

Mississippi Department of
Information Technology Services

600-00

5-Year
Strategic Plan
FY 2021-2025



Mississippi Department of
Information Technology Services

1. Mission Statement

The mission of the Mississippi Department of Information Technology Services (ITS) is to provide trusted information technology and telecommunications leadership and services that offer proven, cost-effective solutions to all stakeholders in Mississippi government.

2. Philosophy

ITS strives to serve as the catalyst for effective planning, deployment, and operation of innovative information technologies for Mississippi state government. ITS seeks active engagement, in conjunction with our partner agencies and private sector partners, to forge a cohesive and collaborative information technology (IT) enterprise for streamlined delivery of government services. ITS, in pursuing excellence within the agency, maintains three core values, which guide our work: focused leadership, valued relationships, and technical excellence.

3. Relevant Statewide Goal and Benchmarks

The Mississippi Statewide Strategic Plan identifies eight statewide goals: economic development, education, public safety, health, human services, natural resources, infrastructure, and government. The efficient use of technology plays a vital role in all eight statewide goals and is the foundation agencies utilize to provide quality services to the citizens of Mississippi. Today, agencies must balance traditional daily operations, citizen expectations, service delivery, efficiency, requirements for innovative technology, and security against budget constraints and limitations. ITS provides leadership, guidance, and technology services and solutions to state agencies, supporting all eight Statewide Strategic Goals.

ITS develops goals and objectives to support and assist state agencies in utilizing technology to meet the mission of their respective agencies, achieve their individual goals, and collectively achieve all eight Statewide Strategic Goals and service delivery objectives. The ITS focus areas in the 5-Year Strategic Plan directly correlate to actionable goals that agencies may use in their strategic planning, depending on their technology needs.

Statewide Goal - Government and Citizens

To create an efficient government and an informed and engaged citizenry that helps to address social problems through the payment of taxes, the election of capable leaders at all levels of government, and participation in charitable organizations through contributions and volunteerism.

Benchmarks

Cost of Government

- Individual tax burden (state and local taxes as a percentage of personal income)
- Total state spending per capita
- Number of government employees per 10,000 population (broken out by federal, state, and local)

Government Efficiency

- Administrative efficiency: Expenditures on state government administrative activities as a percentage of total operational expenditures
- Average wait time for state government services
- State dollars saved by providing government services online (e.g., document retrieval, issuance of new business permits, license renewal)

4. Overview of the Agency 5-Year Strategic Plan

Goals - As part of the enterprise strategic IT planning process, selected goals are utilized to prioritize efforts in delivering the most effective and efficient technology services to the state.

The primary goals of ITS are:

- To provide, protect, and support enterprise technology infrastructure components to enable the effective and efficient use of IT
- To investigate, develop, and promote enterprise business and technology solutions to maximize the benefits of shared technology services
- To promote the funding, procurement, and management of IT as a strategic investment

Objectives - In striving to accomplish the goals stated above, ITS collaborates with all Mississippi public agencies, including public universities, public schools, and other public entities in Mississippi. The focus of the collaboration is improving excellence through quality of service, responsiveness, innovation, professionalism, and teamwork to guide Mississippi state government in selecting technology to support their business operations.

The following leadership technology objectives guided the development of the ITS goals:

- Drive IT initiatives by business needs, goals, and objectives and have a sound business case before new IT investments are made
- Maintain flexibility with accountability in order to respond to new service needs;
- Foster intergovernmental collaboration
- View IT in Mississippi government from the perspective of the entire enterprise, aggregating resources, where feasible, in order to reduce duplication, increase efficiency and effectiveness, and increase purchasing power
- Foster a culture that recognizes the need for investing in information security resources and implementing information security strategies
- Employ statewide solutions capable of reducing the evolving threat to Mississippi government's information assets
- Acquire, manage, and use technology resources economically and efficiently
- Protect private information and securely hold and manage technology assets
- Develop a process to share information easily within government organizations and with outside partners
- Deploy technology that is flexible and interoperable so that changing business needs can be responded to quickly and efficiently
- Recognize that many agencies have substantial investments in existing technology and devise strategies that leverage those investments when practical
- Develop an IT workforce with the skills required to develop, manage, and fully utilize the state's IT enterprise

Priority 1: Cybersecurity - The increasing threat of security breaches and cybercrime demands state government focus on securing the technology utilized throughout Mississippi government. Cybersecurity has continued to rise in importance in the eyes of elected leaders across the country, with this executive-level attention proving to be an opportunity to secure resources and support state cybersecurity programs. As are many state governments, Mississippi is continually implementing new technology solutions to reduce costs, increase productivity, and provide critical services to citizens. The National Governors Association has taken several measures to provide concrete, strategic recommendations for states to diminish cybersecurity risks. The whitepaper published by the NGA, *Act and Adjust: A Call to Action for Governors for Cybersecurity* and the Chair's Initiative, *Meet the Threat: States Confront the*

Cyber Challenge, places states at the center of finding solutions to the increasingly sophisticated cyber threats facing the nation. As outlined in the work by NGA, a robust governance structure for cybersecurity is a foundational element in the development of a common framework to prepare for, respond to, and mitigate cybersecurity risks.

The Mississippi Legislature realized the benefits of a statewide cybersecurity focus in 2017 by enacting to formally establish the Enterprise Security Program. HB 999 enables the oversight of the cybersecurity efforts across all state agencies, including cybersecurity initiatives, services, and the development of cybersecurity policies, standards, guidelines. ITS is committed to the full, collaborative implementation of the Enterprise Security Program, with a focus on improving the state's cybersecurity posture, integrating security into the business operations of supporting the enterprise state network and State Data Centers, operating solutions to reduce the cybersecurity risk every agency faces, and overseeing the enterprise-wide cybersecurity effort.

Priority 2: Cloud Computing - The public sector has moved cloud computing to the forefront of technology initiatives, with the promise of efficiencies and cost savings. With the budget challenges in recent years, many state governments consolidated data centers and technical services throughout state government. Similarly, the foundation of cloud computing is the concept of converged infrastructure and shared technology services. Cloud has also simplified the cyclic capital expenditure (CAPEX) model, the need to purchase, implement, and run dedicated infrastructure to a more obtainable operating expense (OPEX) model, a pay-as-you-go shared service model. Cloud computing has the ability to alter the landscape of IT management, as well as redefine how technology budgets are prepared and defended during the appropriations process. Maximizing the economies of scale in the cloud is a solid business driver allowing agencies to avoid upfront infrastructure costs with improved manageability and normalization of a fluctuating and unpredictable resource demand. The rapid commoditization of computing resources has led to high growth in cloud services.

