regard to formatting, transferring, updating, validation and verification
- **Data integrity.** Converting data for preservation without losing content, style and quality
- **Data Security.** Network security is becoming much more complicated. So, too, is system security
- **Backup and restore.** Large amounts of data require different backup and restoration procedures
- **Data Delivery.** The public is now accustomed to receiving 24 x 7 service from the Archives via the web, yet we only have staff to operate weekday / daytime hours. Also, shielding and restricting access need to be effectively applied where law or regulation demand.
- **Framework training.** As increasingly sophisticated networking configuration is required, local IT staff needs much more extensive training to remain qualified to manage large networks. Focusing on internal networking issues reduces the capacity to attend to application-level concerns.

IT Accomplishments:

Far and away the greatest accomplishment of the Archives in the last several years is the establishment of the electronic archives and successful partnership with the two entities that historically have created some of the largest records series in State government: the

Circuit Courts and the Registers of Wills. These partnerships focus on migrating from paper systems to electronic records management and have the opportunity to save the state, achieve efficiencies while also providing much enhanced access to the records.

Another major accomplishment is the consolidation and integration of the many databases that provide the intellectual control over our vast holdings. Roughly a decade ago, the Archives had over 24,000 separate databases that provided our staff the means of finding records. Over the last 12 years we have worked to bring most all of those data sets together under our *Guide to Government Records*. Much work still needs to be done, but we are very proud of this major accomplishment.

Other accomplishments:
- ☐ Data Integrity – data ingest and data flow is routinely audited
- ☐ Data Security
  - ▪ Network protected by enterprise firewalls and host / PC firewalls monitored by IPS, MARS, and Splunk technology
  - ▪ Critical systems are set up to be dual-host locally and some are dual host remote
  - ▪ Critical databases mirrored locally and remotely
- ☐ Data Delivery – Multi-home Internet connections

IT Goals and Strategies:

Performance Measures	Actual	2014 Actual	2015 Estimated	2016 Estimated
Inputs:				
Electronic record storage capacity (gigabytes)		320,400	320,400	320,400
Outputs:				
Electronic data online (gigabytes)		125,982	128,206	130,430
Website files online (images, htmls, etc.)		254,191,357	276,426,997	298,662,637
Database records managed (millions)		13,278	14,278	14,655
Percentage increase in database records from last FY*		-9%	8%	3%
Outcome:				
Data transferred via web (in gigabytes)		112,163	131,080	145,501
Percentage increase in data transferred from last FY*		1%	17%	11%
Percentage increase in data transferred from 2011**		56%	83%	103%
Efficiency:				
Ratio of electronic data online to storage capacity		39%	40%	41%
*note: percentage incease based on last Fiscal Year				
**note: percentage calculated from the Fiscal Year 2011				

<u>Statewide</u>

Policy and programmatic initiatives that should be addressed include:
- • With DoIT taking the lead, develop model email retention and disposition policy and system

- Development of standards for preservation of the permanent record (pdf /a)
- Establishment of guidelines and standards for procurement authorities and agency staff establish to reference when drafting requirements documents for information systems
- Development of standards and processes for the export of data from legacy systems
- Development of model records retention and disposition schedules for information systems
- Development of model system for archiving of web presence and, most importantly, government publications.

Goals and Strategies related specifically to Mdlandrec.net (Location-Specific)

1. **Security**

    a. Improve password security by requiring users applying for new accounts to select a password reminder question and answer. Current account holders would be asked to select a question the first time that they access Version3 in order to update their account information. Users must answer their reminder question correctly to get the password by email

    b. Reroute logout so that courthouse users are redirected to county home page instead of the MDLANDREC login screen.

    c. Improve validation in search forms to prevent users from entering invalid characters, make sure that required fields are entered prior to submitting the query to the server, and improve query performance. This validation also prevents users from locking up search threads on the servers by hitting the submit button numerous times if they think the search is taking too long.

2. **Searching**

    a. Modify database structure to improve performance and help prevent search queries from timing out.

    b. Reduce the number of instances where user has to select desired book from a list of similarly named volumes by cross matching JIS volume references to MSA accession numbers.

    c. Improve the accuracy of the value of the ending page of instruments derived from JIS CAIS/COTT data.

    d. Add a new search box where the user can input a house number and street name. This search mimics the existing street address search available on the Real Property website. This search can be turned on or off based upon county.

    e. Add data update date to website to reflect the most current dataset

available in MDLANDREC

  f. Add verified date for CAIS/COTT data on the search results and printed results page.

3. **Navigation** Improve navigation by:

  a. Allowing users to view an entire instrument if they enter a page number in a jump box for a page in the middle of the

  b. Reroute users to page-by-page navigation from the CAIS/COTT search when the ending page of the instrument is unknown so that the user can determine the end of an instrument

  c. Reroute users to instrument-by-instrument navigation from the CAIS/COTT search when the ending page of an instrument is known.

  d. Display hyperlink for the instrument view only if the ending page of an instrument is known.

