



A REPORT
TO THE
MONTANA
LEGISLATURE

INFORMATION SYSTEMS AUDIT

Governance Practices for Information Technology Investments

Department of Administration

JANUARY 2018

LEGISLATIVE AUDIT
DIVISION

17DP-02

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January 2018

The Legislative Audit Committee
of the Montana State Legislature:

This is our Information Systems audit of the Governance Practices for Information Technology Investments managed by the State Information Technology Division in the Department of Administration.

This report provides the Legislature information about the processes that govern IT spending from the point of selecting high priority investments and requesting funding to evaluating the investment through its life cycle. This report includes recommendations for enhancing investment processes and coordinating them through an overall framework at the State Information Technology Services Division. A written response from the Department of Administration is included at the end of the report.

We wish to express our appreciation to department personnel for their cooperation and assistance during the audit.

Respectfully submitted,

/s/ Angus Maciver

Angus Maciver
Legislative Auditor

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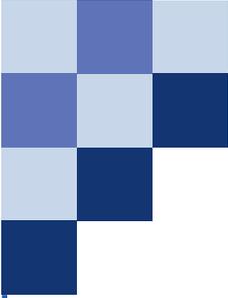
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MONTANA LEGISLATIVE AUDIT DIVISION

INFORMATION SYSTEMS AUDIT

Governance Practices for Information Technology Investments

Department of Administration State Information
Technology Services Division (SITSD)

JANUARY 2018

17DP-02

REPORT SUMMARY

In fiscal years 2016 and 2017, approximately \$42 million of general fund dollars were spent each year on IT investments within state government. SITSD is charged with oversight of these investments; however, current processes do not meet statutory requirements or include key industry standard practices. SITSD's oversight of IT investments faces several challenges including projects exceeding established budgets and time frames, and reporting processes that are decreasing transparency and accountability of these projects. SITSD needs to implement an IT investment management framework to better oversee these expenditures, improve the ability to repeat successful investments that are less likely to exceed budgets, and promote more cost-effective IT investments.

Context

Montana State agencies spent over \$200 million on IT-related expenditures in both fiscal year 2016 and 2017. Almost 70 percent of those were on investments that include hardware, software, and IT-related services. The Montana Information Technology Act (MITA), at Title 2, Chapter 17, Part 5 of the Montana Code Annotated, requires the development of IT resources, including these investments, be conducted in an organized, deliberate, and cost-effective manner. To be organized and deliberate, clearly defined policies and procedures must be consistently followed and oversight needs to ensure investments are thought-out and meet the needs of the state. MITA establishes the State Chief Information Officer (CIO) as the oversight of IT investments. The CIO, located within the State Information Technology Services Division (SITSD) of the Department of Administration (DOA), is responsible for developing the policies and procedures for IT investments, overseeing selection and funding, and approving all IT investments. Once IT investments are funded and approved, SITSD facilitates monitoring and reporting practices.

Results

Our work found that SITSD has established processes related to selecting, funding, approving and monitoring IT investments throughout the state. However, our review determined SITSD needs to strengthen these processes to increase accountability and transparency of state government IT investments as well as provide SITSD with better oversight over investments.

Effective IT investment management requires individual processes be integrated into an investment management framework. We identified various processes that do not coordinate information or clearly relate to the overall goal of managing investments. This framework also needs an oversight board to ensure investments are within the state's and agencies' best interests and the investment management framework is effective. The Information Technology Board is responsible for this duty per MITA; however, it has not been meeting these requirements.

(continued on back)

The processes for selecting and funding of IT investments need to better align with MITA requirements to improve visibility of IT investments. We identified major projects that were not noted in the governor's budget that is presented to legislators. These processes also need to incorporate enhancements to increase efficiency and alignment with industry standards. These include increasing value by documenting business benefits, using consistent data and metrics, establishing scoring processes, and clearly defining processes to ensure they are managed effectively.

We reviewed the approval of IT investments in depth and identified 71 IT investments that were not reviewed and approved by the state CIO and 17 investments that were not signed by the state CIO. SITSD needs to strengthen processes to assist agencies with meeting these requirements. This includes defining how processes are managed to ensure they are completed, defining a consistent approval process, and clarifying risk assessment procedures. To increase communication and awareness of the process, updates to boards that meet regularly should also be established.

Monitoring, reporting, and evaluating IT investments is crucial to successful investments; however, there is no high-level structure that defines, coordinates, and guides agencies through the various forms of reporting. Of the investments reported to oversight committees that we reviewed, the majority were reported inaccurately or in an untimely manner. We also identified \$121 million in investments that are not monitored because the type of investment is not required to be reported. While various processes exist to monitor some of the state's IT investments, expansion of what is monitored is necessary to effectively oversee IT investments.

Recommendation Concurrence	
Concur	9
Partially Concur	0
Do Not Concur	0
Source: Agency audit response included in final report.	

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 Call toll-free 1-800-222-4446, or e-mail lad@mt.gov.

Chapter I – Introduction and Background

Introduction

Montana state government information technology (IT) expenditures totaled approximately \$212 million in 2016 and \$202 million in 2017, shown in Table 1.

Table 1
IT Expenditures in Fiscal Years 2016 and 2017

IT Expenditure Type	2016	2017
IT Consultation & Professional Services	\$61,751,461	\$57,600,322
Repairs and Maintenance	\$14,999,976	\$13,355,175
Hardware Supplies & Materials	\$11,365,840	\$10,629,993
Communication Equipment, Maintenance, & Service Charges	\$5,708,421	\$5,448,266
Hardware & Software Equipment	\$8,958,185	\$5,064,648
IT Services	\$4,827,472	\$3,405,382
IT Training	\$813,247	\$831,015
Leases/Rent	\$967,025	\$499,780
Capital Leases	\$209,297	\$264,476
Minor Communication Equipment	\$502,875	\$235,668
Maintenance	\$9,573	\$6,072
SITSD	\$42,417,158	\$43,058,002
Investments	\$152,530,530	\$140,398,799
Payroll	\$59,477,600	\$62,005,229
Total	\$212,008,130	\$202,404,028

Source: Compiled by the Legislative Audit Division.