The state's cloud model is continuously upgraded, expanded, and enhanced with additional features and functionality. To be responsive to the growing use of the cloud, ITS created a technical advisory council to define the strategy, direction, framework, and future policy for cloud computing services in Mississippi state government. The Cloud Services Advisory Council fostered an inclusive and collaborative relationship with each participating agency and contributed to the definition of technical and functional requirements of statewide enterprise cloud computing. A successful outcome of the Cloud Services Advisory Council was the establishment of a standards-based enterprise solution, minimizing operational costs for all parties by leveraging the volume purchasing power of the entire state.

Priority 3: Infrastructure Optimization - The optimal route to achieve efficiencies in IT for an enterprise the size of state government is the development of an Enterprise Architecture, with a goal to standardize on IT hardware and software to the fullest extent practical; to leverage volume discounts on goods and services; and to share common IT resources. Volume is one of the primary reasons ITS encourages shared technology services. The aggregation of volume is critical to achieving significant discounts in purchasing technology solutions for state agencies. A single agency typically cannot produce the same discount level as having many agencies working together for the same technology solutions. ITS strives toward a purchasing model that establishes a consortium approach where agencies and institutions collaborate on the development of standard technologies, specifications, terms, and solutions and collectively benefit from lower pricing.

State agencies and other government entities utilizing the State Data Centers will improve the efficiency, security, and resiliency of the government systems hosted within this facility.

Mississippi has invested approximately \$30M in this facility, and its full utilization by state government is necessary to obtain the maximum benefit. As directed in MS Code Ann. § 25-53-5, ITS is committed to ensuring that the State of Mississippi receives “the maximum use and benefit from information technology and services” and to “optimize the efficient use of the state's information technology assets.” With focus on these goals, ITS seeks to work in cooperation with state agencies to fully leverage the services offered by the State Data Centers, which will benefit individual state agencies and institutions, and subsequently, the whole of state government.

Priority 4: Statewide Telecommunications - For over a quarter century, Mississippi has worked together at every level of government in the planning, development, and implementation of a Statewide Telecommunications Network. Today, this Network facilitates a secure, redundant, high performance architecture utilized by state government, universities, libraries, community colleges, K-12 schools, and local governing authorities, with approximately 2,700 end sites, 99.99% Internet availability, and \$719,610,330 in federal E-Rate funding. A foundational element in the growth and stability of the Network has been the establishment of a consortium model where agencies and institutions have collaborated to procure common transport technologies, via shared specifications, terms, and solutions. The consortium approach in the procurement and operation of the Statewide Network has utilized common technology equipment and services to drive down maintenance expenses, delivering high quality and affordable technology solutions throughout the state.

As technology continues to evolve and paradigms shift, diverse sets of strategies and solutions must be considered in making government more efficient and effective. To that end, and in keeping with the mission of ITS, to “provide statewide services that facilitate cost-effective information processing,” as well as “minimize duplication” while “providing common technology services across agency boundaries,” ITS formed a special technical advisory committee, the Statewide Network Advisory Council, in accordance with MS Code § 25-53-5(f) and § 25-53-109(a). The Council is a diverse cohort, comprised of government and education stakeholders critical to the success of the Statewide Network. The principal focus of the Statewide Network Advisory Council is the investigation of emerging technologies, as well as the collaborative development of technical specifications for the next-generation statewide telecommunications network. This collaborative work is meant to ensure that Mississippi government and education entities remain competitive and at the forefront of the global market, structuring a successful outcome that will allow for the continued establishment of a standards-based, enterprise solution that minimizes operational costs for all parties by leveraging the volume buying power of the entirety of the state.

Funding - The National Association of State Chief Information Officers (NASCIO) and the National Governors Association (NGA) strongly emphasize the need for a strategic IT investment process, which ensures that state agencies collectively utilize innovative, smart buying, investment techniques. With IT being a critical component supporting the functions and delivery of state government services, many states have focused on the modernization of existing systems and new innovative ways for IT to continue to solve problems in government operations. However, choosing the most appropriate IT applications requires an enterprise methodology that can best meet citizens’ needs, facilitate business/government interactions, and improve internal government processes at a reasonable cost and with ease of implementation. The current budgeting and funding process of IT within Mississippi state government is accomplished on an agency-by-agency basis. The process in many cases leads to duplication, inefficiencies, increased overall cost, and waste. The vast majority of IT spending across the state happens at the agency level beyond the scope of management of

ITS. Many opportunities exist that the state can leverage to accomplish an enterprise approach to sound strategic investment of statewide IT resources, including strategically planning for upgrades, transferring cost savings to fund applications, and implementing return-on-investment programs.

ITS continues to request adequate funds to support the state's mission critical applications. The funding request for FY2021 is the result of detailed planning sessions with the agencies that use ITS systems, services, and facilities at the enterprise level. As the IT organization for state government, ITS implements technologies that enable an enterprise shared technology services model to support all critical government functions. Although many agencies receive direct funds for their IT projects, the needed investments described below are critical to compensate for anticipated growth and to support many of the IT modernization projects previously funded in these agencies. The requested funds are necessary to support these operations and to continually improve existing statewide IT investments. These needed investments will lay the foundation for the state's progress, innovation, and overall improvement of technical operations.

- Improve Statewide Disaster Recovery Solutions

The modernization of many state applications has increased the complexity of how these systems need to be backed up and recovered in the event of a disaster. The expectation of our citizens and government is for an expedient restoration of services following any type of disruption.

In response to the complexities of state government information technology applications, ITS has expanded the state's backup and recovery capabilities. This was accomplished through a public-private business partnership for supplementary data center services for mission critical applications running in both the shared and colocation areas. This partnership with the Mississippi based company provides geographic diversity away from the State Data Center with many portfolio options for the partner agencies to consider, such as improved disaster recovery, business continuity, and high availability capabilities. High-speed, redundant connectivity between the two facilities also ensures low latency and fault tolerance. Faster recovery timeframes and the protection of the state's electronic information is the primary focus.

- Expand On-premise Cloud Services

The state has made a significant investment in modernizing the enterprise infrastructure (storage and compute capabilities) required to run many of the state's mission critical applications housed at the Primary State Data Center. The agencies that utilize the facility and services continue to consume these resources at a growing rate. Funds are needed to expand the enterprise shared technology service model for storage and compute capabilities to meet this demand. In addition, these funds will be used to update legacy systems with current technology to improve response times and allow them to remain up-to-date with IT security requirements.