4. **Appearance** Website upgraded and overall appearance makes pages easier to read, user interfaces self-explanatory, and navigation more efficient.

  1. DB2 Download - CAIS. The DB2 download of CAIS Land Record index data from the Judicial Information Systems mainframe has been streamlined by a full redesign of the processes using state of the art programming tools and techniques. This allowed a redesign of the verification system along with the ability to download JIS MISC and PLAT along with LAND data. The new programming allows not only the daily update, but the ability to run an update during the day if such an emergency situation requires it. The new updates complete in about 40% of the time of the old updates

  2. DB2 Download - COTT. The DB2 download of COTT Land Record index data from the Judicial Information Systems mainframe has been created with a full design of the processes. The COTT data is the data that were replaced by the CAIS set of data starting in the early 1990s. The COTT data did not have a separate nightly update in the original system, but that has been rectified in this version. The previous updates originally occurred monthly and then was updated to weekly. With this new version, there is a nightly updates of all COTT changes. The new updates complete in about 5% of the time of the old updates.

  3. Instrument Verification **-** To verify that all of the required data has been downloaded. The new verification system verifies to a different level of confidence depending on the step. All verifications except the Base Record Counts also perform any cleanup necessary to ensure both databases match. The individual verifications are list in order of confidence with the most confident at the bottom of the list:

    a. Base Record Counts: This nightly verification performs a count on each table and compares the counts to ensure each table matches.

    b. Year/Month Record Counts: This nightly verification

performs a count on each table by Year and Month. Each Year/Month combination is compared between the databases to ensure each combination matches.

    c. Flag Comparison Verification: This nightly verification check to see if the Land Record flags between both database match.

    d. Partial Data Verification: This ad-hoc verification check will check an entire table by downloading the full table from DB2 and then doing a comparison. This can be a lengthily verification step and needs to be set up by staff before it is run.

    e. Full Data Verification: This verification check compares a single data field between both databases using the Year/Month record counts process to check to see if anything does not match. This process will run over the weekends and may be performed either monthly, bi-monthly or biannually

4. **Data Replication**. Complete the data replication model depicted in the Accomplishments section above.

Agency Support of the State IT Master Plan:

MDlandrec.net and plats.net (Statewide)

Implementation of mdlandrec.net allowed the Judiciary and the Archives to consolidate access to land record instruments into one standard, consolidated system statewide as opposed to separate systems in each of the 24 circuit courts. Together, these projects:

- Make land records more widely accessible via the Internet

- Reduce or eliminate the need for people to visit the courthouse

- Enable the courts to provide constituents (state and local government, researchers and the land record user community) with comprehensive access to recent and historical land record filings in conjunction with existing materials relating to land use and ownership

- Free the courts from the costs of storing and caring for collections of large, deteriorating materials that are difficult and expensive to maintain and duplicate

- Over time, eliminate the need to maintain costly and bulky microfilm reader printer equipment and film storage devices in the State's courthouses

- Operate in conjunction with ELROI the recordation system

- Provide timely updates and efficient preservation of new land record filings

- Secure the State's significant investment in digital imaging and provide authentication and backup of scanned images through duplicate archival images in the electronic 'vaults' of the Maryland State Archives.

Redundancy, Disaster Recovery and Data Migration (Line of Business / Interagency)

MSA has completed the build of a disaster recovery site at UMBC and would like to work with agencies to establish DR relationships in which the Archives holds on to security copies of data or hosts applications. MSA engaged a data migration process of transporting data between different Hierarchical Storage Management (HSM) platforms for budgetary and IT compatibility reasons. Platform and operating dependency is a key consideration for any system implementation, upgrade or consolidation of digital storage.

MSA selected EMC's Isilon Network Access System (NAS) clustered tiered level storage designed for its digital storage and file sharing capabilities. EMC's Isilon clustered storage system architecture consists of independent nodes that are all integrated with the OneFS operating system software. MSA has developed its clustered storage systems specifically to address the needs of storing, managing and accessing digital content and other unstructured data from the Annapolis campus and the UMBC disaster recovery and business continuity location.