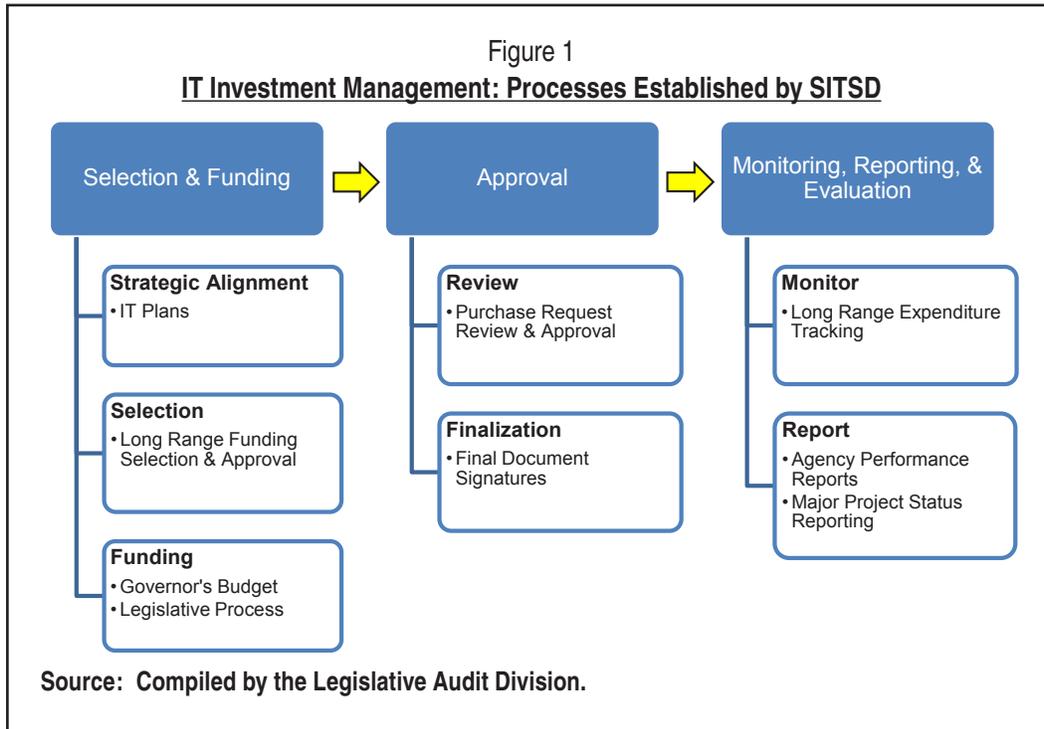
Examples of these investments include IT development projects, IT licensing, contracted services, and hardware and software purchases. With the increasing need to be more efficient with expenditures throughout the state, governing IT expenditures is important. This includes identifying where IT investments can increase efficiencies, but also overseeing investments to ensure expectations are being met and the money expended is truly productive.

Background

The Montana Information Technology Act (MITA) establishes the responsibilities of the state Chief Information Officer (CIO) to govern and oversee IT spending. To comply with MITA, the Department of Administration's State Information Technology Services Division (SITSD), through the CIO, has established processes

to review, approve, and monitor IT investments. MITA requires executive agencies to comply with these policies and procedures. The Office of Public Instruction, the University System, and the National Guard are required to follow these procedures when it affects the statewide telecommunications network.

The framework established by SITSD to manage investments is shown below.



The following sections discuss this framework in further detail.

Selection and Funding

The goal of the selection and funding process is to ensure state agencies prioritize and fund IT investments that best align with IT strategy and business objectives. To help ensure this occurs, SITSD performs the following three steps:

- ◆ Develops a State Information Technology Strategic Plan. To develop this plan, SITSD works with state agencies and plans for the upcoming biennium. In addition to the overall state IT strategic plan, agencies are required to develop individual IT plans that include their direction and objectives for the upcoming years, major IT projects the agency is planning to initiate, and any funding requests tied to those major projects. The individual agency plans should support the state strategic plan.
- ◆ Requests long-range funding every biennium for high-priority IT investments. Agencies submit requests for their top investments noted within their IT plan to SITSD. The CIO reviews these requests and compiles a list

to submit to the Governor's Office of Budget and Program Planning. If an investment receives long-range funding, the agency must submit a project plan and a security plan for review by SITSD prior to funds being allocated for the investment.

- ◆ Provides IT budgets and information to the legislature. The funding for all IT investments is determined through the legislative process. The Governor's Budget includes information about general IT investments and expenditures at each agency, as well as more detailed information about IT investments requesting long-range funds.

Approval

Review and approval of investments prior to acquisition better ensures they are procured and implemented in a cost-efficient manner that meets business and IT expectations. This is also the final opportunity for the state CIO to be made aware of IT spending prior to money being spent. SITSD manages two processes for reviewing and approving investments:

- ◆ SITSD reviews all IT investments through the Information Technology Procurement Request process. After this approval, an agency is authorized to continue procuring a solution that best fits the needs of the agency.
- ◆ All IT contracts or final documents require the CIO's signature to finalize the approval process. This ensures the final contract is reviewed for required language and is consistent with state policies.