- Implement Additional Cybersecurity Technologies

Cybersecurity remains a decentralized responsibility where each agency is responsible for protecting their data, systems, and access. ITS maintains the centralized cybersecurity perimeter that protects the edge between the state network and the public Internet. This perimeter consists of firewalls, intrusion protection devices, and other services to help defend and deter unauthorized access into state IT resources. ITS is requesting funds to improve the state's protective measures by implementing additional cybersecurity

technologies that will dramatically improve the state's existing security posture against any suspicious Internet traffic traversing between the state network and the Internet.

- **Expand the Capabilities of the Capitol Complex Fiber Network**

The Capitol Complex Fiber Network supports high-speed data, voice, and video communications for all major state government buildings in the Capitol Complex, the E&R Complex, as well as many state office buildings along the diverse fiber paths between the two fully redundant network cores. In addition, many state agencies utilize the Network to access applications running at the State Data Center for connectivity to their remote office locations across the state.

Several phased projects are planned to replace sun-setting equipment, facilitate higher bandwidth needs, address route diversity requirements, and provide fault tolerant access to systems housed at the State Data Center. Additionally, the project expands network services between the Capitol Complex and the State's remote facility located in Starkville, Mississippi by adding extra bandwidth capacity as partner agency demand increases in the coming years.

All these needs support and enhance the technical infrastructure of state government that not only increases growth and efficiency while reducing duplication but also plays a significant role in support of the mission critical systems of many state government programs housed and hosted in the State Data Centers.

Future - What does our collective technology future look like? The *5-Year Strategic Plan* offers direction to foster a dialogue for moving the state forward, guideposts for considering strategic investments, mitigating risks, modifying outdated business processes, and securing critical data. ITS is fully engaged, in conjunction with our state agency partners, to facilitate an environment which will foster a strong and collaborative IT enterprise.

5. Agency's External/Internal Assessment & Internal Management Systems

5.1 External/Internal Assessment

Factors – Challenges and/or forces beyond the control of the agency

External/Internal Factors – Statewide IT Spending

- **IT Spend in Mississippi Remains Fragmented**

Based on reports from MAGIC, each year 25 Mississippi state government agencies consume approximately 95% of the total IT spend for technology hardware, software, and services. In the fiscal years from FY 2014 – FY 2018, the expenditure for technology hardware, software, and services averaged \$185.7M, while the amount directly managed by ITS over the same time period averaged \$27.8M, or 15% of the total. A fragmented technology budget fosters technology decisions with little or no coordination across government, resulting in duplicative assets (hardware, software, and services) across multiple departments providing essentially the same functions. The agency-specific funding approach for IT does not lend itself to solving business problems which span across state government, thus limiting ITS' ability to optimize statewide efficiencies, economies of scale, and shared technology services.

External/Internal Factors - IT workforce retraining, replacement, retirement, and retention:

- IT Workforce

The ability of the state to hire IT personnel with technical expertise and experience has become increasingly difficult as the gap continues to widen between the state and the private sector's IT salaries. The demand for an effective and competitive recruiting mechanism is high and continues to escalate as more employees become eligible for retirement. In 2018, approximately 13% of all state employees were eligible to retire. That number is expected to grow to approximately 28% by 2023. ITS, the Mississippi State Personnel Board, and other state agencies have begun a formal review of the IT classifications to update the language and make sure all current technologies are included. Additionally, for legislative review and approval, work is being done toward modernizing the methodology in which pay can be awarded. The realignment of the compensation structure awarded July 1, 2019 was the first step, and this important focus will continue.

External/Internal Factors - Changes in technology:

- Information Technology (IT) Changes at a Rapid Pace

The complexity and longevity of IT equipment and services is evolving quickly. ITS strives to stay at the forefront of emerging technologies and to explore new and innovative models and services that can best serve the state's diverse IT needs. Citizen demands for digital services result in our partner agencies' business requirements being in a constant state of change as new technologies are adopted. ITS is an active member in several nationwide government technology organizations such as the National Association of Chief Information Officers (NASCIO) and the National Association of State Technology Directors (NASTD). ITS continues to utilize the resources and knowledge from other states to help align the statewide shared technology services with emerging technologies and best practices from other states.

- Cybersecurity

Security has risen to be an ever-evolving concern to the state in the provision of IT. ITS has focused on providing resources, guidance, and oversight needed for improving the cybersecurity posture of the enterprise network for state government. Given the large and evident risks associated with securing an enterprise network in a federated state government environment, it is essential that security be applied throughout the enterprise. The success of a common methodology requires a coordinated effort among all agencies, as well as a better understanding of the security maturity level of each agency's security program. An aggregate view of the security maturity level is a critical component in the development of strategies for improving the security posture of the enterprise state network.

- Cloud Computing

Cloud computing has a significant potential impact on every aspect of IT and how users access applications, information, and business services. As cloud computing evolves and matures, it is being presented as the solution to all IT problems. Providers have also matured and now possess the functionality to meet or exceed many of the technical security requirements of government entities such as Health Insurance Portability and Accountability Act (HIPAA) and Criminal Justice Information

Services (CJIS) certifications. However, cloud computing is still a relatively new model for IT. Government cloud services would ensure that all federal, state, and local government data would reside within the continental United States and all operating personnel would be screened for the appropriate security clearance.

- **Mobile Technology**

Results of a Gartner, Inc. survey of Chief Information Officers (CIOs) in the United States and Europe indicate that over 80% of the workforce will be eligible for a bring your own device (BYOD) program by 2020. In order to ensure that the state's information assets are protected from this growing mobile population, the state must manage the introduction of mobile devices into their secured state environments. With the use of mobile computing devices in state government continuing to grow at an overwhelming rate, state government must embrace the expanded role of mobile services today but only while continuing to do so with the utmost care taken to protect our information assets. A balance must be achieved to ensure services are available to Mississippians in the manner they demand to receive while meeting the requirements for faster speed and more access to services and data using web-based technologies.

- **Data Management**

Big data is a term generally used to describe a high-volume of data resulting from a variety of data streams and sources that may be used to analyze information and make informed business decisions. The introduction and combination of new and diverse datasets can benefit organizations attempting to fill information gaps. Filling these gaps can directly lead to operational improvements and business delivery enhancements. The utilization of big data can be viewed as an evolution from historical analysis towards predictive analysis. Recognizing specific patterns and trends allow the decision makers to set strategic goals for future initiatives. Government entities must embrace the fact that big data will continue to impact present and future initiatives. Agencies can no longer operate in silos, but must be willing to collaborate and consolidate redundant data across the enterprise to ensure the benefits of real-time analytics. Big data will not affect only one segment of state government but Mississippi as a whole.

