STATE OF MONTANA

INFORMATION TECHNOLOGY

STRATEGIC PLAN

2020-22

A MESSAGE FROM THE STATE CIO

A new decade of information technology (IT) brings great expectations for change and innovation. To date, technology has advanced at a rapid pace and shows no signs of slowing down. We can expect advancements in technology to exponentially double, as defined by Moore's Law, and suggested by the writings of futurists like Ray Kurzweil. The possibilities for change and innovation in the next decade also come with challenges for individuals and organizations that provide IT services and support.

The State of Montana will focus on key areas to keep pace with the changes and complexities that await us. Our plan for providing state-of-the-art IT services and support will be based on five goals that are based on the knowledge that technology will not get cheaper, we must do more with less, be diligent about cyber security-awareness and education, expect to accelerate digital transformation, and build and sustain relationships inside and outside of government.

Fiscal Responsibility

Technology will not get cheaper – According to The Scholarly Kitchen there are at least three significant areas of IT where costs will continue to rise: bandwidth, skilled personnel, and security. In considering these constraints, the State will work to provide a clear statement of budgeting objectives. The Enterprise will be able to realize efficiencies, optimize costs, and create a sustainable and balanced budget through collaboration.

Goals and objectives supporting transparency, improved efficiencies, and sound business decisions will remain fundamental values. Coordination of fiscal decision making across the Enterprise is key to ensuring fiscal success.

Optimization of Shared Services and Support

Doing more with less – TechBeacon notes that IT organizations will have to strive to tackle increased workloads, productivity, and efficiency; and measure and improve customer satisfaction. We currently do this in State government but can make improvements. We will continue to deliver technology services in a deliberate and cost-effective manner to all our customers. We will accomplish this by automating and streamlining the delivery of technology services, while improving time-to-value for business processes.

Cybersecurity Enhancements and Strategy

Cyber security, awareness, and education – Cybersecurity and risk management is the top priority for State CIOs, according to the most recent National Association of State CIOs' survey of top ten technology priorities. The State of Montana remains committed to identifying, protecting, detecting, responding, and recovering from cyber-attacks and incidents. We are focused on protecting and preserving citizen's data and the State's information assets. Employees share in this responsibility by maintaining security awareness and integrating security best practices into their daily functions. The State utilizes security, privacy, and risk management frameworks to manage a comprehensive cybersecurity program that provides a secure computing environment enabling the delivery of services to our citizens. We will continue to invest in the people, processes, and technology supporting our cybersecurity program to continuously improve the State's security posture.

Unified Digital Government (e-Government Services)

Accelerate digital transformation – According to Granicus, Digital Government Services *"…are defined as service delivery within government — as well as between government and the public — using information and communication technologies"*. An electronic government service is defined by the State as "…an application, or series of applications, on the Internet that provides a specific service to a citizen or business…". Montana has enjoyed two decades of providing innovative and high-tech e-government services. As we enter the next decade, State and local government entities, along with universities will be able to offer new technologies and innovative approaches to services and support for our citizens and business customers.

Service First!

Build and sustain relationships - Service is the foundation for all support provided across the Enterprise. Each employee is guided by the "SERVICE FIRST!" principle as we interact with those who we support at all levels of State government. Providing excellent service is the best way to foster cooperation and collaboration between agencies as we support the citizens of Montana. The Business Relationship Management Institute states that adoption of BRM principles "…*ensures that the potential business value from meeting business demand is captured, optimized, and recognized*".

This IT roadmap outlines how the State of Montana will spend smart, collaborate smart, protect smart, be enterprise smart, and remain business smart to benefit Montana citizens.

Tim Bottenfield, Chief Information Officer

MISSION

The mission of the State Information Technology Services Division is to provide standardized, strategic, secure, and state-of-the art information technology to advance the efficiency and delivery of government services to citizens.

VISION

Our vision is to facilitate collaboration, resource sharing, and alignment of statewide government services to exceed citizen expectations.

IT STATUTE PRINCIPLES

Share our Resources

Montana will use shared platforms and systems to minimize IT expenditures, improve service delivery, and accelerate service implementation.