Monitoring, Reporting, and Evaluation

Monitoring and reviewing investments includes establishing performance measures that ensure investments meet business and IT expectations. This should be done throughout the entire IT investment life cycle and includes:

- ◆ SITSD is establishing processes to monitor long-range fund expenditures to ensure they are appropriate.
- ◆ In the years that agencies do not provide an IT plan, they submit a performance report. These reports give a status update on the investments listed in the previous IT plan, as well as updates to agency IT inventory, goals, and objectives.
- ◆ Agencies must submit status reports for projects that receive long-range funds or are over \$500,000 in development costs to the Legislative Finance Committee (LFC) every quarter.

Audit Scope and Objectives

Audit scope included processes the state CIO has established related to investment management, noted in Figure 1. In addition, we reviewed how procedures, documents, requirements, and other processes relate to each other within investment management.

Further work included review of established and requested IT investments. We reviewed:

- ◆ Approval processes that occurred within calendar year 2015, 2016, and the early half of 2017, and
- ◆ IT investment contracts currently active or closed after 2014.

Specific procurement processes were not reviewed because the process for IT investments follows the same process as all other procurement within the state and is managed by the State Procurement Bureau.

Objectives for the audit were:

- ◆ **Objective 1:** Determine if the Information Technology Procurement Request process is reducing IT costs and duplication, and increasing network security.
- ◆ **Objective 2:** Determine if IT investment monitoring and reporting practices assist in reducing the variance between actual IT investment costs and original IT investment estimates.

Methodology

Methodology for this audit included:

Interviews and Observations: We conducted interviews with SITSD and agency staff and observed Information Technology board, workgroup, and council meetings.

Requirements Review: We reviewed current processes to determine whether they meet requirements of applicable statutes, rules, and policies and procedures.

Sampling: Samples of contracts and IT approvals were gathered to understand the effectiveness of current processes and other conditions that may exist. IT contracts were sampled from all agencies, and IT approvals were sampled from only agencies subject to MITA.

- ◆ Agencies were ranked based on the number of approval requests they send each year and selected to ensure the sample consisted of agencies that submitted higher amounts of requests, as well as agencies that submit fewer requests. All requests from 2015 and 2016 documented by SITSD were reviewed for each agency within the sample.
- ◆ Contracts within scope were grouped based on the total amount for the contract and sampled from each group. This ensures the sample consisted of contracts from varying dollar amounts, yet guarantees high-cost contracts were represented due to increased risk.

File Review: Files from the procurement database, SITSD’s records, and agency records related to IT approvals and contracts were reviewed for all sample items. These files include contracts, statements of work, amendments, risk assessments, process communications, and other documents related to each process.

Process Review: Using the samples and information obtained, we reviewed the process and specific steps to understand the current structure and its effectiveness.

Surveys: Three separate surveys were conducted during audit fieldwork.

- ◆ Agencies subject to MITA were asked to provide feedback on project management and project reporting; 24 were contacted and 18 agencies responded for a 75 percent response rate. Information was gathered from agency CIO, IT managers, or project managers.
- ◆ All agencies were asked to provide feedback on the IT approval process; 24 agencies were contacted and 21 agencies responded, for an 88 percent response rate. Information was gathered from procurement liaisons or IT staff in charge of the IT approval process.
- ◆ Legislative Finance Committee members were also surveyed for information regarding the project reporting process.

Comparison to Industry Standards: We compared various processes to industry standards. Industry standards used include:

- ◆ Control Objectives for Information and Related Technology (COBIT) – These standards for Information Technology management and governance are based on the consolidation of more than 50 IT good practice sources published by various international standards bodies, governments, and other institutions. The standards used relate to providing enterprises with guidance and key practices to establish a structure to measure, monitor, and optimize the realization of business value from investment in IT.
- ◆ Information Technology Investment Management Framework of the Government Accountability Office (GAO) – The GAO is an independent, nonpartisan agency that works for Congress. Based on the GAO’s experiences evaluating several agencies’ implementations of investment management processes and the lessons learned by those agencies, they have developed this framework that provides a method for evaluating and assessing how well an agency is selecting and managing its IT investments.

Overall Summary and Report Organization

While SITSD has established processes to review, approve, and monitor IT investments throughout the state, these processes occur independently of each other and SITSD is not aware of all IT spending, which impacts its ability to effectively monitor investments. These processes, first, need to be integrated with an overall IT investment management framework. A framework that better aligns with industry standards

improves the ability to repeat success while decreasing the amount of money being spent, thus leading to more cost-effective IT investments. Improvements within each area of that framework, selection and funding, purchase approval, and monitoring and reporting also need to be made. These improvements will ensure the IT investment process better meets the requirements of MITA and increase the efficiency and transparency of IT purchases to legislators and SITSD.

This report addresses findings in the following chapters:

- ◆ Chapter II – Improving the Information Technology Investment Management Framework
- ◆ Chapter III – Selecting and Funding IT Investments
- ◆ Chapter IV – Approval of IT Investments
- ◆ Chapter V – Monitoring, Reporting, and Evaluating IT Investments

Chapter II – Improving the Information Technology Investment Management Framework

Introduction

To ensure Information Technology (IT) annual spending is meeting the requirements of the Montana Information Technology Act (MITA) and following best practices to improve effectiveness, an IT investment framework should be defined. An investment framework is the basic structure and overarching principles that guide all of the processes involved in expending money on IT.

This chapter reviews the existing framework for managing IT investments in Montana state government and addresses improvements that need to be made to develop a consistent and coherent decision-making structure. The recommended changes to individual processes discussed in subsequent chapters of this report also need to be reviewed to ensure they contribute to the overall investment framework. However, without a commitment to these high level improvements, the changes to individual processes cannot ensure the state is receiving maximum returns on every dollar spent on IT.

