MISSISSIPPI

Strategic Master Plan for Information Technology

2022 | 2024

Mississippi Department of Information Technology Services
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May 16, 2022

The COVID-19 pandemic brought, and continues to bring, unique challenges affecting all levels of government. The traditional way of doing business transitioned quickly with much more reliance on technology and accelerated the need for remote access to services. COVID-19 has proven that we must continue to look for ways to leverage technology and automation in order to enhance the services we provide to the citizens of Mississippi. ITS has taken proactive measures and continues to build pathways forward to accomplish this goal.

In the recently published 2021 State CIO Survey, Driving Digital Acceleration, the pandemic highlighted the value of technology and how critical it is to the delivery of government services and efficiencies. It is clear that “better online experiences for citizens” stood out as the biggest driver for state government’s need to digitize. Mississippi state government is creating a foundation around the adoption of technology that the pandemic required. The benefits and convenience of speed and accessibility are now standards that our citizens expect in all parts of their lives including government interaction.

Mississippi has delivered web-based and mobile services to citizens, businesses, government employees, and entities for approximately 11 years. Not only have our citizens benefited through the electronic services provided, but Mississippi has been recognized as a technology leader accumulating over 150 national awards in innovation, 22 in 2021. Mississippi’s official website, www.ms.gov continues to win awards in 2021 such as Outstanding Website in the WebAward Competition, the premier showcase for website development in more than 95 industry categories, and other top place awards such as the gold medal at the Hermes and Davey Awards. In response to COVID-19, the coronavirus.ms.gov webpage was launched and the MISSI chatbot was enhanced to respond with COVID-19 information, providing citizens with up-to-date information on school closures, coronavirus testing, and additional COVID-19 related guidance. This resulted in MISSI receiving the Future Ready Award at the 2021 Government Experience Awards.

According to the National Association of State Chief Information Officers (NASCIO), Cybersecurity remains at the top of the state CIO priorities list for 2022, as it has for the last few years, with Digital Government, Broadband / Wireless Connectivity, and Cloud Services placing second, third, and fourth respectively. Through the objectives and strategies outlined, these are also top priorities for Mississippi as demonstrated through recent initiatives. These initiatives include the Mississippi Enterprise Security Program, expansion of our multisite cloud ecosystem, and statewide voice/data network migration efforts which is expected to save taxpayers tens of millions of dollars over the life of the contract period.

On behalf of the Mississippi Department of Information Technology Services, I present to you the 2022-2024 State of Mississippi Strategic Master Plan for Information Technology and I look forward to our continued work together in advancing the goals and strategies presented in this plan.

Sincerely,

David C. Johnson
Executive Director
The 2022-2024 State of Mississippi Strategic Master Plan for Information Technology is prepared to assist state government’s technology and business leaders in making informed technology decisions that support state business goals. It establishes a common set of goals and strategies for the state’s information technology (IT) enterprise over the next three years.

As part of the statewide IT planning process, goals and strategies are developed to assist the Mississippi Department of Information Technology Services (ITS) in delivering the most effective services to the government entities in Mississippi. ITS endeavors to work closely with state agencies, boards, commissions, public education, institutions of higher learning, and other Mississippi public entities to focus on excellence through quality of service, responsiveness, innovation, professionalism, and teamwork. The 2022-2024 State of Mississippi Strategic Master Plan for Information Technology should serve as a guide to government agencies for selecting technology that supports their existing business operations and fostering innovation into the digital transformation of government services.

The development of Mississippi’s 2022-2024 goals and strategies are guided by the following technology leadership values:

- Deliver state government business outcomes, goals, and objectives supported by technology strategies that have a sound business case before new investments are made
- Maintain flexibility with accountability in order to respond to new service needs
- 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 enterprise solutions capable of reducing the evolving threat and protecting Mississippi government’s informational assets
- Recognize that IT is a statewide resource where technology investments should be aligned with strategic goals of the state
- Develop a process that fosters intergovernmental cooperation to share information easily within government organizations and with outside partners
- Employ 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 Mississippi’s IT enterprise

ITS endeavors to work collaboratively with state agencies, universities, public education, and other public entities in Mississippi to focus on EXCELLENCE through QUALITY OF SERVICE, RESPONSIVENESS, INNOVATION, PROFESSIONALISM, and TEAMWORK.
INVESTMENT MODEL FOR STATEWIDE INFRASTRUCTURE

To ensure the effective and efficient use of public funds, ITS collaborates across state and local government agencies to effectively manage and deliver statewide IT services and technologies that are beneficial, secure, accessible, and that leverage the statewide shared infrastructure and architecture.

The Investment Model is comprised of three layers:

- **The Infrastructure Layer** includes managed service delivery, which encompasses services, telecommunications and networking services, and shared computing resources in the State Data Centers.

- **The Enterprise Layer** represents the areas where ITS and agencies work together to leverage Mississippi’s technology investment. Another aspect of the Enterprise Layer is to ensure that effective and innovative solutions are identified and broadly communicated as best practices across the enterprise. Partnerships are an essential element of the Enterprise Layer as Mississippi government seeks to fully leverage the shared services and technology infrastructure.

- **The Agency Layer** represents the business areas of agencies. It encourages creative approaches and supports an innovation-centered environment where individual agencies have the time and resources to focus on creative business solutions.

By utilizing the shared services depicted in the infrastructure layer of the model and by leveraging the statewide enterprise policies, best practices, standards, partnerships, and blueprints reflected in the enterprise layer, individual agencies are able to innovate with creative solutions that focus on fulfillment of their agency’s core missions while taking advantage of the enterprise statewide technology architecture. Deployment of innovative technology solutions will expand access to information and services, equip employees with the tools needed to accomplish their jobs, and improve decision making within organizations.
**E-Rate**

The Schools and Libraries Program (www.usac.org/sl) provides discounts on the costs of eligible telecommunications services, Internet access, and internal connections ranging from 20% to 90%. The highest discounts go to the schools and libraries serving the most disadvantaged populations based on the percentage of students within the district that are eligible for the National School Lunch Program. During the 24 years of the E-Rate program, Mississippi has received on average approximately 1.4% annually of the national total with over $790 million dollars in credits going to schools and libraries in Mississippi. The following table reflects the amount committed to Mississippi by year. Source information: https://tools.e-ratecentral.com/us/stateInformation.asp?state=MS.