External/Internal Factors - Statewide initiative that directs/redirects agency mission:

- **Mississippi Accountability System for Government Information & Collaboration (MAGIC)**

Mississippi began the implementation of its enterprise resource planning system, MAGIC, in 2012 and Phase I was deployed to production on July 1, 2014. Residing in the State Data Centers on a dedicated mainframe, the system replaced multiple disparate legacy systems and is being used by all state agencies to process their financial, procurement, grants management, and reporting needs. Work is underway for Phase II, implementation of a Human Capital Management System to replace the current 20-year old homegrown legacy system, the Statewide Payroll and Human Resource System (SPAHRs).

External/Internal Factors - State statutes or regulations:

- SB 2779, 2018 Regular Legislative Session (ITS Hybrid Operating Funding Model)

SB 2779 was passed during the 2018 Legislative Session and changed the ITS financial model from a general fund agency to a hybrid general fund and special fund agency. Realizing the benefits of fully capitalizing on the state's use of non-general funds dollars, the Mississippi Legislature authorized ITS to pass-through costs for telecommunications, data center services, and other IT services to the state agencies utilizing said services. SB 2779 supports ITS' mission of increasing efficiencies and decreasing technology duplication across government.

The ITS Hybrid Operating Funding Model created by SB 2779 consists of two main categories, Hub and Spoke. Hub Services are included in the annual ITS General Fund Budget Request and consist of ITS Core Business Functions that provide expertise to develop and manage shared technology services to be utilized by state agencies and governing authorities across the state. Spoke Services consist of shared technology services to be utilized by state agencies and governing authorities across the state that are integrated, consolidated, centrally managed, and/or justified as a needed service. Spoke Services are consumed directly by a partner agency and/or governing authority where each partner agency determines their service needs and is financially responsible for their portion of the services utilized. Spoke Services are to be included as part of individual agency budget requests appropriated by the Mississippi Legislature.

The Hybrid IT Operating and Funding Model creates significant savings to the General Fund by allowing agencies to redirect appropriated funds (Federal and other Special Fund Dollars) to pay for shared technology services. Agencies can now use their appropriated funds to pay for their specific utilization of IT services provided by ITS. This structure is strictly a direct pass-through model where ITS manages the program, using core (Hub) resources that are already funded so no additional fees or charges are added. Spoke Services, pass-through expenses, represent the direct cost of shared technology services consumed at the discretion of each agency and their budget authority.

- HB 649, 2017 Regular Legislative Session (Data Management Working Group)

Acknowledging the difficulty that comes with sharing information in a cross-jurisdictional context, the Mississippi Legislature passed HB 649, creating the Mississippi Data Management Working Group (MDMWG) to examine the state's management of data. The signing of HB 649 enabled the state to examine data as an enterprise asset. The MDMWG was tasked with researching state agency data sources and issues related to quality, utility, and accessibility, across all branches of Mississippi state government. While HB 649 recognized the large and growing role that data plays in running an efficient and effective government, it also acknowledged the increasing opportunities and challenges inherent in handling enormous amounts of data. Comprised of the executive leadership from nine state agencies, the ultimate responsibility of the MDMWG was to report to the Legislature recommendations for ways to improve data management practices including any potential legislation that would provide structure, policy, and guidance. In order to accomplish this goal, the MDMWG generated survey questions focused on the quality, format, cost, utility, accessibility, and confidentiality of the data maintained by all agencies of the executive, legislative, and judicial branches in Mississippi government. The final report was delivered to the Legislature in December 2018.

- HB 999, 2017 Regular Legislative Session (Enterprise Security Program)

Agencies, government leaders, and policymakers of Mississippi government all individually hold crucial keys in the security effort the state must undertake. These stakeholders have progressively increased their attention and focus on the escalating cybersecurity challenges facing our state. Realizing the state must prioritize cybersecurity efforts, the Mississippi Legislature passed House Bill 999 (*HB999*) during the 2017 Regular Legislative Session. The goal of HB999 is to advance the state government enterprise approach to cybersecurity by:

- Formalizing the authority of the Enterprise Security Program to continue the coordinated oversight of the cybersecurity effort across all state agencies
- Confirming the responsibility shared by each agency concerning the protection of all data and IT resources under the agency's control
- Ensuring that a strong governance structure is in place to continue the efforts for establishing a framework to assist state agencies in their efforts in preparing for, responding to, and preventing cyber-attacks
- Reinforcing the necessity that each agency has a vested interest in the enterprise-wide approach for protecting all of the state's assets
- Demonstrating due diligence to the citizens and businesses who trust and rely on government services through the continued advancement and support of the Enterprise Security Program's efforts in maintaining the minimum cybersecurity standards and policies for state government assets

The vested interest each stakeholder has in improving the security posture of the Enterprise State Network and State Data Centers calls for everyone to become problem-solving partners, commit resources, participate in the decision-making process, and most importantly, remove barriers that impede progress. Through the enterprise effort, stakeholders can ensure agencies have appropriate security controls and can have confidence those controls are implemented cost effectively. The enterprise approach demonstrates due diligence to the citizens and businesses who rely on government services.

To advance the cybersecurity effort across all areas of state government, each stakeholder must have an understanding of the current and future goals for protecting the state's IT assets, must have confidence in the enterprise cybersecurity policies and plans, and must commit to performing their role in the enterprise security effort.

- HB 1317, 2014 Regular Legislative Session

In the 2014 Regular Session, HB 1317 was passed requiring the development of a State Procurement Portal to provide Mississippi vendors all the information necessary to assist them in procuring contracts with the state. This portal is a collaborative effort between the Electronic Government Oversight Committee (EOC), ITS, and the Department of Finance and Administration (DFA).

- HB 1450, 2012 Regular Legislative Session

In 2012, the MS Legislature enacted HB 1450 that encouraged the development and use of enterprise services within the State Data Centers to facilitate cost-effective information processing and telecommunications solutions. In the bill, state agencies in conjunction with the ITS Board were charged with identifying opportunities to consolidate services to minimize duplication, reduce costs, and improve the efficiency of providing common technology services across agency boundaries.

External/Internal Factors – Federal statutes or regulations:

- Executive Order 13636 of 2013 (“*Improving Critical Infrastructure Cybersecurity*”)

The State of Mississippi’s Enterprise Security Policy (ESP) was developed to establish enterprise requirements for safeguarding the state’s information and IT resources from unauthorized use, access, disclosure, modification, or destruction. Federal Executive Order 13636 of 2013, “Improving Critical Infrastructure Cybersecurity” calls for the development of a voluntary Cybersecurity Framework that provides a “prioritized, flexible, repeatable, performance-based, and cost-effective approach” for assisting organizations responsible for critical infrastructure services to manage cybersecurity risk. The Cybersecurity Framework along with the recommendations provided by the National Governors Association (NGA) builds on the advice of national experts and practitioners from both the public and private sectors.