Improve Business

IT will be used to provide educational opportunities, create quality jobs, support a favorable business climate, improve government, protect individual privacy, and protect the privacy of IT information.

Use Resources Wisely

IT resources will be used in an organized, deliberative, and cost-effective manner.

Deliver Services

IT systems will provide delivery channels that allow citizens to determine when, where, and how they interact with state government.

Protect, Privacy, Data, and Systems

Mitigation of risks is a priority for protecting individual privacy, confidential data, and IT systems.

GUIDING PRINCIPLES

Spend Smart

Collaborate Smart

Protect Smart

Enterprise Smart

Business Smart

ACCOMPLISHMENTS TO BUILD ON

- Replaced the legacy DNS that provides highly available \ fault tolerant DNS, DHCP, and IPAM services. This significantly improved network security.

- Expanded the State's private cloud to include efficient automation for virtual server management and disaster recovery services.

- Improved the security of the State of Montana's email ecosystem by implementing a new secure email gateway. It has improved the deliverability of messages by reducing false positives; all while heightening security by identifying and blocking extremely difficult to detect malware and text only phishing messages.

- Negotiated a reduction in traditional and SIP calling long distance services per minute rates. This resulted in a one-time credit of approximately $100,000 along with ongoing monthly savings. The Transport Services Contract also resulted in a savings of approximately $112,000 with the contract implementation, along with an ongoing savings over what previously paid.

- Upgraded sites across Montana with the new Transport Contract, increasing bandwidth speeds without a significant cost impact.

- Improved the agency ITPR process by changing the request portal and providing training and process documentation.

- Completed the budgeting process for the 2021 Biennium with SITSD's new TechBudget budgeting system. Agency feedback of the user-friendly system was positive due to trainings and improved communication.

- Installed over 7,000 VOIP phones and moved 1,000 analog lines into the VOIP environment.

- Moved to a Layer 7 (Application) based external firewall. This move allows the state to have further visibility and granularity into the traffic that can enter and exit the State of Montana network.

- Upgraded and consolidated our network core providing better load balancing, uptime, and port density and availability throughout the network.

- Migrated to Avaya Aura Contact Center (AACC). The AACC allows for a statewide unified contact center with over 800 agents deployed.

- Met with state agencies to discuss communication concerns and work toward making improvements for agency benefit.

- Worked with vendors and agencies to improve business relationships and communications, provide enterprise services trainings, and promote these products to a wider audience.

- Adopted a statewide 9-1-1 plan and completed a statewide GIS assessment for Next Generation 9-1-1.

- Created a system for agencies to report project and financial data to the Legislative Finance Committee (LFC) along with a series of dashboards for Committee members to review the data. The system provides a robust reporting module that provides legislators and the public a way to track agency project statuses and spending.

- Implemented F5's web application firewall (WAF) for executive branch external facing web applications. The WAF adds a layer of protection to state applications and associated data.

- Deployed behavior-based anti-virus for all State workstations to protect, detect, and respond to ransomware and advanced malware attacks. Negotiated contract to allow Montana cities and counties to take advantage of the State's government pricing.

- Partnered with the Montana Analysis & Technical Information Center (MATIC) to form the multi-agency Election Security Workgroup with representatives from DOA, DHS, DOJ, SOS, and National Guard to facilitate communication, collaboration, and coordination to secure the State's elections.

- Collaborated with State agencies in the Montana Information Security Advisory Council (MT-ISAC) Best Practices workgroup to review and recommend cybersecurity best practices, standards, and frameworks.

- Hosted Cybersecurity Awareness events and conducted continuous Phishing Campaigns for all State employees to raise awareness of cybersecurity threats and enhance the State's cybersecurity posture.

- Partnered with the Department of Homeland Security to conduct the State's first public/private statewide Cybersecurity Tabletop Exercise.