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*Some funding requests remain under review*
CURRENT IT OUTLAY IN MISSISSIPPI

The spend reflected in this section is as categorized in Mississippi’s Accountability System for Government Information and Collaboration (MAGIC) and is only as accurate as the information entered by agencies at the time the funds were expended. Payments to vendors by schools, libraries, community colleges, universities, and other governing authorities are not included in the noted expenditures. Additionally, the personnel category is an annualized projection of filled and vacant IT positions.
MISSISSIPPI STRATEGIC MASTER PLAN FOR IT

EXECUTIVE SUMMARY

GOAL 1
Provide, Protect, and Support Enterprise Technology Infrastructure Components to Enable the Effective and Efficient Use of Information Technology

STRATEGIES
- Utilize fully the Primary and Co-Processing Data Centers’ Technology Infrastructure Services
- Provide, manage, and facilitate efficient and cost-effective usage of telecommunications services
- Provide, protect, and support enterprise technology infrastructure components to strengthen the security posture of the state

GOAL 2
Investigate, Develop, and Promote Enterprise Business and Technology Solutions to Maximize the Benefits of Shared Services

STRATEGIES
- Implement and promote digital government and mobile solutions to deliver public sector services
- Implement an effective and efficient messaging service for state government
- Investigate, propose, and implement an effective and efficient enterprise business resiliency solution
- Implement and promote an effective and efficient enterprise cloud ecosystem for state government

GOAL 3
Promote the Funding, Procurement, and Management of Information Technology as a Strategic Investment

STRATEGIES
- Initiate innovative and collaborative procurement strategies and practices
- Raise awareness and seek alignment of the IT investment process
- Enhance contract management strategies and practices
- Provide innovative and timely information technology training to state employees

GOAL 4
Promote Statewide Sharing of Information Technology Between all State Agencies to Foster a Collaborative Approach to Innovative and Digital Transformation of Government

STRATEGIES
- Develop a technology blueprint that drives improved IT coordination and investment
- Facilitate and coordinate inclusive planning and outreach processes across state government
- Continue emerging technology research and strategic private sector relationships
- Provide effective communications via media-related activities to improve communication with all partner agencies, advance ITS’ mission and vision, and encourage public interaction
MISSISSIPPI IT GOALS & STRATEGIES

GOAL 1
PROVIDE, PROTECT, AND SUPPORT ENTERPRISE TECHNOLOGY INFRASTRUCTURE COMPONENTS TO ENABLE THE EFFECTIVE AND EFFICIENT USE OF INFORMATION TECHNOLOGY

Strategy 1.1

Utilize fully the Primary and Co-Processing Data Centers’ Technology Infrastructure Services

Mississippi government continues to experience growth in the purchasing and implementation of redundant IT hardware and software within the agencies. This growth results in excess hardware and software infrastructures and capacity with independent operations across a broad range of technical environments, service levels, and security standards. Often, these disparate environments are more expensive to maintain and operate than an enterprise statewide system. Additionally, this fragmentation creates a duplication of effort and presents a challenge for statewide disaster preparedness and response. Fully utilizing the investments already made in the state’s Primary Data Center is a critical step toward helping government build a more secure, agile, and cost-effective infrastructure for the delivery of critical government services.

The availability and protection of the state’s electronic information is a critical component for the delivery of government services to its citizens. The Primary Data Center offers security, resiliency and hosting options to meet an agency’s business requirement. To compliment the attributes of the Primary Data Center, agencies have access to the state’s Co-Processing Data Center with similar attributes for geographical diverse computing, backups, and business resiliency options.

Action:

- Increase use of the state’s enterprise on-premises hybrid-cloud computing environment
- Expand the state’s Primary Data Center colocation area to encourage agencies to relocate stand-alone systems to a more robust and secure computing environment
- Implement and continue to improve backup and business resiliency solution for the enterprise Tier 0 services critical to the state’s IT operations. Develop, maintain, and test business resiliency solutions and business continuity processes for critical enterprise state network infrastructure
- Expand service-based business resiliency solutions that can be agency specific to improve recovery times, reduce cost, and provide opportunities for an agency to directly subscribe to the service as deemed necessary in support of their program areas.
- Continue to leverage the attributes of the Co-Processing Data Center for those applications and systems that necessitate off-site backups and business resiliency requirements
• Implement a Configuration Management Database System interfacing with the Service Center application, to assist with help desk ticket creation and verification of hardware and software components; thus expanding the Service Center to provide partner agencies with a single point of contact for system monitoring, ticket tracking, and accessing a knowledge database

• Build on the benefits of implementing Information Technology Infrastructure Library (ITIL) best practices for incident management, service request management, problem management, and change management

• Continue support of the zSeries platform that supports the Department of Finance and Administration’s MAGIC application

• Continue support of the state’s Active Directory

**Strategy 1.2**

**Provide, Manage, and Facilitate Efficient and Cost-Effective Usage of Telecommunications Services**

Statewide voice and data communications are provided for state entities and local governing authorities within the Capitol Complex, the Jackson Area, and across the state through a combination of vendor contracts and directly managed services. The current contracts for statewide voice and data communications leverage the state’s aggregate buying power to ensure that the best possible rates and universal service offerings are available to government entities. These long-term contracts include access to enhanced telephone services, dedicated Internet, managed router and broadband data network services, and audio/video/web conferencing. Telecommunications services provided directly to agencies within the Capitol Complex include access to the Capitol Complex fiber network, enterprise telephone system, voicemail, and high-speed network connectivity to the State Data Centers, Internet, and the Mississippi Optical Network (MissiON).

**Action:**

• Manage the statewide Multi-Protocol Label Switching (MPLS) data communications network and related contracts

• Manage and maintain the Primary Data Center network and Co-Processing Data Center network

• Manage and maintain the statewide enterprise telephone system

• Provide agencies and institutions with cost-effective telecommunications services (voice and data) that support the missions and objectives of state government

• Provide agencies and institutions with access to the Internet and computing resources through the state’s shared data network infrastructure

• Enhance the communications infrastructure (voice and data) to expand services and provide reliable, secure communications access to state resources and mission critical applications

• Perform annual needs assessments and upgrades to state communications resources at the enterprise level

• Install and maintain the copper and fiber cabling infrastructure in and between all state government buildings in the Capitol Complex area

• Provide statewide contract for audio, web, and video teleconferencing
• Monitor, enhance, and modify all telecommunications networks to maximize utilization and decrease operational overhead

• Promote access and use of the state telecommunications contract for governing authorities to improve infrastructure and services and reduce telecommunications expense at the local level

• Manage the implementation of technically sound and cost-effective communications platforms at all newly constructed or renovated facilities through inter-agency policies and procedures

• Coordinate relocation of communications services for all agencies impacted by new building and renovation activities

• Provide value-added services to our partner agencies such as end-user training, vendor bill auditing, system administration, network monitoring, and on-going project management

• Examine security functions and services for core voice communications platforms

• Implement Voice over Internet Protocol (VoIP) and other real-time applications, where appropriate

• Coordinate the transition to approved enterprise technologies ensuring interoperability and effective cost management related to inventory, support, and maintenance of the statewide network

• Incorporate new and proven industry standards in telecommunications technologies to enhance the service and delivery needs of the state

• Perform reconciliations on agency invoices to ensure accurate billing by telecommunications vendors

Strategy 1.3

Provide, Protect, and Support Enterprise Technology Infrastructure Components to Strengthen the Security Posture of the State

ITS administers the Enterprise Security Program to execute the duties and responsibilities of Mississippi Code Annotated § 25-53-201. ITS provides coordinated oversight of the cybersecurity efforts across all state agencies, including cybersecurity systems, services, and development of policies, standards, and guidelines. The complexity of the enterprise and the challenges associated with securing an environment composed of decentralized agencies requires a coordinated effort to help the state better understand its aggregate security maturity level. ITS uses this understanding to refine the enterprise security effort.