5.2 Internal Management Systems Used to Evaluate Agency’s Performance

The ITS Board is comprised of two distinct components. First, there are five lay members appointed by the Governor and confirmed by the Senate, serving five-year, staggered terms. Second, there are two non-voting legislative advisors representing each house who are appointed by the Lieutenant Governor and the Speaker of the House. The ITS Executive Director reports directly to the Board and provides agency performance updates on a monthly basis.

ITS is responsible for the establishment of IT policy and planning, for IT procurement and contracts, and for providing the computing and telecommunications infrastructure for all information systems technologies within state government. ITS supplies the technology to partner agencies, institutions, and governing authorities, enabling critical governmental functions across the state. Both manual and automated reporting of information regarding the performance of services and systems are used to gauge the alignment of outputs with pre-established thresholds and performance goals. The monitoring, analysis, and evaluation of periodic performance and utilization reports may lead to changes such as enhancements, patching, or upgrades.

In striving to accomplish agency goals, ITS collaborates and enters into partnerships with state agencies, universities, and other public entities in the delivery of technology services, infrastructure, and equipment. The ITS Business Relationship team is a dedicated staff that works with state agencies to ensure customer satisfaction and service levels are met and to garner valuable feedback. With periodic face-to-face visits, phone calls, and emails, ITS gathers input on the quality of service, responsiveness, professionalism, and teamwork provided in the fulfillment of requests from state agencies for services and support. The feedback also reveals opportunities for new technologies or enhanced services. ITS also conducts surveys to capture information regarding service performance, levels of service provided, and various other topics.

In addition, ITS draws upon the information collected in agency technology plans that detail projects planned and budgeted for the current and upcoming fiscal years. The plans are evaluated for possible statewide infrastructure impact and needs, opportunities for agency collaboration, potential volume purchases, IT training and education opportunities, and research on new and emerging technologies. The analysis from the agency plans is used to prepare the goals and strategies outlined in the *State of Mississippi Strategic Master Plan for Information Technology*. This report is published annually and provides an overall picture of the current efforts and the planned direction of technology in state government.

6. Agency Goals, Objectives, Strategies and Measures by Program

Program 1: Administration

GOAL A: Provide oversight for the funding and efficiency of Information Technology as a strategic enterprise investment for the state.

OBJECTIVE A.1: Provide direction and management for the overall agency and provide any needed support to the various service units of ITS to enable them to better serve our client agencies.

Outcome: Successful execution of the agency's business and operational functions to include:

- a. Executive leadership
- b. Administrative support of the executive staff, appointed Board members, and legislative advisors
- c. Coordination, planning, and budgeting between all divisions
- d. Creation and publication of policy, procedures, and special reports on key IT initiatives and goals
- e. Communications and outreach to agencies, governing authorities, and private sector companies which conduct business with the agency
- f. Support of administrative services needed for all internal agency units including business processes and personnel

A.1.1 STRATEGY: Planning, organizing, and providing administrative leadership and strategic management enabling ITS program areas to formulate and implement decisions, develop policies and long-range plans, and allocate resources to achieve the organization's overall objectives. Also, provide administrative support for the ITS Executive Board and the agency.

Output: Vendor bills (accounts payable) are processed within a timely manner

Output: Customer invoices (accounts receivable) are processed within a timely manner

Output: Timely preparation and submission of Annual Budget

Output: Timely preparation and submission of GAAP Packet

Efficiency: Sustain accounts payable and accounts receivable within expected turnaround time

Explanatory: The administrative program is a necessary function within any state agency to carry out the day-to-day operations that support the overall mission of the agency.

GOAL B: Promote the funding, procurement, and management of Information Technology as a strategic investment.

OBJECTIVE B.1: Facilitate and coordinate inclusive planning, communication, and outreach processes across state government including infrastructure planning, disaster recovery, business continuity, and more.

Outcome: Publication of error free *Strategic Master Plan, Technology Infrastructure and Architecture Plan, ITS Disaster Response and Business Continuity Plan, and ITS Services Catalog*

B.1.1 STRATEGY: Annually update the *State of Mississippi Strategic Master Plan for Information Technology* and the *Technology Infrastructure and Architecture Plan* for statewide publication and dissemination by ITS to assist state government's technology and business leaders in making informed technology decisions. Additionally, maintain and update the *ITS Services Catalog* and the *ITS Disaster Response Business Continuity Plan*.

- Output:* Documents coordinated internally and published via the web and/or hardcopy
- Efficiency:* Produce documentation to assist agencies in aligning their use of technology with the direction established for the state's IT enterprise
- Efficiency:* Produce documentation to aid agencies in identifying opportunities to minimize duplication, reduce costs, and improve the efficiency of providing common technology services across agency boundaries
- Efficiency:* Produce documentation that provides a comprehensive inventory and description of the services offered to customer agencies
- Efficiency:* Produce documentation to strengthen organizations' survivability in the event of a disaster including a step-by-step road map to recovery
- Explanatory:* ITS provides a variety of technology based services to our customers, but many of our services are not well known or effectively utilized. ITS desires to make the most impact we can through the efficient use of IT resources and the consistent delivery of services. ITS will make every effort to inform our customers of the services we have available and provide justification for why they should use those services. The development and publication of these documents seeks to optimize the use of IT services and resources for enhanced delivery of government services.

GOAL C: ITS works with the Mississippi Department of Education, the Mississippi Library Commission, and service providers throughout the E-Rate process. Through this coordinated effort, the State of Mississippi strives to maintain a 100% participation rate of public school districts, and a 99% participation rate of public libraries in the E-Rate program.

OBJECTIVE C.1: Maximize the state's funding and participation in federal programs that improve telecommunications infrastructure within the state.

Outcome: Statewide coordination of E-Rate

C.1.1 STRATEGY: Coordinate the state's participation in the federal E-Rate program for K-12 and library participation and ensure that maximum benefits are received for eligible services.

Output: Statewide coordination of the E-Rate program for the public K-12 schools and libraries

Efficiency: Obtain the maximum E-rate funding for all qualifying entities statewide

Explanatory: The E-Rate program for public schools and libraries was established by Congress to help make advance learning technologies, telecommunications, and internet access affordable across the country. This program provides discounts ranging from 20% to 90% on the cost of eligible equipment and services, Internet, and internal connections. The highest discounts go to schools and libraries serving the most disadvantaged populations. For Mississippi the majority of E-Rate funds are made available where over 50% of the students in the district qualify for the National School Lunch Program.

Program 2: Data Services

GOAL A: Provide, protect, and support enterprise technology infrastructure components to enable the effective and efficient use of IT.