Primary Cluster   DR Cluster
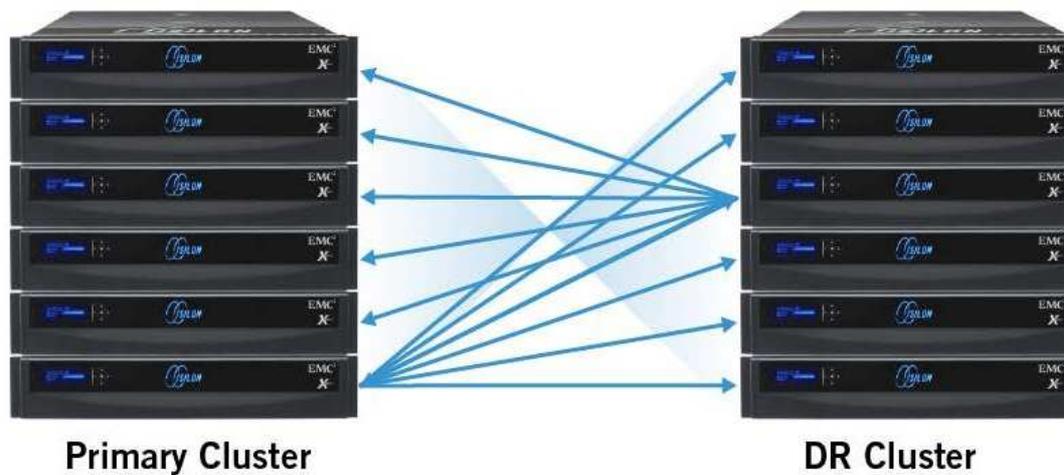
The Isilon platform and operating systems provides a variety of cost effective options (including secure intra-agency cloud and/or shared media storage and public accessibility to data) for on-demand digital storage with daily backups de-duplicated in a centrally managed and broadly accessible. This shall also include the capability for robust file sharing among both sites which provides a single unified operating system and can deliver over 100 GB/s of throughput co-located.

Intra-Agency Sharing / Supporting Strategies

Maryland Elected Official "MDElect" is a joint effort between the Maryland

Archives, Towson University GIS, State Board of Elections and the Maryland Department of Planning for displaying the current and most recent districts numbers, and current elected officials (i.e. Congress, Senators, and Representatives) in the state of Maryland.

Maryland Government Pictures "MDGOVPICS" provides an inter-agency shared SQL database photography service working together with the Maryland Archives ensuring transparency, accountability, and ongoing collaboration of shared resources for the citizens of Maryland.

Information Retention Standards (Statewide)

The Maryland State Archives is in the initial phases of redrafting regulations related to records retention. In addition, the Archives will build and prototype a model web-based system for agencies to use to inventory records – a necessary perquisite to development of a sound records management program.

Interoperability

Land Records Access

The Maryland State Archives is programming interfaces in to the *mdlandrec.net* system for both the State Department of Assessments and Taxation in support of the ground rent legislation passed last year and to the Maryland National Capital Parks and Planning

Prince George's County PGAtlas project.

Guide to Government Records

Understanding the organization of the MSA Guide to Government Records is the key to pursuing successful research at the Archives. The organization of these finding aids is closely related to the way the Archives identifies its records. With the advent of new switching and routing technology along with servers providing better scalability, virtualization, and data redundancy supporting ColdFusion, and .Net technologies. The purpose of this site is to provide an inventory of the Archives' holdings and to aid our patrons in their use. Efficient web centric applications along with SQL database technologies exist supporting the new optimized management systems. MSA websites display of data will be handled in a more direct method through a stored procedure API. The current deployment has external guide and internal guide, both the internal and external versions has an independent set displayed fields, which is set at the series level, and are controlled by the MSA Guide Administrator for access.

While the Guide is essential to the Archives staff, and while it is made available to the public, it is difficult to understand and navigate without significant training.

Current Environment:
Optimize service delivery while maintaining effective cost controls

Information Technology (IT) must continue to improve the enabling infrastructure as technology and process improvements occur. Leveraging task orders through state contracts, enabling (IT) for better efficiency and return of investment utilizing contractual services in a timely and efficient manner. The IT strategy is to support business decisions from an agency approach, recognizing that IT is and necessary asset and critical to future, reallocating of funding to support fundamental and not ad-hoc services is key. The decision to effect change must be balanced with the resources and funds available to properly support the business goals of the Maryland State Archives. Delivering services, security and performance are key performance indicators in providing a much more agile environment for accessing the data. MSA supports a holistic view of the state's permanent record data with the key mission of the agency acting as a host provider, and becoming stewards of the data.