Action:

• Align the Enterprise Security Policy and overall Enterprise Security Program with the National Institute of Standards and Technology (NIST) Cybersecurity Framework; the security controls defined in the 800 series of publications by NIST and the Center for Internet Security (CIS) Controls

• Evaluate and award a Request for Proposal (RFP) for the acquisition of managed security services to assist with identifying, measuring, and prioritizing the potential risks that exist on state IT assets

• Centralize termination of all VPNs in the enterprise remote access VPN solution. The VPN solution extends the private network across a public network to provide authorized users secure remote access to the state network
• Collect and analyze information regarding the use and associated costs of cybersecurity solutions and services within state government. The analysis of this information will assist the Enterprise Security Program in deciding the appropriate enterprise security solutions and services for reducing risk and cost

• Research cloud security solutions and services for gaining visibility into cloud usage and risks, meeting compliance requirements, enforcing security policies, and detecting and responding to potential threats. Implement an enterprise architecture joining cloud infrastructure to the Enterprise State Network without introducing undue risk

• Research managed security service options for the state to deliver security device management to assist in meeting agency security needs, as well as any state and federal legal and regulatory requirements for providing effective protection of their networks and computing platforms

• Develop an RFP for the acquisition and implementation of an enterprise perimeter defense solution to enhance the ability to protect state assets against attacks by detecting and filtering unwanted software, malicious code, and traffic to malicious sites from user-initiated Internet traffic

• Research managed security service options for the state to assist with evaluating and researching threats and prioritizing alerts and response recommendations based on risk

• Research and consider developing an RFP for the acquisition of managed security services to assist with the monitoring and analysis of cybersecurity incidents reducing the timeframe required to respond in the event of a cybersecurity incident

• Research managed security service options for the state to assist with the monitoring and analysis of cybersecurity incidents reducing the timeframe required to respond in the event of a cybersecurity incident

• Develop a strategy for analyzing the effectiveness of an agency’s cybersecurity program and the controls that protect agency assets and assign a cybersecurity rating based on enterprise requirements and industry standards

• Develop a standardized reporting format for consistently communicating an enterprise view of the state government cybersecurity posture to stakeholders

• Research strategies for implementing a basic cyber hygiene course to be completed by state government employees. The course will be implemented using the existing enterprise security awareness training solution

• Expand the current partnership, tools, and processes used to assess and evaluate externally accessible state government assets for known vulnerabilities
Goal 2
Investigate, Develop, and Promote Enterprise Business and Technology Solutions to Maximize the Benefits of Shared Services

Strategy 2.1 Implement and Promote Digital Government and Mobile Solutions to Deliver Public Sector Services

The public-private partnership between the state of Mississippi and its eGovernment partner, NIC Mississippi (formerly Mississippi Interactive - MSI), is focused on the timely and leading-edge delivery of web-based and mobile services in an efficient and cost-effective manner. Citizens, businesses, government employees, and local entities benefit from the solutions provided by this program. Effective governance provided by the Electronic Government Oversight Committee (EOC) has afforded NIC Mississippi clear direction to efficiently prioritize, develop, and launch over 20 interactive services each year. The goal of the partnership is to enable government entities to create program efficiencies, meet legislative service deadlines, and establish a citizen-centric website, as well as an effective social media presence.

Action:
- Provide administration and support for the effective functioning of the EOC, including the use of a methodology for prioritizing the deployment of digital government applications across state government
- Establish Mississippi as an innovative leader in mobile technology offerings
- Expand the use of the eGovernment payment engine, in conjunction with the EOC and Department of Finance and Administration (DFA)
- Continually improve Mississippi’s portal, ms.gov, to provide additional information to online visitors and to encourage the use of digital government services
- Promote the use of NIC Mississippi services for agency websites, digital government services, and mobile applications
- Leverage the eGovernment shared services environment to give state agencies equal access to advanced technologies
- Expand the use of web-based and mobile services to state government boards and commissions and local governing entities
- Continue to promote a “security-first” environment

Strategy 2.2 Implement an Effective and Efficient Enterprise Messaging Service for State Government

The state’s enterprise hosted messaging solution provides the means of consolidating agency-managed standalone systems into a single platform to improve efficiencies, drive standardization, promote modernization, and leverage the state’s volume buying power to reduce overall cost. The solution is built on Microsoft’s 365 platform, which further expands the capabilities and benefits beyond traditional email services. When state agencies fully adopt this shared service, the Microsoft 365 platform will provide the state with a common
naming convention, comprehensive employee address book, calendaring, archival, and access to other enhanced hosted service offerings such as SharePoint, Teams, and the complete Microsoft 365 desktop suite. As part of the enterprise agreement, these services are also available to other government authorities.

**Action:**

- Investigate a turn-key managed Microsoft 365 environment that offers agencies next generation desktop products and options through a consumption-based model
- Implement a new and innovative email relay and spam filtering solution to be incorporated into the managed service solution
- Continue to solicit agencies’ executive support for a centralized email solution with a focus on operational efficiencies and potential cost savings
- Develop a comprehensive identity management solution for state government
- Continue to communicate with state agencies concerning the core email functionality and infrastructure required for day-to-day operations
- Work toward a consumption-based model for licensing and usage that will transition individual contracts into a statewide enterprise solution
- Improve the state’s spam filtering and email relay services at the enterprise level
- Develop a comprehensive reporting and management tool to capture usage and performance measures related to the services provided
- Continue to research and implement best practices to promote and accelerate the enterprise cloud email migration strategy for the state

### Strategy

**2.3 Investigate, Propose, and Implement an Effective and Efficient Enterprise Business Resiliency Solution**

The modernization of many government applications coupled with web-enabled access makes it necessary for the state to rethink and significantly improve its existing disaster recovery strategy. Today’s citizens expect conducting business with the government to be as instantaneous and reliable as doing business across the Internet. To sustain accessibility to government resources in the event of a disaster, a robust business resiliency plan and enterprise backup solution are vital for agencies to meet recovery time and recovery point objectives. Rather than a single approach, a new solution is required that offers agencies with options to meet their specific and often unique requirements. The new solution offers a portfolio of services that can be tailored to match the criticality of the supported application.