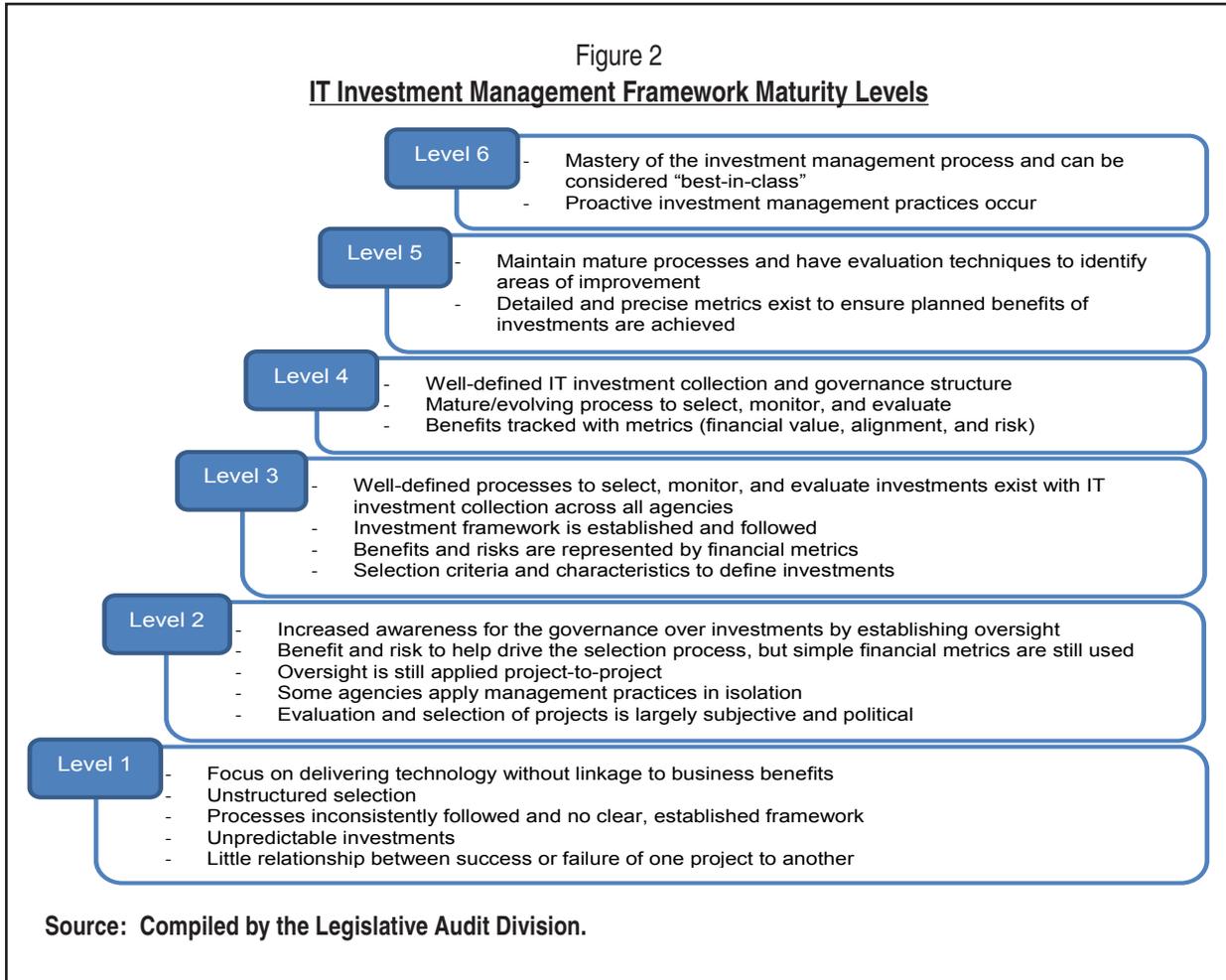
We found that although the State Information Technology Services Division (SITSD) has acknowledged the importance of defining an IT investment framework, two important elements of this effort have yet to be developed:

1. SITSD has not established and properly defined the structure of its overall IT investment framework in a clear and meaningful way, and
2. Important governance principles and practices relating to the role of the state's Information Technology Board have not been developed.

These issues are discussed in more detail in the following sections.

SITSD Needs to Establish Overall Framework Definition

Industry standards provide a method for evaluating and assessing how well an agency is selecting and managing its IT investments. These standards, in turn, provide a means for assessing how well an organization's IT investment framework has been developed and implemented, which can be summarized in six progressive levels of maturity. Figure 2 (see page 8) shows the characteristics of each level, starting with organizations with no established framework and moving to organizations with a mature framework that has mastered governance of the process.