Ensure IT systems interoperability
The IT systems supporting the Archives interfaces with other state agencies. Creating seamless delivery of services between these agencies is critical to an effective information environment and improved citizen access. Communication between IT personnel at the various state agencies striving to enforce common interface standards is essential. Interoperability with partner agencies will continue to be a major catalyst and hurdle for IT system improvements.
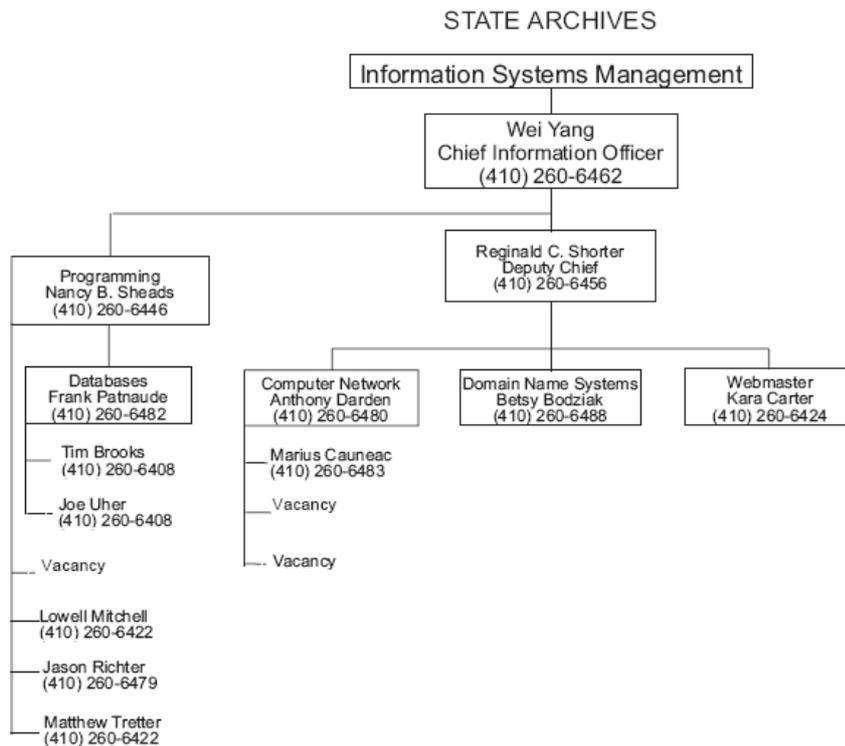
Storage Capacity
Data storage providing fast and reliable access of permanent record data for the Archives patrons. By refreshing and optimizing server and storage technologies, the Archives are better equipped, gaining more powerful and reliable infrastructure, while increasing service levels and productivity. The Archives operational efficiency through consolidation

of legacy storage will provide cost savings for storage in the fourth and fifth year of annual hardware maintenance.

Retention management
Improvements to patron services and information delivery processes require skilled administrative and technology personnel providing quality service delivery, assuring data reliability, controlled access to data, and maintaining data integrity.

IT Resources:

STATE ARCHIVES

Information Systems Management

Wei Yang
Chief Information Officer
(410) 260-6462

Reginald C. Shorter
Deputy Chief
(410) 260-6456

Programming
Nancy B. Sheads
(410) 260-6446

Databases
Frank Patnaude
(410) 260-6482

Computer Network
Anthony Darden
(410) 260-6480

Domain Name Systems
Betsy Bodziak
(410) 260-6488

Webmaster
Kara Carter
(410) 260-6424

Tim Brooks
(410) 260-6408

Marius Cauneac
(410) 260-6483

Joe Uher
(410) 260-6408

Vacancy

Vacancy

Vacancy

Lowell Mitchell
(410) 260-6422

Jason Richter
(410) 260-6479

Matthew Tretter
(410) 260-6422

Future Environment:

The Maryland State Archives is currently in the process of implementing workflow and routing concepts to increase efficiency by concentrating on the routine aspects of work activities. Workflow and routing typically separate work activities into well-defined tasks, roles, rules, and procedures which regulate most of the work. Within information technology, processes in the work place are partially or totally automated by information systems, i.e., computer programs performing tasks and enforcing rules which were previously implemented by humans.

MSA is still in the business processes evaluation phase and is just starting to reengineer

each process to improve or adapt it to changing requirements within state government.

Business process redesign includes increasing customer / patron satisfaction, improving efficiency of business operations, increasing quality of deliverables, reducing cost, and meeting new business challenges and opportunities by changing existing services or introducing new ones. MSA has started workflow management which in terms supports the reengineering of business and information processes.

It involves:

1. Defining workflows, i.e., describing those aspects of a process that are relevant to controlling and coordinating the execution of tasks which includes skills of individuals or information systems required to perform each task.

2. Providing for fast redesign and reimplementation of the processes as business needs and information systems change. Workflow management software will provide the ability to support integration and interoperability among other state agencies providing intra-state sharing with the current missions and goals of the ITMP.

Methodologies:

Currently MSA has adapted a methodology of system oriented workflow which will streamline the administrative task of each department, and minimizing human intervention.

Governance:

IT Sustainability

In support of the State of Maryland's Smart, Green and Growing initiative, MSA IT will work to pursue measures that promote more effective power management and lower operational energy use overall. IT has implement technologies as server virtualization, to reduce the number of physical servers running at any given time. A concerted effort has been made to further lower the carbon footprint, and vendor supplied initiatives to support the goal.

Security:

The Archives continues to review and enhance security practices and measures as appropriate. MSA network, which hosts several critical systems, leverages a robust security package which includes intrusion detection in support of state audit recommendations and compliance.

MSA enterprise network has a combination of supported technologies driving a need for additional bandwidth and throughput. Merging technologies such as cloud, analytics, and social media are fundamentally changing user behavior and network usage patterns,

driving demand for bandwidth and a growing need for resiliency and security. These changes are making enterprise and data center networks increasingly complex, adding to MSA ITs economic burden by creating environments that are inherently difficult to manage and operate.