**Action:**

- Create an improved comprehensive business resiliency strategy with options tailored to meet the agency’s requirements for recovery time and recovery point objectives
- Leverage the attributes of the State Data Centers and the cloud hosting solutions to support mission critical applications
- Develop an enterprise solutions portfolio through strategic partnerships
- Evaluate direct-to-cloud and hybrid backup solutions to safeguard state government data
- Ensure off-site data is secure with approved encryption and security measures
• Foster executive support of the enterprise business resiliency service available to state agencies
• Test, evaluate, and measure outcomes regularly to ensure capabilities are adequate and functional

Strategy

2.4

Implement and Promote an Effective and Efficient Enterprise Cloud Ecosystem for State Government

Cloud computing has moved to the forefront of IT in the public sector, with the promise of efficiencies and cost savings. Many state governments, during the economic downturn of the Great Recession, sought to consolidate data centers and technical services. Similarly, the foundation of cloud computing is the concept of converged infrastructure and shared services. Cloud has also simplified the cyclic Capital Expenditure (CAPEX) model of procuring, implementing, and running a dedicated infrastructure, to a more obtainable Operating Expense (OPEX) model of pay-as-you-go shared services. Maximizing the economies of scale in the cloud is a potent driver allowing agencies to avoid upfront infrastructure costs, with improved manageability. The rapid commoditization of computing resources has led to high growth in cloud services.

Action:

• Fully deploy a hybrid cloud solution within the State Data Centers where the selected business partner owns and manages all technical aspects in the on-premises cloud infrastructure. This service provides a low cost, general purpose, and virtual compute and storage environment that is managed by agencies via a self-service portal
• Leverage the Primary Data Center’s physical and mechanical resources to support a long-term partnership with a vendor to provide a fully managed and robust hybrid cloud solution
• Develop a delivery model that provides government agencies with the ability to rapidly provision compute and storage needs via a self-service web interface
• Work closely with state agencies to evaluate applications for cloud readiness to ensure performance expectations are met and right sized for performance and economies
• Document the development of an instance-based (small, medium, large, and extra-large) service menu
• Establish a portal interface to broker select public cloud solutions and allow for the transfer of services between approved cloud service providers
• Develop a statewide cloud computing strategy and policy based on best practices and industry standards
Goal 3

Promote the Funding, Procurement, and Management of Information Technology as a Strategic Investment

Strategy

3.1 Initiate Innovative and Collaborative Procurement Strategies and Practices

ITS assists state agencies, universities, and local governing authorities with the acquisition of IT hardware, software, and services. An ongoing initiative is the re-engineering and continuous improvement of procurement processes and procedures through both strategic and incremental changes. In addition, focus is placed on the identification of collaborative opportunities. With this, procurements are conducted to provide and facilitate the use of the state’s technology infrastructure which allows multiple agencies to benefit from a single procurement. Improvements in the procurement process focus on the following initiatives with the goal of providing better service to our partner agencies, universities, and local governing authorities while delivering cost savings to the state.

Action:

- Facilitate the technology procurement process through the utilization of MAGIC, Mississippi’s statewide SAP Enterprise Resource Planning solution

- Continue to enhance the procurement process to provide accessibility and transparency to both vendors and procurement entities utilizing web-enabled applications, including:
  - Web publication of RFPs and Notice of Intent to Certify Sole Source procurements and advertisements
  - Dynamic presentation of procurement status information
  - Publication of agendas and minutes from ITS Board meetings
  - Publication of procurement outcome and award information

- Continue to enhance and standardize best practices for RFP and sole source procurements, content, and proposal evaluation methodologies

- Work with manufacturers and resellers on the Express Products Lists (EPL) to provide agencies, public universities, and local governing authorities with purchase choices of current technologies in a timely and cost-effective manner

- Enhance internal ITS procurement processes, emphasizing consistent, appropriate, and timely processing of all requests

- Provide expedited approval of commodity-level procurements for agencies that have submitted comprehensive technology plans

- Provide proactive training to vendors and partner agencies, universities, and local governing authorities regarding procurement law and procedures, timelines, and best practices

- Facilitate dialog between the ITS Board and partner agencies and universities on technology strategies and initiatives

- Coordinate the procurement process with the IT planning process to address partner agency requests and technology direction

- Identify and promote opportunities for utilization of existing technical resources in lieu of procuring redundant equipment and products
• Coordinate the requirements of multiple partner agencies in developing procurement instruments that leverage the state’s combined purchasing power to achieve the best possible discounts for technology products and services

• Facilitate the acquisition and adoption of enterprise solutions to provide standard products across state government for common functions

Strategy

Raise Awareness and Seek Alignment of the IT Investment Process

3.2

The National Association of State Chief Information Officers (NASCIO), the National Association of State Technology Directors (NASTD), and the National Governors Association (NGA) strongly emphasize the need for a strategic IT investment process to ensure that states utilize innovative, smart-buying, investment techniques. With IT being a critical component of state government infrastructure, many states have focused on using IT to solve workforce and service delivery problems in government operations. However, choosing an appropriate IT solution requires planning, thorough analysis, and a strong business case to better meet citizens’ needs, facilitate business/government interactions, and improve internal government processes at a reasonable cost and with ease of implementation. Currently, the budgeting and funding of IT within Mississippi state government continues to be federated and is accomplished on an agency-by-agency basis. On behalf of the state, ITS maintains multiple master enterprise contracts that achieve cost efficiencies through volume purchasing, while passing through actual charges to partner agencies to fully leverage available federal dollars. Many additional opportunities exist that can be leveraged to accomplish an increasingly strategic investment of IT resources across the statewide enterprise, including strategically planning for upgrades, transferring cost savings to fund applications, and implementing return-on-investment programs.

Action:

• Seek opportunities to develop and implement IT services that are common to multiple agencies and governmental programs in order to minimize duplication of efforts among organizations

• Utilize economies of scale by spreading fixed costs over larger volumes to reduce overall unit costs, and efficiently leveraging scarce and expensive IT staff resources

• Focus on enhancing input and direction from the state’s executive and legislative leadership with aims to achieve economies of scale, increase accountability, and implement enterprise-focused solutions

• Seek interagency dialogue to address the enterprise of state government across all functions to enable the use of common software, hardware, communication systems, data applications, and professional service contracts

• Focus on enabling strategic technology projects to be critiqued and prioritized by the state’s executive and legislative leadership, with funding appropriated via a separate budgeting process and management monitored and reported through a project management office

• Improve current, traditional IT funding approaches by expanding adoption of innovative and alternative funding models focused on enabling the state to deliver savings and improve services to citizens

• Investigate the transfer of savings from shared service IT initiatives to fund applications and upgrades
Strategy 3.3  
Enhance Contract Management Strategies and Practices

ITS contracts on behalf of state agencies, universities, and other local procurement clients for the acquisition of IT hardware, government software, and services. An ongoing initiative is the continuous improvement of the development and management of contracts and negotiation strategies with the goal of strengthening the state’s contractual position with technology vendors. This would be mutually beneficial and provide efficient delivery of technology products and services to government.