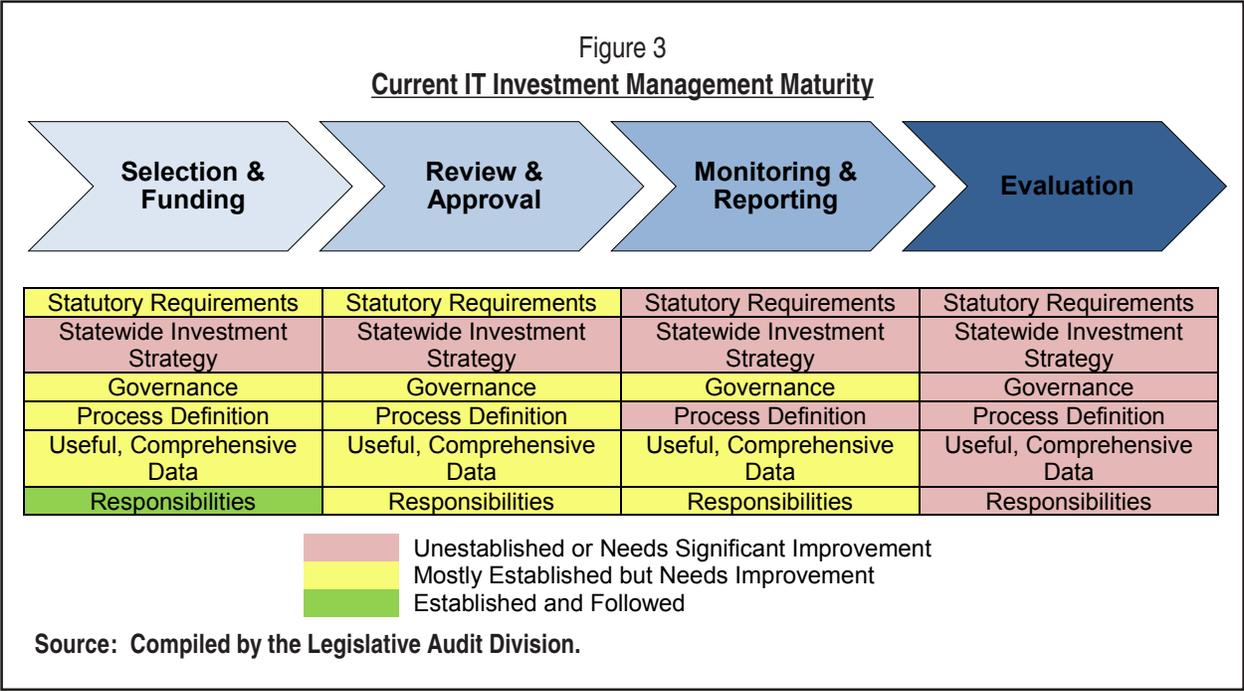


As a framework matures through these levels it is easier to understand the value being realized from IT investments, as well as to leverage IT for specific statewide strategic outcomes. A mature framework also includes proactive versus reactive analysis to better plan and define what investments should be made in the future to obtain greater cost-efficiency. To ensure investments are providing intended benefits and value to the enterprise, industry standards require this governance framework be formally established and defined to effectively implement the key practices of each level.

When reviewing the individual processes related to IT investments, we determined individual processes of selection, funding, monitoring, and reporting exist; however, it was clear no overarching definition or framework to clearly relate all of the individual processes has been developed. Additionally, the description and goal for the overall investment management process and how all of these individual processes align, has not been established. SITSD's current process aligns with an organization in Level 1, trying to move to Level 2 in the maturity model described in Figure 2.

For every key process in IT investment industry standards, the organization has to commit to having documented policies and procedures to ensure IT investments support the ongoing and future business needs. The overarching policies and procedures create the framework that defines a structured approach to investing in IT and realizing the returns on those investments. This framework is also crucial to define overall roles, oversight responsibilities, and management processes.

Figure 3 shows the results of current processes occurring individually. A framework establishes overall accountability and simplicity, while creating consistency among investments. An overarching structure also reduces any confusion and provides end-to-end detail to identify inefficiencies or areas of improvement. This structure also helps ensure the governing entity is able to effectively assess progress and make informed decisions about continuing forward with specific investments or divesting.



As shown in Figure 3, SITSD’s current investment management structure needs improvement, or significant improvement, in three stages: Selection & Funding, Review & Approval, and Monitoring & Reporting. The final stage, Evaluation, needs to be established by SITSD.

- We identified issues as a result of auditing the individual processes, including:
- ◆ Inconsistent metrics used in defining major projects, reviewing investment requests, and reporting investment status.
 - ◆ Unclear responsibilities for ensuring process steps are completed.

- ◆ Missing management procedures for reviewing, approving, and evaluating investments.
- ◆ Agency noncompliance throughout the individual processes.
- ◆ Confusion and frustration from both agencies and SITSD.

Issues and corresponding recommendations within each process are discussed in detail in the following chapters; however, creating a framework that establishes the overall goal and objectives of IT investment management is the first step in addressing the issues identified.

By looking at and defining the bigger picture of investment management, consistent metrics and documents can be used to assist agencies, and expectations of each process are better understood so agencies are not frustrated or confused by various policies. Defining the overall framework will increase department and agency understanding of how each of the individual processes relates to the others and will help identify redundancies and inefficiencies that can be resolved. All of these improvements should lead to a more structured way of ensuring the state receives a return on its IT investments and a more mature, strategic investment framework.

RECOMMENDATION #1

We recommend the Department of Administration establish and define an overall IT Investment framework.

Investment Board Critical in Overall IT Investment Framework

The industry standard framework points out that when moving toward a Level 2 maturity framework instituting the investment board is a critical process. Therefore, oversight responsibilities were reviewed for all identified processes related to IT investment management.

MITA establishes the duties of the Information Technology Board (ITB) and statute further defines the 19 members of the board:

- ◆ Seven agency directors, including the director of the Department of Administration (DOA) as the presiding officer.
- ◆ The state CIO.
- ◆ The director of the Governor's Office of Budget and Program Planning

(OBPP).

- ◆ Two legislators, one from the House and one from the Senate.
- ◆ Two local government representatives.
- ◆ One representative each from the private sector, public service commission, legislative branch, judicial branch, university system, and K-12 education.

MITA defines the ITB's role in the selection process with responsibility similar to that of an investment board in industry standards. The ITB is also required to review the implementation of major information technology projects, and to advise the respective governing authority on any issue of concern. Industry standards require a board be involved in both of these processes to ensure balanced, unbiased decisions are made. However, when reviewing past ITB minutes and meetings, no discussion advising on and reviewing major technology budget requests or reviewing IT implementation projects was identified.