OBJECTIVE A.1: The overall objective of Data Services is to provide reliable, available, secure, and cost effective computing services around the clock for all state agencies requiring shared data, large scale computing resources, web and e-mail resources, and/or specialized technical support. These services are provided through a Mississippi cloud offering with equipment housed in the State Data Centers and through services provided by partner companies.

Outcome: Maintain z114 mainframe system availability

Outcome: Maintain DASD storage availability

Outcome: Maintain Tape system availability

Outcome: Maintain VMware cluster environment availability

Outcome: Maintain Proxy F5 services system in support of websites/applications

Outcome: Power distribution uptime

A.1.1 STRATEGY: Provide sufficient computing power and physical environment to support software applications running in the State Data Centers. Data Services provides computer services to approximately 130 state agencies and a number of private entities that access public records. These services utilize the state's proxy F5 system for secure connectivity to websites and applications.

Output: Number of hours z114 mainframe system available for use in a one-year timeframe

Output: Number of hours VMware cluster environment system available for use in a one-year timeframe

Output: Number of hours Proxy F5 services system in support of websites/applications available for use in a one-year timeframe

Efficiency: z114 mainframe average internal response time

Efficiency: z114 mainframe average cost/hour CPU

Efficiency: VMware vCPU average cost/month

Explanation: In recent years, many state IT organizations have seen a proliferation of redundant IT hardware and software resources implemented to address state agencies' specific needs. This proliferation has resulted in state agency hardware and software infrastructures with independent operations and a broad range of technical environments, service levels, and security standards.

Often, these disparate environments are more expensive to maintain and operate than a federated statewide system. This fragmentation creates a duplication of effort and can present a challenge for statewide disaster preparedness and response.

A.1.2 STRATEGY: Provide adequate storage and retrieval of data. Deploy storage technology for de-duplication, compression, virtual storage, thin provisioning, high capacity devices/media, and other leading edge storage technologies.

- Output:* Quantity of DASD IBM storage available and managed
- Output:* Quantity of offline tape storage
- Output:* Quantity SAN storage available and managed
- Efficiency:* Cost of DASD storage
- Efficiency:* DASD I/O Average Response Time for IBM storage
- Efficiency:* SAN Average Input/output Operations Per Second (IOPS) Primary SAN Storage
- Efficiency:* Cost of Tape processing
- Efficiency:* Cost of SAN storage Primary Tier 1
- Explanatory:* The State Data Centers house approximately 244 terabytes of online mainframe storage, 3.6 petabytes of open systems storage, and 2.0 petabytes of offline tape storage. The storage environment continues to be enhanced by investing into storage technologies such as Virtual Storage Area Networking (VSAN) and cloud based services to increase the efficiency of allocated storage.

A.1.3 STRATEGY: Provide technical expertise and Service Center support for all software products and hardware infrastructure at the State Data Centers on a 24-hour, 7-day-a-week basis. Expand the implementation of ITIL best practices for more efficient incident management, service request management, problem management, and change management to handle increases in ticket volume with same staffing levels.

- Output:* Number of closed ITS Operational Divisions incident tickets in a fiscal year
- Output:* Number of closed ITS Operational Divisions request tickets in a fiscal year
- Output:* Number of customer forums conducted
- Output:* Number of internal ITIL meetings
- Output:* Number of external ITIL meetings

Explanatory: For all Operational areas, the Service Center provides the customer with a single point of contact for system monitoring, ticket tracking, and knowledge database. The implementation of a Configuration Management Database System will provide an interface with the Service Center System to assist with help ticket creation and verification of hardware and software components.

A.1.4 STRATEGY: Provide business recovery planning services to agencies utilizing the infrastructure solutions supported by the operational areas of the State Data Centers.

Output: Number of hot-site disaster recovery tests performed annually

Output: Number of agencies that participate in hot-site disaster recovery annual test

Output: Number of agencies invited to participate in annual test

Explanatory: By investigating the implementation of a state owned disaster recovery facility, expanding the Disaster Recovery Services to include agencies as requested, and by expanding the use of the Ancillary Data Center as a co-processing facility, Data Services will enhance business continuity and disaster recovery services for high availability and continuous processing.

A.1.5 STRATEGY: Utilize fully the Eastwood and Ancillary Data Center's Technology Infrastructure Services.

Output: Total number of mainframes supported

Output: Total number of physical VMware servers supported

Efficiency: Cost of dedicated full rack for colocation per month

Explanatory: By fully utilizing the investment in the State Data Centers, a critical step will be achieved toward helping government build a more secure, agile, and cost-effective infrastructure for the delivery of state government services.

Program 3: Information Systems Services

GOAL A: Support the implementation of cost effective technology solutions to meet the IT needs of state government and to facilitate citizen and business access to state government services and information.

OBJECTIVE A.1: Develop, deploy, and support web-enabled applications, including partnering with Mississippi Interactive on e-Government applications for ITS and customer agencies.

Outcome: Develop and deploy effective web-enabled applications

A.1.1 STRATEGY: Manage the development and deployment of web-enabled applications, using state-of-the-art practices, technologies and tools.

Output: Number of hours spent on application development and support

Efficiency: Maintain or increase the number of web-enabled applications deployed

Explanatory: This goal implements MS Code Ann. § 25-53-29 (1) (a), whereby ITS “shall provide a high level of technical expertise for agencies, institutions, political subdivisions and other governmental entities as follows: planning; consulting; project management; systems and performance review; system definition; design; application programming; training; development and documentation; implementation; maintenance; and other tasks as may be required.”

GOAL B: Maximize the value obtained for information system project dollars by leveraging the combined purchasing power of the state, and by directing and ensuring competitive technology procurement.

OBJECTIVE B.1: Support the acquisition and implementation of cost effective technology solutions to meet the IT needs of state government.

Outcome: Percentage of total requests competitively procured

B.1.1 STRATEGY: Develop open and competitive specifications for technology procurements that meet the customers' business objectives, maximize competition, and protect the state legally and fiscally.

Output: Number of RFPs published

Output: Number of Letters of Configuration published

Output: Number of Contracts executed

Output: Number of Procurement approvals granted

Efficiency: Process 100% of procurement projects in compliance with all statutory and procedural requirements

Explanatory: ITS was created by the legislature to maximize the use and benefit of IT in state government by promoting full cooperation, coordination, cohesive planning, and maximum compatibility among all state agencies and institutions of higher learning (IHL). State statute establishing ITS and outlining the duties and responsibilities of the agency is found in MS Code Section 25-53-1, et seq. The acquisition of IT for all state agencies and IHLs is within the scope of the ITS law and the policies and procedures established in accordance with this statute. ITS law and policy cover the procurement of all IT hardware, software, and services by state agencies and IHLs.