- Entitled employees to a Virtual Desktop Interface (VDI) that resides in the State of Montana Data Center (SMDC). Being entitled to a virtual desktop provides an employee access to a unique VDI that can be viewed on any device, anytime, from anywhere in the world if the employee has an internet connection. Unified Digital Workspace (UDW) implementation allows employees to have the same experience whether they are sitting at their desk, working from home, or traveling.

- Implemented ServiceNow to support an enterprise model for agency separation so agencies can use ServiceNow without seeing other agency's information.

- Improved the firewall approval process for more effective management of the firewalls. This was done in a ServiceNow request form and workflow.

Goal 1 – Fiscal Responsibility (Spend Smart)

Create, optimize, maintain a balanced budget.

Objective One: Cost-Effective

Provide clear budgeting objectives to improve efficiencies, optimize costs, and maintain a balanced budget.

Objective Two: Transparency

Provide accurate IT investment data and transparent budgeting objectives to agencies, governor's office, legislators, and any other users of IT investment data.

Objective Three: Collaboration

Engage agencies in IT cost discussions to drive effective coordination and optimization of fiscal decision making across the enterprise.

Objective Four: Vendor Performance Value

Ensure vendor performance aligns with the State's needs by mitigating underperforming investments and validating effective contract management.

Objective Five: Statewide Investment Management

Implement an IT investment management framework to better oversee investment projects and maintain established budgets, time frames, and reporting processes.

Goal 2 – Optimization of shared services and support (Collaborate Smart)

Optimize systems and infrastructure to deliver responsive solutions in a cost-effective manner using blockchain.

Objective One: Automate

Deliver automation in all areas of IT, develop a culture of automation.

Objective Two: Shared

Decrease duplication and deliver shared SaaS solutions when possible.

Objective Three: Standardization

Simplify architecture and infrastructure, work with other states to develop standardized processes.

Objective Four: Capability

Simplify architecture and infrastructure, work with other states to develop standardized processes.

Objective Five: Agile Thinking

Deliver solutions and ideas that can quickly respond to deliver business value and outcomes.

Goal 3– Cybersecurity Enhancements and Strategy (Protect Smart)

Utilize the National Institute of Standards and Technology (NIST) Cybersecurity Framework to manage and reduce cybersecurity risks to the State.

Objective One: Identify

Identify the people, processes, and technology that support the State's critical business processes.

Objective Two: Protect

Protect citizen's data and the State's IT assets, limiting the scope and impact of potential cybersecurity events.

Objective Three: Detect

Detect cybersecurity events in a timely manner.

Objective Four: Respond

Respond to cybersecurity events in a timely manner.

Objective Five: Recover

Recover from cybersecurity events in a timely manner.

Goal 4– Unified Digital Government (Enterprise Smart)

Provide consolidated access to government information and services anywhere, anytime, on any device .

Objective One: Modernization

Utilize new processes and technologies to create an IT environment that enables business, improves services, and facilitates innovation.

Objective Two: G2B (Government-to-Business)

Provide businesses with simplified access to government information and services, to result in more efficient interactions and transactions that save businesses time and money.

Objective Three: G2C (Government-to-Citizens)

Provide citizens with a single portal to government information and services to facilitate involvement in government, streamline consumption of government services, and enhance interactions with government.

Objective Four: G2G (Agency-to-Agency, Government-to-Local Government, State-to-State)

Implement enterprise technologies that facilitate communication, data access, and information sharing between government entities to reduce costs and increase collaboration.

Goal 5 – Service First (Business Smart)

Integrate business relationship management, guiding principles, and user feedback to improve communication, promote services, and share information widely.

Objective One: BRM

Establish guiding principles for employees and promote positive business relationships.

Objective Two: Communication

Provide a single location to find information on our products, services, trainings, contacts, etc.; and provide clear and understandable communication to all.

Objective Three: Marketing

Promote our services and products with mass marketing campaigns via newsletters, emails, website updates, and more.

Objective Four: Retain, Recruit, and Train

Engage human resources on hiring and retention strategies, while providing valuable training to new and current employees.

Objective Five: Business User Feedback

Solicit regular feedback from agencies on suggestions, concerns, and improvements that would help them serve their customers.