Current Operations Do Not Meet MITA Requirements

Our work identified the role of ITB within the process is not meeting MITA requirements or aligning with industry standards. The role of an investment board is crucial to the selection process for high-priority investments to ensure the decisions being made are not biased and align with the overall goals of IT investment management. Currently the state CIO selects the investments proposed to OBPP. Since the state CIO is also the CIO of the Department of Administration, this process sets up a potential conflict of interest in regard to which projects are selected.

Industry standards require a board oversee project and investment progress by reviewing verified performance data and ensuring that appropriate actions are taken to correct underperforming projects. MITA assigns this responsibility to the ITB. While major implementation projects are reported quarterly to the LFC, the current process serves more as an informational update to the legislature. An investment board, like ITB, would have more immediate, direct impact to improve the project's performance.

Increase Responsibilities of the Information Technology Board

SITSD agrees there needs to be a process established for reporting to the ITB, but the information should not be excluded from the reports already established for other legislative and interim committees. The purpose of the information being reported to each group needs to be clearly defined so there is no redundancy or confusion in the responsibilities and actions that need to be taken by each group.

Increasing the responsibilities of the ITB in IT investment selection and reporting would ensure the requirements of MITA are met and an effective oversight body is established to govern the spending of over \$200 million in IT expenditures each year. OBPP is represented on ITB and could also provide value and insight to the selection process from the governor's initiative perspective. This would also align with industry best practices of sharing the selection responsibility between an investment board and the CIO and allowing an IT-related board to review investments with the intent to identify underperformance and ensure corrective actions are taken to have a more immediate and direct impact.

RECOMMENDATION #2

We recommend the Department of Administration work with the Information Technology Board to:

- A. *Define and document the responsibilities of the Information Technology Board relating to overseeing the IT investment management process.*
 - B. *Include responsibilities within the selection and reporting of IT investments in accordance with statute.*
-

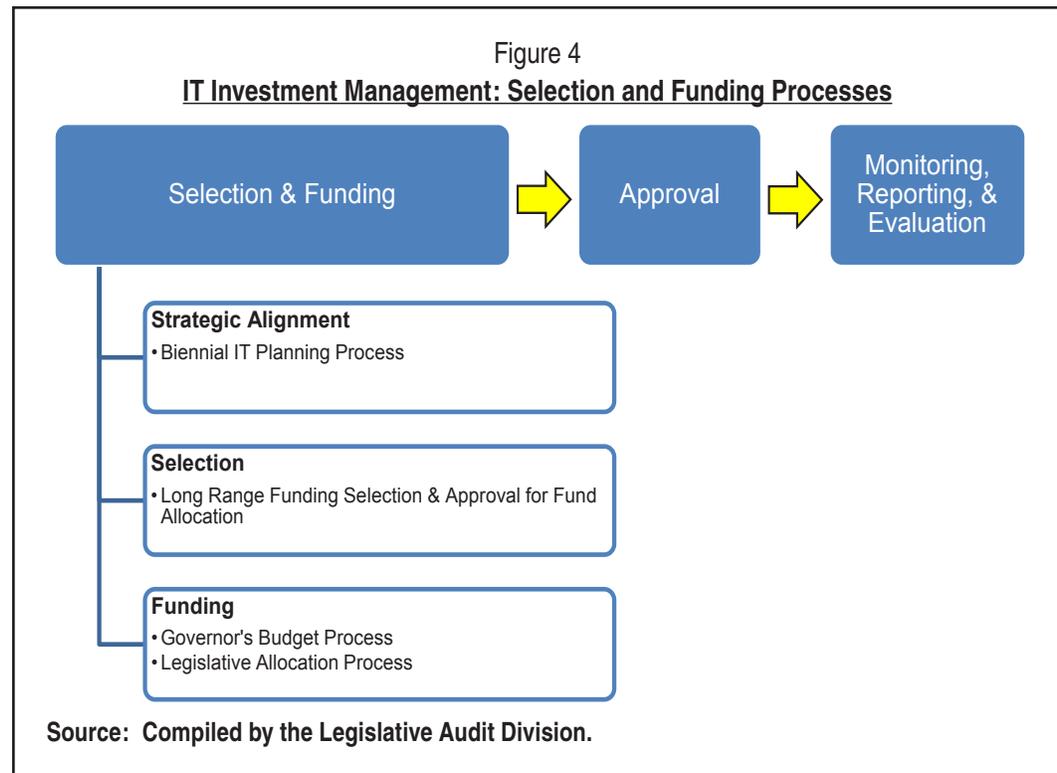
Chapter III – Selecting and Funding Information Technology Investments

Introduction

Selection and funding are important procedures of the Information Technology (IT) investment life cycle to align IT strategy with funding and ensure the right investments are being made and the top priority investments are funded. The details of these processes may vary in different investment structures, but Montana's current processes address:

- ♦ **Strategic alignment:** ensures money is spent appropriately on investments that align with state IT objectives.
- ♦ **Selection and approval for funding:** ensures high priority investments to the state receive needed funding and a structured plan is in place to mitigate risks of those investments.
- ♦ **Funding:** Ensures visibility and transparency of IT within government as well as a legislative process to appropriate state funds.

The processes established for selection and funding are shown below.



Audit work reviewed these processes to determine if they meet the requirements of MITA and align with best practices to ensure they are effective in reducing costs to the state.

Selection and Funding Process Requirements

Various statutes define the requirements for processes within selection and funding of IT investments, including the executive budget described in §17-7-123, MCA, and IT project budget summary from §2-17-526, MCA. The IT Planning process conducted by agencies and the State Strategic planning process conducted by SITSD are defined within MITA as well.

We compared the current selection and funding processes to those required in statute. Based on this review, we identified the following areas for improvement:

- ◆ Visibility of IT Investments to the legislature.
- ◆ Consistency of approval to allocate long-range funds.
- ◆ Clarification of criteria used for “major” projects.