Action:
- Continue to enhance the development of vendor contracts
- Incorporate contractual terms and conditions to support the evolution of technology and its implementation in state government, including measures to strengthen the state’s security posture
- Administer and manage the state’s software escrow services contract for use by state government agencies
- Administer and manage the state’s Cellular Master Agreement for the delivery of cellular devices and services to state and local government
- Administer and manage the state’s e-Government Agreement for the delivery of electronic government services to state and local government
- Administer and manage the state’s Managed Service Provider Agreement for the delivery of technology resources as independent contractors to state government

Strategy 3.4  
Provide Innovative and Timely Information Technology Training to State Employees

ITS provides self-paced, online training to state agencies via the Internet. There are currently over 5,000 courses in technical, end-user, and professional development topics, with new courses added quarterly. ITS provides an ongoing program designed to enhance and improve the skills of state employees.

Action:
- Provide self-paced, online training to state agencies via the Internet
- Provide continuous online curriculum updates to keep pace with new and emerging technologies, including new products and new releases of software
- Provide a comprehensive information technology training program for end-users, technical staff, and managerial personnel
GOAL 4: 
PROMOTE STATEWIDE SHARING OF INFORMATION TECHNOLOGY BETWEEN ALL STATE AGENCIES TO FOSTER A COLLABORATIVE APPROACH TO INNOVATION AND DIGITAL TRANSFORMATION OF GOVERNMENT

Strategy 
4.1 Develop a Technology Blueprint that Drives Improved IT Coordination and Investment

Many states are investigating the link between a technology blueprint, often referred to as an Enterprise Architecture, and IT enterprise investments. A technology blueprint depicts the key technology components to create an IT ecosystem. It is a holistic, comprehensive planning approach for a government enterprise that integrates information and services across government agency boundaries. A technology blueprint supports the coordination of various IT support functions. It also can create and enforce statewide standards and policies for data, security, purchasing, management, and operational procedures for all technology investments.

Action:
- Implement a standards-based blueprint for the state’s use of technology, which addresses the whole enterprise of state government and enables data sharing across all government functions to enable the use of common software, hardware, communication systems, and data applications
- Optimize shared technology components, including data centers, cloud services, computing environments, vendor platforms, storage, enterprise applications, and networks. These shared services can reduce initial purchase and ongoing maintenance costs, ensure better use of existing IT assets, and promote interoperability across government
- Implement new and review existing policies, standards, guidelines, and purchasing instruments for consistency and alignment to the state’s strategic direction
- Identify and review business processes that are common across multiple agencies
- Develop business cases that consider alternatives and recommend actions related to future shared services that will provide value and cost savings
- Coordinate statewide enterprise architecture and planning initiatives

Strategy 
4.2 Facilitate and Coordinate Inclusive Planning and Outreach Processes across State Government

ITS desires to make the greatest impact possible through the consistent delivery of services and the efficient use of IT resources. We make every effort to work with our partner agencies to find the best and most economical solution to their technology needs. Planning for technology allows our partner agencies to invest scarce public resources in strategically planned projects in order to improve productivity of government workers and improve service delivery to the citizens and businesses of Mississippi. ITS has a dedicated staff that consults with partner agencies on the services available through the State Data Centers, as well as the acquisition of technology products and services, telecommunication solutions,
and security. We will continue to provide outreach to state government entities, to improve communication with our partner agencies, and to provide resources to assist with technology products and services.

**Action:**
- Facilitate partner agency outreach meetings to review technology-based services provided by ITS, review services currently provided, help ensure partner agency satisfaction, and review agency project lists for potential opportunities to efficiently utilize IT resources and provide capacity planning
- Develop ongoing interactive statewide IT advisory groups to help set direction and establish priorities for state technology initiatives
- Provide support and online tools to agencies, boards, and commissions to assist in the budgeting and planning of technology projects
- Expand statewide technology outreach with partner agencies
- Review partner agency technology plans for statewide infrastructure impact and needs, opportunities for agency collaboration, potential volume purchases, technology training and education opportunities, and other focus areas
- Develop a formalized governing process for agency technology plan review and approval
- Facilitate regular change management calls with partner agencies to promote communications
- Develop surveys to capture information from agencies regarding services, performance, and various other topics
- Host interactive forums to inform stakeholders of changes in services, policies or procedures, standards, or costs for specific areas of service
- Facilitate statewide conferences with a technology agenda based on agency feedback
- Cultivate and strengthen existing partner agency relationships by developing mechanisms to facilitate outreach and information sharing with stakeholders

**Strategy 4.3 Continue Emerging Technology Research and Strategic Private Sector Relationships**

The state utilizes IT research resources and vendor relationships to stay informed of industry changes that may affect the enterprise. State IT leaders monitor changes and future technology trends in the IT ecosystem and embrace new technologies and methodologies to service the needs of the state. The continued research is used in conjunction with agency technology plans, emerging technology initiatives, participation in national and local organizations, and vendor relationships to build strategic technology roadmaps for the future.

**Action:**
- Fully leverage partnerships with leading IT research and advisory firms
- Continue involvement in national technology organizations with a focus on state government
- Continue research in new innovative technologies to stay abreast of the latest advances in technology
• Cultivate and strengthen partnerships with other government entities to understand the benefits and challenges of implementing new technologies
• Drive digital transformation of state government by presenting new innovative technologies

Strategy 4.4

**Provide Effective Communications via Media-Related Activities to Improve Communication with all Partner Agencies, Advance ITS’ Mission and Vision, and Encourage Public Interaction**

ITS strives to provide effective outreach to state government entities, improve communication, and provide resources to assist with technology decisions for needed products and services. Communications channels range from one-on-one meetings, seminars, summits, and councils established for enterprise initiatives.