OBJECTIVE B.2: Provide procurement information to technology vendors to promote competition for the acquisition and implementation of cost effective technology solutions to meet the IT needs of state government.

Outcome: Publish all RFPs & RFP process status information on the Internet

Outcome: Conduct timely post-procurement reviews with all requesting vendors

B.2.1 STRATEGY: Provide IT procurement information via the Internet.

Output: Number of post-procurement reviews conducted with vendors

Efficiency: Maintain or increase amount of public records information available via the Internet

Explanatory: ITS was created by the legislature to maximize the use and benefit of IT in state government by promoting full cooperation, coordination, cohesive planning, and maximum compatibility among all state agencies and IHLs. State statute establishing ITS and outlining the duties and responsibilities of the agency is found in MS Code Section 25-53-1, et seq. The acquisition of IT for all state agencies and IHLs is within the scope of the ITS law and the policies and procedures established in accordance with this statute. ITS law and policy cover the procurement of all IT hardware, software, and services by state agencies and IHLs.

GOAL C: Maximize compatibility of the state's resources in accordance with the state's Information Technology Architecture, by promoting and facilitating the technology planning efforts of state agencies.

OBJECTIVE C.1: Assist state agencies in meeting their missions more effectively and efficiently through the proper planning for technology projects and resources.

Outcome: Receive plans from 95% of state agencies

C.1.1 STRATEGY: Provide assistance to state agencies in their planning efforts and submission of their technology plans.

Output: Number of procurement training classes offered to state agencies

Efficiency: Number of hours of planning assistance provided to state agencies

Efficiency: Percentage of state agencies contacted to offer planning assistance

Explanatory: This goal implements MS Code Ann. § 25-53-29 (1) (b), whereby ITS “shall publish written planning guides, policies and procedures for use by agencies and institutions in planning future electronic information service systems. The bureau may require agencies and institutions to submit data, including periodic electronic equipment inventory listings, information on agency staffing, systems under study, planned applications for the future, and other information needed for the purposes of preparing the state master plan. The bureau may require agencies and institutions to submit any additional data required for purposes of preparing the state master plan.”

Program 4: Education

GOAL A: Provide an ongoing educational program designed to enhance and improve the skills of state employees who develop or use Information Technology.

OBJECTIVE A.1: Improve the productivity, efficiency, and service delivery of state agencies by providing ongoing education in IT for state employees at a reasonable cost to the client agencies.

Outcome: Percentage of state agencies that utilize the educational program to enhance and improve the information technology skills of their state employees.

Outcome: Percentage of courses that was useful and valuable to improving the partner agencies government functions as measured by ITS Course Evaluation Forms.

A.1.1 STRATEGY: Provide accessibility to a comprehensive information systems training program for end users, technical, and managerial personnel at a significantly lower cost than alternative training sources.

Output: Number of classes taught

Output: Number of students

Output: Number of agencies participating

Efficiency: Average cost per student

Explanatory: Continuing education and training are essential for the effective planning, implementation, support, and use of technological solutions. ITS coordinates cost-effective education and awareness opportunities with technology training partners to offer instructor led training, as well as self-paced, online training to Mississippi public entities via the Internet. The technical educational curriculum expands as the demand for information systems skills increases.

Program 5: Telecommunications Services

GOAL A: Provide, manage, and facilitate efficient and cost-effective usage of Telecommunications Services.

OBJECTIVE A.1: To provide cost effective high performance statewide voice and data communications that are fully redundant and highly resilient to state government, higher education, K-12, libraries and governing authorities within the Capitol Complex, the Greater Jackson Area, and across the state through a combination of directly managed services and vendor contracts.

Outcome: Percent of voice telecommunications system availability

Outcome: Percent of Internet system availability

Outcome: Percentage of Data Center Average Availability

Outcome: Percentage of Wide Area Network Average Availability

Outcome: Percentage of Capitol Complex Network Average

A.1.1 STRATEGY: Provide feature rich voice communication architecture through vendor contracts and directly managed services that provide options and affordable pricing to meet the business needs of the state.

Output: Total number of telephone lines provided

Output: Total number of long distance minutes processed

Output: Total number of 800 numbers provided

Output: Total minutes of usage-inbound to 800 numbers

Output: Total number of audio/video/web conferencing accounts serviced

Output: Total number of conference calls

Output: Number of conferencing minutes

Output: Grade of Service for PBX and Centrex trunking at P.01 or greater

Efficiency: Average cost per line-PBX

Efficiency: Cost per long distance minute-direct dial

Efficiency: Cost per minute-incoming calls to 800 numbers

Efficiency: Cost per minute audio conferencing

Efficiency: Cost per minute web conferencing

Efficiency: Data Center Network Average Latency

Efficiency: Capitol Complex Network Average Latency

Efficiency: Wide Area Network Average Latency

Explanatory: The current contract for statewide voice communications leverages the state's aggregate buying power to ensure that the best possible rates and universal service offerings are available to government entities. This long-term contract includes access to local and long distance telephone services. Telecommunications services provided directly to agencies within the Capitol Complex include access to the Capitol Complex fiber network, telephone system, and voicemail.

A.1.2 STRATEGY: Provide highly reliable and robust high-speed data communication architecture through vendor contracts and directly managed services that provide options and affordable pricing to meet the business needs of the state.

Output: Data Center - Number of physical connections supported

Output: Capitol Complex - Number of physical connections supported on fiber network

Output: Capitol Complex - Number of agencies supported on fiber network

Output: Number of data circuits managed

Efficiency: Average Cost per megabit Internet access

Efficiency: Average cost per megabit for wide area network connections

Efficiency: Average cost per megabit for Capitol Complex connections

Efficiency: Capitol Complex network average latency

Efficiency: Data Center network average latency

Efficiency: Wide Area Network average latency

Explanatory: The current contract for statewide data communications leverages the state's aggregate buying power to ensure that the best possible rates and universal service offerings are available to government entities. This long-term contract includes dedicated Internet, broadband data network services, and router management services. Telecommunications services provided directly to agencies within the Capitol Complex include access to the Capitol Complex fiber network, and high-speed network connectivity to the State Data Centers, Internet, and the university research network known as the Mississippi Optical Network (MissiON).

Program 6: Electronic Government Services

GOAL A: Maximize efficiencies and encourage citizen engagement by offering e-Government services to citizens, state agencies, local government, and the business community through a competitive bid, self-funded, outsourced business model.

OBJECTIVE A.1: Effectively develop and deploy e-Government services.