These improvements relate to MITA requirements as well as industry standards and are discussed in the following sections.

Reduced Visibility of IT Investments

The executive budget requires “a summary of budget requests that include proposed expenditures on information technology resources.” Prior to the 2017 Legislative Session, this was achieved through the IT Summary in the Governor’s Budget. In the 2015 Legislative Session, a subcommittee was tasked with reviewing how IT expenditures are tracked statewide and reported to the legislature. The outcome was a new section of the governor’s proposed budget that is specifically related to IT expenditures to better highlight their amount and the corresponding IT resources.

Although the intent was for the Governor’s Budget to provide more comprehensive information regarding IT expenditures starting in the 2017 Legislative Session, our review of the IT budget found pieces of required information missing. We noted the budget documents provided less project-specific information than was provided in IT summaries found in previous budgets:

- ◆ Expenditures by accounts and funds as well as current long-range appropriations are included. However, statute requires “a summary of budget requests that include proposed expenditures on information technology resources. The summary must include funding, program references, and a decision package reference.” Our review of the Governor’s Budget found this information was not included even though the IT Summary previously did.
- ◆ Proposed major IT projects impacting other state agencies or branches that are funded in the existing operating budget were not noted in the Governor’s Budget. Previously they were part of the IT Summary.

By not discussing individual investments and their impact to other state agencies or branches in the proposed Governor’s Budget, visibility to specific and—in most cases, significant—IT investments requiring funding is limited.

The long-range funding process was also reviewed during audit work. This process includes agencies submitting investments to be chosen by the state CIO and included in the Governor’s Budget. The CIO’s suggested requests for long-range IT funding represent the IT project budget summary, required by MITA, that is provided to the Governor’s Office of Budget and Program Planning (OBPP). MITA requires this summary include a description of other agencies/branches impacted by each project and the cost estimation by agency. However, this information was not requested from the agencies, nor was it identified in the IT project budget summary. Without this information, the impact of the project and necessary resources are not considered during funding decisions. Previously, the IT Summary was managed by OBPP but the recent changes for reporting IT expenditures in the governor’s proposed budget are now managed by SITSD. SITSD indicated these requirements were lost during the transition of responsibilities between the two offices.

Missing Approvals and Inconsistent Information for Allocating Long-Range Funds

When long-range funds are appropriated by the legislature, the entire appropriation is transferred to SITSD. Agencies then request their entire appropriation be transferred from SITSD when they need to expend it. MITA states that “Amounts appropriated by the legislature to executive branch agencies, other than the university system, for long-range information technology capital projects may not be encumbered until project and security plans are approved by the CIO and the budget director if the legislature directs these approvals as a condition on the appropriations in the bill making the appropriations.” As part of the long-range IT bill, these approvals are requested.

In the investment process, this is considered a stage-gate. Stage-gate processes are an industry standard of stopping the project from moving to the next stage until certain approvals are granted, otherwise known as the gate. The approvals at each gate are usually dependent on the review of specific project deliverables.

We reviewed project and security plans for long-range projects in the 2017 biennium for compliance with this statute. SITSD was unable to provide both the project and security plan for three of the four projects that requested funds because there is no

defined process for documenting approvals at SITSD. Of the documents received, two of them did not show CIO approval:

1. Department of Health and Human Services (DPHHS) project plan for \$20 million in technology improvements.
2. Department of Justice (DOJ) project plan for \$834,000 in court technology improvements.

To supplement the guidance provided by statute, SITSD developed the Long-Range Information Technology Program (LRITP) Funds Disbursement Standard to define templates, approvals, and responsibilities. The established templates for project plans referenced in the standard no longer exist and the project plans that were reviewed provided inconsistent information between agencies. The plan provided by DPHHS discusses how the funds will be used across three separate projects, while the other plans discussed specific information related to data storage, security, descriptions, and safeguards. While this standard also defines who is responsible for approvals and reviews, it does not identify the procedure for how these responsibilities are carried out or who is accountable for maintaining approved documentation.

SITSD is aware there is no defined procedure for this process, contributing to the insufficient records. SITSD indicated the project plan template is on the list of update projects for the newly implemented project management advisory workgroup. This group consists of various project managers from state agencies and started meeting in 2017.

Coordinate With OBPP and ITB to Determine Criteria for Major Projects

Investments that are significant to an agency and could be financially impactful to the state are considered major projects. These investments require specific steps be followed within SITSD processes throughout the investment life cycle. These steps include:

- ◆ Noting major projects in an agency's IT Plan.
- ◆ Submitting information about major projects through SITSD's long-range funding process.
- ◆ Defining major IT projects in the statewide IT Summary of the Governor's Budget.
- ◆ Reporting major projects at quarterly Legislative Finance Committee (LFC) meetings.

Audit work reviewed the criteria and requirements for major projects in each of these processes. The criteria defining major projects in these processes is shown in Table 2 (see page 17).

Table 2
Major Project Definitions Within IT Investment Processes

Process	IT Plan & Long-Range Funding Requests	LFC Reporting	New IT Expenditure Summary
Cost	Over \$500,000 budget	Project estimate is at least \$500,000 for development	Undefined
Significance	Over \$100,000 and over 25% of IT Budget	Project is included in the bill that provides resources for long-range IT	
Complexity	Impacts other agencies or is enterprise wide	Project is potentially of enterprise interest or need	
Interest	Enterprise Planning Process (EPP) item for IT spending	LFC Requested	

Source: Compiled by the Legislative Audit Division.