MSA has implemented Juniper EX switching Virtual Chassis technology which allows multiple EX Series and QFX Series switches to be interconnected over a highspeed backplane using dedicated Virtual Chassis ports, or through optional 10GbE or 40GbE. The Juniper solution provides for greater availability, better performance, scale, and flexibility.

The Archives employs security monitoring, analysis, and response technologies to monitor network devices and applications, greatly improving threat identification, mitigation responses, and compliance with network security audits utilizing SPLUNK technology allowing captures, indexes and correlates real-time data in a searchable repository from which it can generate graphs, reports, alerts, dashboards and visualizations. In addition, Archives continues to employ disaster recovery measures fostering a relationship with the University of Maryland Baltimore County as a business continuity and disaster recovery facility.

2. **Agency Certification of Compliance with State Nonvisual Access Regulations**

The Agency must certify that information technologies procured, and services provided, are compliant with State nonvisual access regulations (COMAR 17.06.02.01-.12). The IT Nonvisual Accessibility regulations can be found at: http://www.doit.maryland.gov/ *Search: Nonvisual Access.*

X | By checking the box, the Agency certifies its compliance

1.5 Section 4 – Information Technology Portfolio

Providing detail on the Agency's IT portfolio helps support State IT strategic planning by providing a view of the State's overall IT portfolio. *Print Section 4 contents and instructions to reference during data entry.*

IT Portfolio Contents:
- Baseline IT budget
- Current and planned IT Projects
    - Planned start and end dates for each project
    - Perpetual Objective and Supporting Strategy targeted for each project
    - Current State SDLC phase for each project (See Table 1 - State SDLC Phases)
    - For solicitations related to an IT project, provide Contract Award (planned or actual)
- All current and planned Agency IT procurement activity. Document the type of procurement (e.g. RFP, TORFP, IFB) as well as a schedule for planned procurement activities including, but not limited to, the following milestone dates:
    - Draft procurement kick-off

- o Procurement submission to DoIT for review
- o Release procurement
- o Begin proposal evaluation
- o Contract award

Table 1 - State SDLC Phases

1 - Initiation	4 - Requirements Analysis	7 - Integration and Test
2 - Concept Development	5 - Design	8 - Implementation
3- Planning	6 - Development	9 - Operations and Maintenance (O&M)

IT Portfolio Scope

The Agency IT portfolio must include any <u>current or planned future IT project</u> meeting the following criteria:

- MITDP
  - o Reminder: a project may be deemed an MITDP due to factors other than overall project size. See the definition for an MITDP online at: http://doit.maryland.gov/policies/pages/mitdps.aspx
- Major enhancement (project) being completed under an O&M contract,
- Current Memoranda of Understanding (MOU) or Interagency Agreements (IAs) in place that support an IT project,
- Existing public-facing geographic information system (GIS) initiatives undertaken or already in place including the URL (e.g. Maryland Department of Natural Resources (DNR) "Maps and Map Data" http://dnr.maryland.gov/gis/)

Data Instructions

Use the following instructions to guide completion of the IT Portfolio. Actual data requested varies by project or procurement type.

SDLC Phase –	Enter the SDLC phase as documented in Table 1 - State SDLC Phases
PIR Date –	Enter the date listed on the Agency PIR approval letter (for MITDP in SDLC phases 5-8)
Project Start Date -	Enter the planned or actual project start date for the project. If the project has halted and restarted, enter the start date on which the project restarted for the most recent of SDLC phases 1-4.
Planned End Date -	Enter the planned end date for the project including 1 full fiscal year of O&M beginning after the fiscal year in which the project ends.
PPR EAC $ -	If in SDLC phases 1-4, enter the estimated cost at completion of Phase 4. If in SDLC phases 5-9, enter actual costs at completion of Phase 4.
Project EAC $ -	Enter the estimated cost at completion of the project including 1 full fiscal year of O&M. Estimate at Completion (EAC) is the total updated estimated project cost, combining actual cost to date, plus planned

expenditures for the remainder of the current fiscal year, plus planned expenditures for all remaining project years after current fiscal year.

CTD $ -   Enter actual costs through end of FY14. This number should match entries in the Agency's financial systems (e.g., ADPICS).

Project Description -   Enter a short summary of the project.

Project Status -   Enter a short analysis of the current state of the project as of the start of FY16.

Associated Contracts   Enter the name of all contracts, including MOUs and IAs supporting the project to date.

Funding Source -   List all funding sources and dollar amounts for all years. FY14 and earlier dollars must be actuals; FY15 must be approved amounts; FY16 dollars are proposed/requested values. Dollar amounts must match other Agency deliverables, including the DA-21 Over the Target Request for FY16.

Note: A Project Planning Request (PPR) ITPR estimates the costs for SDLC Phases 1-4 only. After receiving PIR Authorization from DoIT, the Project Implementation Request (PIR) ITPR estimates the costs for SDLC Phases 5-9.