Outcome: Increase in the number of government services that are available online

A.1.1 STRATEGY: Manage the contract with the outsourcing vendor to ensure that applications are developed as efficiently as possible.

Output: Number of e-Government Services deployed during the FY

Efficiency: Maintain or increase the number of services deployed

Explanatory: In December 2010 following a successful response to RFP 3564, ITS and DFA entered into a public-private partnership with Mississippi Interactive (MSI), a subsidiary of NICUSA for the management of e-Government services in Mississippi. Outsourcing e-Government services with MSI provides access to services and applications with no initial investment by the state.

OBJECTIVE A.2: Maintain the health of the e-Government business model.

Outcome: Enhance the e-Government business model to allow for the continued delivery of e-Government services at little or no upfront cost to the state

A.2.1 STRATEGY: Facilitate activities of the Electronic Government Oversight Committee to ensure efficient and effective applications development.

Output: Review and update the portal business model

Efficiency: Increase in revenue

Explanatory: The Mississippi Electronics Oversight Committee (EOC) oversees the implementation of e-Government and related technology initiatives. The ITS staff provides administrative support for the committee and the ITS Executive Director currently serves as the Chairman.

Committee Responsibilities

- Prioritizing and making recommendations for all electronic government services, in order to cut across state and local governmental organizational structures
- Addressing policy issues such as privacy, security, costs, and accessibility
- Reviewing ongoing fiscal and operational management and support of Mississippi's e-Government portal

- Providing a mechanism for gathering input from citizens, businesses, and government entities
- Encouraging self-service models for citizens through state websites and other electronic services
- Promoting economic development and efficient delivery of government services by encouraging governmental and private sector entities to conduct their business and transactions using electronic media.

OBJECTIVE A.3: Engage and inform citizens through relevant, current, and innovative e-Government services.

Outcome: Expand use of mobile technologies

Outcome: Increase citizen involvement via social media impressions

A.3.1 STRATEGY: Manage the contract with the outsourcing vendor to ensure a Mobile-First strategy.

Output: Number of mobile applications deployed or downloaded

Efficiency: Increase downloads of mobile applications

Explanatory: Citizens are on the go and so is the state. Mobile is one of the most effective mediums for providing important real-time information and services to citizens. Mississippi is dedicated to seeking out innovative services that are fast loading, user-friendly, and mobile-optimized.

A.3.2 STRATEGY: Increase the citizen engagement by enhancing the state's social media presence.

Output: Number of impressions or interactions

Efficiency: Increase impressions or interactions

Explanatory: Since Mississippians are interacting with social media as a part of their everyday lives, Mississippi government can engage with citizens by meeting them where they are. Social media provides tools that allow citizens to submit photos, comments, and questions that can be shared with other citizens and can allow Mississippi government to serve citizen needs more effectively.

Program 7: Information Security Services

GOAL A: Provide, Protect, and Support Enterprise Technology Infrastructure Components to strengthen the Security Posture of the state.

OBJECTIVE A.1: Enterprise Collaboration – Promoting a culture for investing in effective and efficient cybersecurity strategies, solutions, and resources capable of reducing the evolving data threat.

Outcome: Average number of agencies attending Security Council Meetings

A.1.1 STRATEGY: Coordinate regular Security Council Meetings with agency Information Security Officers.

Output: Number of Security Council Meetings Conducted

Efficiency: Number of FTE hours required to host the Security Council Meetings

Explanatory: Each state agency must be part of a coordinated enterprise-wide security program to gain better understanding of maturity of each agency's cybersecurity program. Having an aggregate view of the cybersecurity maturity level for the enterprise is critical to any governance and authority structure, but lack of agency collaboration and participation will prevent this view from existing. Agency participation in the Information Security Council is a critical component in solidifying a more robust governance structure for cybersecurity.

OBJECTIVE A.2: Enterprise Governance – Managing enterprise security program activities providing an enterprise-wide approach to prepare for, respond to, and reduce cybersecurity risks.

Outcome: Number of agencies receiving cybersecurity awareness materials/information

Outcome: Number of agencies receiving cybersecurity threat/vulnerability intelligence information

A.2.1 STRATEGY: Perform, coordinate, and promote security education and awareness.

Output: Number of cybersecurity awareness materials/information disseminated

Efficiency: Number of FTE hours required to disseminate cybersecurity awareness materials/information

A.2.2 STRATEGY: Disseminate persistent and regular cybersecurity threat and vulnerability information.

Output: Number of cybersecurity threat/vulnerability intelligence information disseminated

Efficiency: Number of FTE hours required to disseminate cybersecurity threat/vulnerability intelligence documents

OBJECTIVE A.3: Enterprise Security Operations: Managing enterprise core and perimeter cybersecurity solutions for protecting the state's assets and gaining situational awareness.

Outcome: Percentage of Internet traffic to and from the Enterprise State Network inspected by enterprise perimeter defense systems based on policies, rules, signatures, and threat intelligence

Outcome: Percentage of Enterprise State Network traffic to and from the State Data Centers inspected by enterprise perimeter defense systems based on policies, rules, and signatures

Outcome: Percentage of cybersecurity incidents for SOM assets resolved by state agencies

Outcome: Percentage of cybersecurity incidents for SOM assets resolved by state agencies within stated guidelines

Outcome: Percentage of cybersecurity incidents for SOM assets resolved by state agencies within one day

Outcome: Percentage of cybersecurity incidents for SOM assets resolved by state agencies between one and two days

A.3.1 STRATEGY: Maintain ongoing operational responsibilities for enterprise core and perimeter defense solutions.

Output: Amount of Internet traffic to and from the Enterprise State Network inspected by enterprise perimeter defense systems based on policies, rules, signatures, and threat intelligence

Output: Amount of Enterprise State Network traffic to and from the State Data Centers inspected by enterprise perimeter defense systems based on policies, rules, and signatures

Efficiency: Number of FTE hours required to manage the enterprise perimeter defense systems for the Enterprise State Network

Efficiency: Number of FTE hours required to manage the enterprise perimeter defense systems for the State Data Centers

A.3.2 STRATEGY: Manage security monitoring and event correlation tools and leverage internal/external partners for the identification of security incidents.

Output: Number of cybersecurity incidents for SOM assets identified and documented

Efficiency: Number of FTE hours required to manage the security monitoring and event correlation tools and services

Explanatory: ITS serves as a central resource for Enterprise State Network situational awareness and incident management and has established notification procedures for informing state agencies of potential security incidents on agency-managed information systems. Each agency must be prepared to respond to cybersecurity incidents that facilitates timely and appropriate action to mitigate risks within their agency. Being able to detect and respond to cybersecurity incidents in a timely manner can significantly reduce the negative impact to state government as a whole.