**Action:**

• Identify communication challenges and customize how and what is communicated to internal and external audiences
• Analyze communication platforms and methods to align different forms and channels of communication to best fit the audience and message
• Develop and ensure social media and the ITS website maintain content strategically focused on the planning, creation, delivery, and governance of content
• Manage production of strategic publications such as the *State of Mississippi Strategic Master Plan for Information Technology*, *Mississippi Department of Information Technology Services Annual Report*, *Five-Year Strategic Plan*, and *ITS Services Catalog* along with additional brochures, manuals, surveys, etc.
• Seek out potential opportunities for award recognition on the national level in highlighting the great work done by state entities for providing our citizens with exceptional information technology services
• Provide consultative services to coordinate the development, effectiveness, and use of electronic and printed materials for public and professional meetings, seminars, and conferences
MISSISSIPPI IT AT WORK

Each year, state agencies in Mississippi work to enhance government services by leveraging technology to implement strategic systems. The systems featured in this year’s “Mississippi IT at Work” section of the 2022-2024 State of Mississippi Strategic Master Plan for Information Technology provide improved services to citizens, businesses, and state employees through the implementation of innovative IT applications.

MS.GOV
MISSISSIPPI’S OFFICIAL STATE WEBSITE

Ms.gov is a joint effort between the state of Mississippi and its eGovernment partner, NIC Mississippi (NIC MS). MS.gov was implemented under a self-funded model at no cost to the state or citizens. To date, the design, maintenance, and customer support efforts of ms.gov are valued at nearly $2.5 million.

The eGovernment partnership has garnered the creation of 324 online and mobile services aimed at assisting citizens in day-to-day interactions with state government. The success of Mississippi’s eGovernment services can be seen in the over 500,000 individual downloads of native mobile apps, electronic revenue collected on behalf of the state in excess of $600.3 million, and over 60% in mobile or tablet adoption of prime services, including online hunting and fishing license sales and online driver license renewals. Through this public-private partnership and its focus on efficient government solutions, Mississippi has realized a cost savings in excess of $2 million per year totaling over $15.7 million to date.

Additionally, this partnership has garnered the state over 150 awards, 22 in 2021, including:

- The Mississippi Department of Public Safety’s “Skip the Line” program was selected as an award recipient in the Center for Digital Government’s annual Government Experience Awards. DPS received the prestigious recognition for the seamless use of emerging technology and people-first delivery of digital government solutions.

- Government Experience Awards
  - Future Ready Award – MISSI
  - Project Experience Award – Mississippi Department of Wildlife Fisheries and Parks Citizen Platform

- Dot COMM Awards
  - Gold Winner – Eudora Welty House and Garden Website
  - Gold Winner – Department of Revenue QuickPay
  - Honorable Mention – MS.gov

- WebAward
  - Outstanding Website – MS.gov

- MarCom Awards
  - Platinum Winner; Mobile Traffic and Alerts – Department of Transportation MDOTtraffic Mobile App
  - Gold winner; Government Websites – MS.gov
  - Honorable Mention – Access MS
• Davey Awards
  o Gold Winner; Government Websites - Mississippi Department of Public Safety Website
  o Gold Winner; Government Websites - MS.gov

• W3 Awards
  o Silver, General Website Categories; Best Use of Emerging Technology – MISSI, chatbot
  o Silver, Website Features; Home Page for Websites - MS.gov
  o Silver, Mobile App; Maps and navigation – Department of Transportation MDOTtraffic App

• Hermes
  o Gold – MS.gov
  o Honorable Mention – Department of Public Safety Website

• Communicator Awards
  o Award of Excellence; Websites – General – MS.gov
  o Award of Distinction; Websites – Features and User Experience – MS.gov
  o Award of Distinction; Websites – Government – MS.gov
  o Award of Excellence; Websites – AccessMS
  o Award of Excellence; Websites – Government – Mississippi’s Coronavirus Website
  o Award of Distinction; Websites – Government – Department of Public Safety Website

The ms.gov team actively works year-round to generate and refine ideas for new content and functionality to enhance ms.gov for citizens. By sampling analytics and user feedback mixed with online research and best practices, the team continues to balance citizens needs with user wants by actively seeking and applying knowledge from industry leaders, state IT officials, and citizens.

A cornerstone of ms.gov is the emerging technology featured throughout the site, including:

• **MyMississippi** - Mississippi’s government citizen platform, My Mississippi (myMS) is an intelligent personalized platform developed for citizen use to track important reminders, receive alerts, save frequently accessed content online, interact with the “Ask Mississippi” digital voice assistant for Amazon Alexa and Google Home, and communicate with the state of Mississippi’s chatbot, MISSI. myMS’s 2020 redesign and continued innovations have focused on providing a quicker onboarding process utilizing single sign-on technology from Google, Facebook, and Twitter. myMS is now 40% faster and easier to use thanks to analytic-driven changes when signing up for an alert, as well introducing text messaging options for users on-the-go. Citizens can link their myMS account to ms.gov’s Alexa and Google digital voice assistants for additional functionality, including access to expiring license information and receiving alerts via Amazon Echo and Google Home devices.

• **MISSI** - Mississippi’s chatbox, MISSI, continues to be the focal point of the new Mississippi government experience. MISSI is integrated into the ms.gov design, accessible to users immediately upon every site visit, no matter the device. This popular support service experience has led to over 790,000 chat interactions with citizens with as much as 50% of the incoming questions handled by MISSI.

• **Ask Mississippi** - The Ask Mississippi Platform was one of the first voice assistant skills developed for state government in the nation. Using Alexa Voice Services, citizens can simply “Ask Mississippi” to set a reminder for when their driver’s license expires. Ask Mississippi can provide local fishing reports, assistance in paying taxes, up-to-date traffic alerts, and current COVID-19 case
counts. Hundreds of other supported interactions are continuously updated using the Ask Mississippi Platform’s back-end content and delivery hub. As the information is added to the hub, any of the platform’s device integrations can access the information in real-time without the need for any hard-coded updates.

- **Customizable Dark Mode** - Dark mode is ideally suited to low-light environments, helping to prevent eye strain. Ms.gov in dark mode allows ms.gov content to stand out while the surrounding user interfaces recedes into the background.

- **Apple Business Chat** - Mississippi was the first state in the nation to utilize Apple Business Chat technology. By using Business Chat users can get the information they need right in Messages on their iPhone, iPad, or Apple watch which makes connecting with Mississippi government as easy as texting their favorite people. The goal behind using Business Chat, is to give citizens another avenue to get answers quickly, resolve issues, and complete transactions on their phone, tablet, or desktop regardless of location. It is a powerful new way for ms.gov to securely connect and engage with citizens.

NIC MS continues to invest in software solutions to support new development methodologies while using readily available platforms to create development efficiencies and reduce time to market. Continued leveraging of NIC’s Microservices Platform (MSP) will enable building of microservices into small, independent, auto-scaling, highly reusable, simpler parts. The adoption of NIC’s AppEngine, AccessGov, and TeleGov platforms will continue allowing fast tracking simple form and scheduling services to production with little custom development and less overhead for maintenance. Exploration of additional opportunities for Mobile Inspections will allow agencies to collect information or conduct inspections with or without payment both on and offline in the field.