TESTIMONIALS

Department of Revenue

SITSD participation is critical to the success of our IRS onsite reviews that occurs every three years. We begin prepping for this review several months in advance and it takes up an extraordinary amount of staff time. The IRS stated in our closing conference that this was one of the best sites they have reviewed. This is due to the hard work of many, including our great partnership with SITSD.

I work with SITSD on a regular basis as a member of the Montana Information Security Advisory Council (MT-ISAC). They work with State agencies and private sector members to develop best practices to protect the enterprise.

Margaret Kauska, Chief Security Officer – GSLC

Department of Natural Resources and Conservation

The DNRC has been using ServiceNow as a tenant of DOA SITSD since May of 2019 Plans are in place to add HR, Finance and Payroll to enable greater utilization of catalog requests and workflow for both request and incident resolution tasks.

The DNRC uses the Service Desk and Service Catalog portions of ServiceNow and are very happy. We've developed a handful of catalog request items and have received very positive feedback on the potential for greater throughput for DNRC Office of Information Tech. Incidents that require multiple disciplines for resolution are much better tracked and shared using ServiceNow than our previous service desk software solution.

We are anxious to roll out more catalog request items before the end of the year and during the beginning of 2020, plan to utilize software and hardware asset management within ServiceNow, connecting it to our SCCM subscription to automate much of the adding and tracking of IT assets and improving the tracking of software subscriptions and license maintenance activities.

We are excited about the current abilities and planned usage for reducing the busy work of our under-resourced staff (doing more with less!)

John Adams, Application Development Manager

Montana Arts Council

The Montana Arts Council is pleased with UDW, we especially like how it helps spread the cost out over several fiscal years. With the CPU's we were having to spend between $1,200-$1,600 per new machine every five years and due to budget issues, we had some machines longer than seven years. This way we can budget for it through our fixed costs and have less obsolete equipment.

Jenifer Alger, Chief Financial Officer

Department of Labor and Industry

Based on requirements by the US Department of Labor (USDOL), states must deliver Labor Market Information (LMI) to their users via electronic format. This equates to states either building and maintaining their own websites or utilizing outside contractors. Either option can result in exorbitant costs for the states. A partnership between the Montana based LMInformer Consortium and SITSD was formed that provides a cost-effective alternative for states via a Montana hosted website environment. Virginia and Ohio have recently joined the consortium allowing them to provide customized LMI data visualizations to their customers while meeting their USDOL requirements. This could not have happened without the tremendous support and highly responsive service of SITSD.

Mike Peery, Director, Labor Market Information Division

Department of Administration

The State Information Technology Services Division assisted us in the development and implementation of a new Risk Management Information System (RMIS) to more efficiently manage workload. We migrated over 23,000 legacy records and now have improved navigational features, better reporting capabilities, and more efficient storage of electronic documents. We are pleased with the product and greatly appreciate the professionalism of the State Information Technology Services Division staff.

Brett Dahl, Administrator/Chief Risk Officer, Risk Management & Tort Defense Division

Department of Justice/Department of Criminal Investigation

The partnership between the Montana Analysis & Technical Information Center (MATIC) and SITSD has improved the strategic posture toward cyber threats targeting the State. SITSD has been a proactive partner by sharing information through the Montana Information Security Advisory Council, the Election Cybersecurity Workgroup, and cyber exercises. This collaborative approach has improved our ability to assist stakeholders in the protection of emerging cyber threats targeting critical infrastructure and key resources within Montana.

Anne Dormandy, MATIC Supervisory Agent

Governor's Office

SITSD has done a great job implementing improvements to the budget process. Last budget cycle, Tech Budget was loaded with actual billing for each agency and they had ability to edit their projected services. Tech Budget gave each agency the ability to split services to whatever level of detail they wanted to. Tech Budget also included a report function that gave agencies the ability to export data into excel to review and create internal reports to aid in the input of their IT budget into IBARS by reporting level. ITSD has been very open to suggestions on how to make this system as useful as possible over the past few years.

Errolyn Lantz, Budget Office