* During the FY13 budget cycle, Legislature established language that requires approval of an Agency's MITDP project funding request before an Agency can expend funds, for both the project's planning and implementation phases. This is known as the two-step Information Technology Project Request (ITPR) process. The process to request approval for project planning, document the project's attributes, and provide estimates of project schedule, funding and cost information was captured and began with the FY13 ITPR. The *FY16 ITPR Guidelines & Instructions* can be found at the DoIT website at: http://doit.maryland.gov/, Search: "Agency ITPR". (reference http://mlis.state.md.us/2011rs/bills/hb/hb0072e.pdf, page 51).

1.5.1   Baseline IT Budget

Total FY15 IT Budget:	$1,126,602
Requested FY16 IT Budget:	$1,352,949

The Agency IT Budget value must account for all dollars spent on IT-related items, including: internal and external staff, hardware, network expenses, O&M, other IT services, plus any IT projects.

1.5.2   Current MITDPs (Commencing FY 15 or earlier)

MSA has no current MITDPs.

1.5.3   Current Procurements
The following section describes all IT procurements greater than $25,000 that are in any stage between in-development through evaluation.

1.5.3.1 Current Procurement 1

Copy the following table for each current procurement.

Procurement Title *(include ADPICS number)*	Application and Support Improvements (D60P5400006)
Procurement Type *(RFP, TORFP, PORFP, IFB plus Fixed Price, Time and Materials, or describe other)*	TORFP
Period of Performance *(include main period of performance and list option years available)*	3 Years
Procurement Schedule *(insert procurement milestone dates)*	Submission to DoIT for review: 09/03/2014 Release procurement: Begin proposal evaluation: Contract award:
Associated with What IT Project	MDLandrec
Projected Total Cost *(include all option years)*	$300,000

1.5.4 Current MOU or Interagency Agreements

The following MOU or IAs are currently in effect for any IT –related activities or support. List any MOUs or IAs regardless whether they support an MITDP.

1.5.4.1 Current MOU/IA Number 1

Type of Agreement (MOU or IA)	MOU
With Whom	University of Maryland Baltimore County
Cost	$100,000.00 per year
Term *(include start and end dates)*	2013-2018
Scope	Provide conditioned space and power in secure area
List all Projects Utilizing the named MOU/IA and associated services Provided	All MSA projects

1.5.4.2 Current MOU/IA Number 2

Type of Agreement (MOU or IA)	MOU
With Whom	Towson University
Cost	$150,000.00 per year
Term *(include start and end dates)*	2013-2015
Scope	Provide IT consulting services for database management, application development and programming services as well as support for GIS appications at the Archives.
List all Projects Utilizing the named MOU/IA and associated services Provided	

1.5.4.3 Current MOU/IA Number 3

Type of Agreement (MOU or IA)	MOU

With Whom	Maryland Environmental Services
Cost	Time and material as needed
Term *(include start and end dates)*	Ongoing
Scope	Support for such things as the automated environmental monitoring system at the Archives.
List all Projects Utilizing the named MOU/IA and associated services Provided	

1.5.5   Other IT Projects

This section describes other IT-related projects per the scope in Section 1.5, including major enhancements being completed under O&M Contracts and/or any current GIS projects.

None planned

1.5.6   Planned Future MITDPs (Commencing FY16)

This section contains information about any MITDP projected to start in FY16.

MSA has no future MITDPs.

1.5.7   Future IT Procurements

The following section describes all IT procurements of a value of $25,000 or greater that are: planned for award that expect to utilize funds in FY16.

Future IT Procurements will support ongoing business functions of the Archives.

1.5.8   Future MOU or IAs

The following MOU or IA pertaining to IT currently are planned for FY16 or beyond.

None planned

1.5.9   Other Future IT Projects

This section describes planned future "other" IT-related projects per the scope in Section 1.5, including major enhancements being completed under O&M Contracts and/or any current GIS projects.

None planned

1.6 Section 5 - Six Year IT Project Outlook

The Department of Legislative Services (DLS) requires DoIT to submit a projection for all Agency projects that may request funds for FY2016 through FY2021 in a Six-Year IT Project Outlook Report. The Six-Year IT Project Outlook Report includes any projects within the six year horizon that are expected to be within SDLC Phases 1 through 9 (Initiation through O&M), including any planned projects that have not yet begun SDLC Phase 1 (Initiation).

The following data is required to be included in the report, beginning in in Section 6.6.1:

Project name –   enter the name of the project (if project is listed in Section 4, the names must match)

Brief description – enter a brief description of the project (if project is listed in Section 4, the descriptions must match)

Project Data by Fiscal Year –

        Fiscal Year –   If the project is an MITDP that has not yet started phases 5-9, enter as much as is known. *Do not delete years from the table.*

        Funding Source –   GF = General Funds

                         RF = Reimbursable Funds

                         SF = Special Funds

                         FF = Federal Funds

                         MITDPF = General Funds appropriated for the project and accounted for in the Major IT Development Fund

                         N/A = the project or system is projected to be closed out prior to a fiscal year

        Estimated Project SDLC phase – List all phases expected to be partially performed during the fiscal year. Estimate for all projects unless the project is projected to be closed out prior to a fiscal year (enter "N/A" if this occurs).