NIC MS plans to utilize three new NIC SaaS products, Enterprise Licensing and Permits (ELP), NIC Licensing Solution (NLS), and YourPassNow (YPN). Enterprise Licensing and Permits offers a full life cycle enterprise licensing solution that could be self-serviced by the agency. This wide-ranging self-service solution provides the support of statewide consolidation of licensing and permitting applications and renewals across all subscribing agencies. NIC Licensing Solution is a full life cycle enterprise regulatory licensing and permitting solution that allows agencies to rapidly launch modernize state licensing platforms. YourPassNow is a digital marketplace that makes it easy and convenient for visitors to purchase entrance passes and land access permits to public lands online. It detects fraud, waste, and abuse through built-in validation and enhances safety by eliminating the need to carry cash.

Learn more about how Mississippi delivers innovative technology at: [http://www.ms.gov/Technology](http://www.ms.gov/Technology)
Chat IT Up!

Mississippi Government (MS.GOV) and Mississippi Board of Nursing (BON)

The first chatbot launched for government use, MISSI, is the focal point of the Mississippi government experience. MISSI is integrated into the ms.gov design, serving users immediately upon every site visit, no matter the device. MISSI was designed to efficiently communicate and deliver real-time information to citizens online. Questions including “how do I renew my hunting license,” “where can I purchase a driver’s license,” and “I need help with my taxes” are just a few of over 400 iterations the ms.gov chatbot supports. This popular support service has led to over 790,000 citizen chat interactions with as much as 50% of the incoming questions handled by MISSI.

To further this experience, NIC Mississippi partnered with the Mississippi State Board of Nursing to introduce BON in 2021. Both housed on the ChatBot.com platform, these dependable, no-maintenance information bots serve the state well with the increase efficiency. On any given day, MISSI provides quick information about the most frequently used online licenses, helps consumers search for, claim, or report unclaimed property, learn more about their state, answer requests for vital records, and much more. While BON offers license verification information, quick access to nursing applications and forms, as well as guiding users directly to compliance documentation. Assuming each inquiry would have involved a 5 to 10-minute phone call with a live operator, there are definitely efficiencies and cost savings realized.

During the COVID-19 pandemic, MISSI was updated with the latest information from coronavirus testing and the latest guidance from state agencies to assist citizens. Being able to deliver information directly to citizens 24/7 are the biggest benefits of MISSI and BON. With 50% of all visitors coming from mobile devices, having “always on” content delivery channels, like MISSI and BON, that can be access on the go with mobile device provides an incredible advantage. On average, MISSI and BON handle a combined 14,000 queries a month totaling over 793,000 interactions since their launches in 2017 and 2021, respectively.

These dependable, no-maintenance information bots have served the state well and it’s very likely chatbot use will continue to be leveraged by more state agencies. With the lack of human involvement needed, they could serve as a viable option to reduce or even replace help desk call centers with the increased efficiencies allowing a reduction in the number of resources required to handle incoming calls.
COMMUNICATING THROUGH A PANDEMIC
MISSISSIPPI STATE DEPARTMENT OF HEALTH (MSDH)

Two years into the Coronavirus pandemic, MS Ready continues to provide important health reminders and crucial COVID-19 updates to our citizens. Thankfully, the Mississippi State Department of Health began working with our eGovernment partner over six years ago and launched MS Ready, an emergency preparedness mobile app with alerts in mind. While the application contains a wealth of information to reference during emergencies and weather-related events, in 2020 and through 2021 it was MSDH’s daily communication channel used to update the public on COVID-19 rates and fatalities.

During the pandemic, downloads of the free MS Ready mobile app, skyrocketed with MS Ready seeing increases of over 5,000% in month-over-month downloads. Along with the increase in downloads, pre-pandemic push notification numbers climbed from approximately 3,000 per month to over 492,000 per month during 2020 and 2021 as daily communications about COVID-19 in Mississippi increased. Throughout 2020 and 2021, MSDH has successfully distributed approximately 12 million notifications through the MS Ready mobile app, keeping citizens aware and up to date during these unprecedented times.

Features of the application, available in the Apple App Store and Google Play for free download, include:

- Real-time push, text, or email notification of statewide emergency alerts to keep users aware of potential emergencies, hazards, and health updates
- Detailed information about emergencies, natural disasters and how users can safely prepare
- Important MSDH phone numbers and an emergency hotline, available both online and offline, in case of a loss of cellular data or Internet connection
- Complete emergency checklist of items to have on hand should an emergency arise
- Instant connection to MSDH twitter, Facebook, and YouTube pages within the app
The Mississippi State Department of Health launched a mobile child care facility inspection application allowing completion of their inspection checklist using an iPad. Photographs of the facility, owner, and violations can be taken and the complete report can be generated in the field. Final signatures are also obtained electronically on the full report before the inspector leaves the facility. Data gathered from the mobile application feeds a comprehensive Child Care Facility Inspection portal and back-end database which is housed in the Licensing and Reporting System (LARS) developed and supported by ITS. During a nightly process, a pdf of the full report is generated and redacted as required for automatic publication to the agency’s website.

The previous process was entirely paper based and extremely labor intensive. On returning to the office, the inspector manually keyed the entire report into the back-end system. Follow-up was often flagged on the facility rather than on individual items within the facility. It was easy to miss items or ignore a follow-up all together if the information was keyed incorrectly. The old reports were handwritten and often difficult to read, as well as the information gathered could vary from report to report.

Using the new system, follow-up is automatically scheduled based on the data input and is required for each item found during the inspection. Escalation of unresolved items is also automatic. Data required for federal reporting is gathered automatically as the inspector works through the application workflow and the data is consistent across all facilities.

The agency handles close to 5,000 inspections annually. System highlights include:

- Automated document generation – redacted version for the web
- Automated schedule for follow-up
- Automated generation of Federal reports
- E-signatures on the complete report
- Near real-time reporting using web services
- Standardized documentation and enforcement of regulation requirements
- Fully mobile solution using the latest technology from Apple’s iPad
- Reduction in fraud from photographs of facility staff present for the inspection
- Elimination of hand-written reports
Mobile views rose 72.56% from 2019 to 2020 and the Department of Public Safety’s Driver Service Bureau’s (DSB) website saw a 56.12% user increase overall. In June 2021, DSB website’s homepage was redesigned with an updated entry point driven by that increase of mobile visitors.

A new “Video Walkthrough” was also added, as required by SB2633, to guide users through accessing popular sections of the website.

However, the “Skip the Line” program continued to receive primary focus and since its launch has:

- Served over 5 million site visitors with more than 76% of people using a mobile device with 70% opting for text notifications.
- Provided online scheduling via TeleGov for more than 285,000 appointments across 35 locations.
- Reduced in-person wait time from over 2 hours to an average of 20 minutes.