        Estimated Expenditures – Enter estimated dollars for the fiscal year and funding source. Enter "TBD" for an MITDP not starting Phase 5 before FY16. Enter "0" if the project is projected to be closed out prior to a fiscal year.

Total Estimated Cost – Estimated cost through the 6 year outlook period

1.6.1 Six Year IT Project Outlook
Complete the table below for each IT project or system expected to require funds in fiscal years 2016 through 2021.

1.6.1.1 WorkFlow

Project Name	WorkFlow and Routing Management
Brief Description	Workflow management software will provide the ability to support integration and interoperability among other state agencies providing

Fiscal Year	Funding Source *(one line per source per FY; GF, RF, SF, FF, MITDPF or N/A)*	Estimated SDLC Phase *(See Table 1 - State SDLC Phases)*	Estimated Expenditures *(Dollars)*
		intra-state sharing with the current missions and goals of the ITMP.	
2016	N/A	1 - Initiation, 2 - Concept Development	$125,000.00
2017	N/A	3- Planning, 4 - Requirements Analysis	$100,000.00
2018	N/A	6 – Development, 7 - Integration and Test	$550,000.00
2019	N/A	8 - Implementation	$250,000.00
20120	N/A	9 - Operations and Maintenance (O&M) – Year 1	$TBD
2021	N/A	9 - Operations and Maintenance (O&M) – Year 1	$TBD
		Total Estimated Cost	**$**

1.6.1.2 E-Commerce

Project Name	E-Commerce Electronic Payment	
Brief Description	An electronic payment strategy is being developed, and the priority for sequence of electronic payment capabilities.	

Fiscal Year	Funding Source *(one line per source per FY; GF, RF, SF, FF, MITDPF or N/A)*	Estimated SDLC Phase *(See Table 1 - State SDLC Phases)*	Estimated Expenditures *(Dollars)*
2016	N/A	1 - Initiation, 2 - Concept Development	$ 100,000.00
2017	N/A	3- Planning, 4 - Requirements Analysis	$75,000.00
2018	N/A	6 – Development, 7 - Integration and Test	$ 200,000.00
2019	N/A	8 - Implementation	$ TBD
2021	N/A	9 - Operations and Maintenance (O&M) – Year 1	$TBD
2022	N/A	9 - Operations and Maintenance (O&M) – Year 1	$TBD
		Total Estimated Cost	**$**

1.6.1.3 Enterprise Document Management

Project Name	Document and Content Management	
Brief Description	To assist the entire state of Maryland seeking to manage the creation, storage, and retrieval of information stored as documents	

Fiscal Year	Funding Source *(one line per source per FY; GF, RF, SF, FF, MITDPF or N/A)*	Estimated SDLC Phase *(See Table 1 - State SDLC Phases)*	Estimated Expenditures *(Dollars)*

Fiscal Year	Funding Source	Estimated SDLC Phase	Estimated Expenditures
2016	N/A	1 - Initiation, 2 - Concept Development	$ 125,000.00
2017	N/A	3- Planning, 4 - Requirements Analysis	$ 200,00.00
2018	N/A	6 – Development, 7 - Integration and Test	$ TBD
2019	N/A	8 - Implementation	$ TBD
2020	N/A	9 - Operations and Maintenance (O&M) – Year 1	$ TBD
2021	N/A	9 - Operations and Maintenance (O&M) – Year 1	$TBD
		Total Estimated Cost	**$**

1.6.1.4 Single-Sign on

Project Name	Network Single-Sign on		
Brief Description	Provide authentication and access control of multiple related, but independent software systems.		
Fiscal Year	Funding Source *(one line per source per FY; GF, RF, SF, FF, MITDPF or N/A)*	Estimated SDLC Phase *(See Table 1 - State SDLC Phases)*	Estimated Expenditures *(Dollars)*
2016	N/A	1 - Initiation, 2 - Concept Development	$ 125,000.00
2017	N/A	3- Planning, 4 - Requirements Analysis	$ 100,000.00
2018	N/A	6 – Development, 7 - Integration and Test	$ 100,000.00
2019	N/A	8 - Implementation	$ 250,000.00
2020	N/A	9 - Operations and Maintenance (O&M) – Year 1	$ TBD
2021	N/A	9 - Operations and Maintenance (O&M) – Year 1	$TBD
		Total Estimated Cost	**$**

1.7 Section 6 - Maryland IT Security Policy Compliance

1.7.1 Objective

The objective for ITMP Section 6, Maryland IT Security Policy Compliance, is to ensure each agency has a documented security plan and procedures to comply with the Maryland Information Security Policy (MD ISP) and current legislation, Chapter 304/SB 676, a product of the 2013 Legislative session.

For the 2016 FY ITMP, the State is most concerned with information systems containing personally identifiable information (PII), but also the importance of safeguarding protected health information (PHI) and other sensitive/confidential data. However, as technology systems and data contained therein are so critical to efficient and effective agency operation, it is critically important that all agencies apply good information security processes including system categorization, risk assessment and compliance to requirements delineated in the MD ISP and State Law.

1.7.2 Background

DoIT requires each State agency under its jurisdiction to annually submit an IT security plan or documented security procedures that address key areas of the MD ISP and State Law. This requirement was instituted in response to the Data Security Performance Audit (conducted from May 2011 to February 2012), and current legislation (Chapter 304/Senate Bill 676 – Government Procedures – Security and Protection of Information, 2013 Session).

The current MD ISP is located on-line at:
http://doit.maryland.gov/Publications/DoITSecurityPolicy.pdf.

Current State Law, Chapter 304/Senate Bill 676 – Government Procedures – Security and Protection of Information, 2013 Session, is located on-line at:
http://mgaleg.maryland.gov/2013RS/Chapters_noln/CH_304_sb0676t.pdf.

1.7.3 Definitions

- PII – Personally identifiable information is defined as data elements such as an individual's name combined with any one of the following; social security number, driver's license number, financial, tax or health records.

- Information System containing PII data – any State of Maryland automated system that processes, stores, or transmits PII data via any means.

1.7.4 ITMP Section 6 Submission Requirements

DoIT requires each Agency to submit the following as part of its annual ITMP:

1. Agency inventory of any information systems containing personally identifiable information (PII). See Appendix B for inventory format.

   a. If your agency does not maintain or control any systems with PII, provide a statement indicating that fact.

   b. The inventory shall be created and maintained as a separate document from the ITMP.

   c. The inventory shall be updated annually.

   d. The inventory shall be certified as accurate within 60 days of ITMP submission by the agency Chief Information Officer, Chief Information Security Officer or authorized point of contact (as provided below in 6.7.6).

2. Evidence of measures to demonstrate compliance with IT security common controls as defined in MD ISP Sections 3, 5 & 6. This can be accomplished by one of two methods :

> a. An existing, approved IT security plan meeting the following requirements:
>
>> i. Plan clearly identifies the agency's Chief Information Officer, Chief Information Security Officer or authorized point of contact (as provided below in 6.7.6),
>>
>> ii. Plan clearly indicates the authorizing authority who approved the security plan,
>>
>> iii. Plan has been reviewed and revised within the past year,
>>
>> iv. Plan addresses all common controls listed in MD ISP Sections 3, 5, & 6.
>>
>> v. If such documentation is not complete, not current, or not approved, the "Information Technology Security Plan (ITSP)" template must be fully completed.
>
> b. A completed "Information Technology Security Plan (ITSP)" template. The ITSP may be found on-line at the State Information Technology Security Policy and Standards web page: http://doit.maryland.gov/support/Pages/SecurityPolicies.aspx

1.7.5 Agency Exemptions

Any agency with no systems containing confidential data as defined above must still provide a statement indicating that fact.

1.7.6 Agency Security Plan Point of Contact

Insert the name of the individual who is the Agency's point of contact for security-related matters.   This individual is responsible for ensuring the accuracy of the security-related information submitted with the ITMP.

Name	Reginald Shorter
Role	Chief Information Security Officer
Title	Deputy Chief Information Officer
Agency	Maryland State Archives
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2 Appendix B – Complete System Security Inventory of PII Systems

2.1 System Security Inventory Scope

The system security inventory documents <u>all</u> automated information systems associated with the agency that contains PII.

Examples of assets associated with automated information systems that contain PII include:

- Information assets: databases and data files, system documentation, user manuals, training material, operational or support procedures, disaster recovery plans, archived information;
- Software assets: application software, system software, development tools and utilities
- Physical assets: computer equipment (processors, monitors, laptops, portable devices, tablets, smartphones, modems), communication equipment (routers, PBXs, fax machines, answering machines), magnetic media (tapes and disks), other technical equipment (uninterruptible power supplies, air conditioning units), furniture, accommodation; and
- Services: computing and communications services, general utilities, e.g. heating, lighting, power, air-conditioning

A complete inventory shall include a unique system name, a system owner, a security classification and a description of the physical location of the asset. See the MD ISP for all system security inventory requirements.

Num.	Unique Name of information system containing PII	System Business Owner (Name and Title)	Security Classification *(Public, Confidential)*	Description of the Service the System Supports	Date of Most Recent System Authorization (ex. C&A, IV&V, Authorization to Operate, etc.)	Location of System *(Include externally hosted systems as well as assets containing system backups)*
1.	MDLANDREC.NET	MSA	Public	Land records of Maryland State		MSA
2.	Guide of MD Government Records	MSA	Public	Catalogue of Maryland Government Records Collections		MSA