Features of the “Skip the Line” program include:

- **Online Appointment System** - Customers can schedule appointments online via www.dps.ms.gov/appointment. These appointments are given priority service over walk-in customers.

- **Skip the Line Cam** - Customers can view the lines at all troop locations prior to arriving by visiting www.driverservicebureau.dps.ms.gov/live-feeds.

- **Online/Mail-In Firearm Renewal** - All firearm permit renewal applications will be processed by mail. This will eliminate the need to renew in person and the requirement that customers be fingerprinted for a firearm permit renewal. Firearm permit renewal applications are available online at www.driverservicebureau.dps.ms.gov/Firearms/Home.

- **Removal of Alphabet Schedule** - All services (including processing of new firearm permits) will be available every day of the week.
The Hunt is Over!
MISSISSIPPI DEPARTMENT OF WILDLIFE, FISHERIES AND PARKS (MDWFP)

The MDWFP Hunting and Fishing Citizen Platform has greatly increased the ease of use and process for citizens looking to purchase a hunting and fishing license. The pandemic has encouraged more individuals to venture outdoors, and MDWFP continues to see that effect. In 2021 over 83% of every outdoor license was purchased through a mobile device, an increase of 23% from last year.

License purchases for the 2021 dove season saw record opening weekend traffic with over 13,500 people visiting the services over a two-day period. In the first full week of sales, over 10,000 transactions were processed. This was a year over year increase of over 42%, and adoption of auto-renewals saw a significant opening week increase of over 57% during 2021. MDWFP also had a record-breaking annual alligator application and permit year with 6,103 applications processed within the 8-day purchase period. In total, 985 permits were sold, grossing more than $220,000 in revenue. Over the 4-day 2021 Thanksgiving holiday, the Hunting Fishing Customer Portal processed 10,328 license transactions totaling just under $915,000 in revenue for MDWFP, a 41% increase over last year.

The MDWFP Hunting and Fishing Citizen platform consists of an innovative online portal with auto-renewable licenses and packages that transformed a paper-based process to one that takes place on the citizen's mobile device. Features include:

- **Automatically Renewing Licenses** - Outdoor enthusiasts can opt-in upon purchasing a new license for it to automatically and securely renew before their annual expiration date. Also, users can take advantage of real-time updates and see their applicable licenses automatically update.

- **License Packages** - Customers can purchase licenses in bulk, eliminating the need to search through a list of licenses to find the best one to suit each individual hunt.

- **Digital Licenses** - With over 55,000 downloads a year (6,000 in December 2021), the mobile app connects real-time, updates licenses on the fly, removes licenses when they expire, and is always available even without cell coverage (stored in the offline mode).

- **Harvest Reporting** - Game Check was implemented into the mobile device to allow users to report their deer and turkey harvest immediately after they have finished their hunt.

- **Customer Portal** - Users can view past license purchases and update auto-renewal information, mailing address, and customer information, as well as use it to navigate for licenses purchases.

- **WMA Mobile Application** - Allows users to check-in to wildlife management area (WMA) locations, select a time and date of their check-in, enroll the activities, check-out when finished, and report any species hunted during their visit. New for 2021, enhancements provide important information about current or upcoming hunting seasons for different regions including bag limits, legal weapons, and license specifications.
The primary goal of the IT Planning Cycle is to improve the overall efficiency and effectiveness of information technology in state government. Investing scarce public resources in carefully selected IT projects offers significant benefits including improved service delivery to the citizens and business of Mississippi. While planning is a prerequisite to the budget process and necessary for the procurement of information technology and services, an information technology plan (IT plan) is the single most important ingredient to the effective use of technology in an agency.

The IT Planning Cycle has four components: **Strategic Planning**, **Legislative and Budget**, **Technology Events**, and **Strategic Publications**. These components are not necessarily sequential in all aspects, but they are designed to overlap to assist state government in making wise technology investments.
Strategic Planning provides a method for determining how well technology is currently meeting the business needs of an agency and helps identify technology gaps that could improve agency performance and service. As stated in § 25-53-5(a) Mississippi legislation requires all agencies of state government to submit an IT plan to the Mississippi Department of Information Technology Services (ITS) each year. The September 1 due date for submitting agency IT plans directly correlates to the agency budget submission in order to assist agencies in determining the resources needed for their technology initiatives. ITS provides planning methodology information to guide agencies through the planning process as well as staff to assist with their IT plan development.

ITS formally reviews each agency IT plan, provides an analysis of the data, and generates reports that are evaluated for possible statewide infrastructure impact and needs, opportunities for agency collaboration, potential volume purchases, IT training and education opportunities, and other technology focus areas. The information is also used to prepare the State of Mississippi Strategic Master Plan for Information Technology. This report is presented annually to the Governor and Legislature to advise them of the allocation of fiscal resources to best achieve statewide information resource management goals.

Funding for technology initiatives makes the Legislative and Budget component essential in the IT Planning Cycle. The Joint Legislative Budget Committee meets in September of each year to consider agency budget requests and state revenue estimates then budgets are approved the following April. Agencies are also required to submit a Five-Year Strategic Plan in the first quarter of each fiscal year. Legislative leadership have tasked its members to develop ways to better integrate agency planning and performance information into the appropriations process. Agencies must align the Five-Year Strategic Plan submitted with their budget request to the statewide strategic planning elements as close as possible to create a unified statewide strategic plan.

The Technology Events component includes research, communication, and collaboration that make it the vital link to all other components in the IT Planning Cycle. ITS utilizes partnerships with leading IT research and advisory firms, government technology organizations, and vendor relationships to identify, analyze, and track new technologies or products that could benefit state government. On a national level, ITS participates in technology organizations such as the National Association of Chief Information Officers (NASCIO), the National Association of State Technology Directors (NASTD), the Multi-State Information Sharing and Analysis Center (MS-ISAC,) and subscribes to a leading knowledge broker, Gartner, Inc., to stay abreast of the latest advances in technology and to understand how other government entities are implementing them. In Mississippi, ITS serves with other state agency representatives on the Advisory Board for the Mississippi Digital Government Summit, hosts strategic technology councils, and hosts several Security Council meetings throughout the year to share knowledge with other state government agencies, boards, and commissions.

The key deliverable of the IT Planning Cycle is the Strategic Publications component. Information gathered from agency IT plans is used to assist ITS in developing the goals and strategies reflected in the State of Mississippi Strategic Master Plan for Information Technology, and the Five-Year Strategic Plan. The technologies, architecture, and services that are developed and implemented from ITS’ goals and strategies are described in the ITS Services Catalog.
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