According to SITSD, the criteria for long-range funding requests is going to be adjusted to match the criteria used for LFC reporting. While there are similarities in the cost metric, such as the \$500,000 minimum, what the \$500,000 represents differs and this change could reduce visibility of agency IT investments. In LFC reporting, the \$500,000 minimum is defined as project estimate for development; however, it is defined as budget request in planning and funding processes. Depending on the time frame and information used to develop each figure, a project can have estimated development costs of \$450,000, but a budget of \$800,000 when looking at the entire life cycle cost and including internal resources.

MITA requires the state CIO and OBPP jointly determine major project criteria for projects included in the IT project budget summary, which aligns with industry standards requiring executive officers, investment boards, and budget management to determine this kind of criteria. Using a project development estimate instead of a life cycle budget could reduce the number of financially impactful investments presented to the legislature and SITSD. For these reasons, SITSD needs to coordinate with OBPP and the ITB to develop criteria for major projects.

Increase Alignment With MITA and Industry Standards

While the previous sections discuss requirements of MITA, the practices discussed also align with industry standards. Each aspect is important to investment management in various ways.

- ◆ Noting projects that impact multiple agencies and branches in current operating budgets or new budget request is significant because costs need to be accurately distributed to agencies or branches involved in the system for accountability. By improving procedures and updating requirements for budget reporting, SITSD will increase transparency and accountability, and align with best practices for managing IT investments. Currently, visibility and transparency of IT investments is limited.
- ◆ The approval process for allocating long-range funds gives the opportunity for oversight of the project and governance of the process. Clearly defined stage-gate processes, like for fund allocation, and the procedures that each investment category should follow (major, nonmajor, and other) are an industry best practice. Without consistency of data and the appropriate approvals, SITSD cannot verify the process is occurring or effectively verify a project is ready for long-range funds. The use of a stage-gate is also an added safeguard for high-priority investments.
- ◆ Defining major projects in conjunction with OBPP and aligning that definition throughout the investment life cycle follows best practices and is important for consistency, accuracy, and reducing confusion. The current criteria is conflicting and may cause confusion for agencies as to when an investment should be noted or reported in various processes. This discussion can be presented to the ITB, to which the OBPP director is appointed. Best practices indicate that criteria like this should be established by an investment board and the executive officers in the private sector, which aligns with the OBPP director and CIO determining this per MITA.

By implementing these changes, SITSD can ensure key practices related to selection and funding of IT investments are achieving the goals of the investment framework and statutory requirements.

RECOMMENDATION #3

We recommend the Department of Administration:

- A. *Include all required IT investments and investment information within the Governor's Budget and requests for long-range funding.*
 - B. *Define the procedures, templates, and responsibilities for approving allocation of long-range funds to ensure the state CIO signs required documents.*
 - C. *Coordinate with the Information Technology Board and Office of Budget and Program Planning to define and document criteria for a "major" project to be used throughout the IT investment life cycle.*
-

Selection and Funding Design Improvements

We compared the current process for selecting and funding IT investments to industry standards to identify improvements that can be made by SITSD. While there is a wide range of practices that can be implemented, the more mature practices require initial key practices to be implemented first. We identified that Montana state government is missing many of these initial key practices and enhancements are needed in order to ensure these practices can be implemented. These are further discussed in the sections below.

Increase Awareness of IT Value: Industry standards cite the need for more than just cost to be included in the investment process. Risk and benefits are also driving factors in the value of IT and need to be identified. Initial project risk evaluation should be defined in the request for long-range funding; however, it is not currently set up as a metric nor referenced later in monitoring and reporting.

Improve Business Alignment: To assist with accurately identifying these benefits, agency IT plans and projects noted within them need to align with agency goals and objectives. Currently, agency plans are structured to align with the strategic plan of SITSD. This strategic plan aligns with the governor's priorities; however, it does not directly link to the specific agency objectives. Including this link in IT plans will ensure investments include benefits that are tangible to the agency as a whole, instead of just IT.

Create Data Consistency: During the selection and funding process, IT Plans, long-range funding requests, and procurement requests are all submitted by agencies, independent of one another. These requests require some of the same information; therefore, agencies are required to fill out information including problems addressed, alternative solutions considered, detailed description, and costs up to three times in the different forms. The forms also inconsistently request additional information, like funding, start and completion dates, and procurement information. None of this information is entered electronically into a database until the final procurement request. If the information starts in a database and is updated as the investment develops or more information is known, less burden is put on agencies to fill out multiple forms and SITSD is better able to link multiple forms for each investment. Creating a comprehensive set of investment data shows a complete picture of the investment, including risk and benefits, for SITSD's review at each request.

Establish Funding Selection Scoring Process: Currently, selection for long-range funding is subjective and completed by the CIO. There are criteria for what can be considered: major projects defined by the requirements for a long-range funding

request. However, after this point there is no clear process or scoring defined to ensure consistent, unbiased selection based on factors that are determined to be the best for Montana's IT investments. Unbiased and well documented selection procedures are necessary because the state CIO is also the CIO of the Department of Administration. This creates a potential conflict of interest when selecting high-priority investments. Having a defined scoring process to identify high-priority investments is also an industry standard to create consistency and reduce subjectivity. SITSD piloted a similar process prior to the 2017 Legislative Session; however, no additional long-range IT funding was approved by the legislature and no formal process has yet been finalized.

SITSD is aware of the need for these improvements, and has started researching and testing possible changes. Efforts have been focused on other individual policies to this point, and SITSD has not reviewed the collection of policies that create the investment framework.

Each of the improvements adds benefits to the state of Montana and the IT investment management processes. These benefits include:

- ◆ Improving business alignment to better define the benefits of IT and bring the actual value of IT investments to the forefront so that business needs are taken into account. Currently, IT is measured by cost, which leads some to see it as a cost-burden.
- ◆ Establishing a funding selection scoring process to allow for transparency and reduce the appearance of conflicts of interest when high-priority projects are selected. Having an oversight of this process, like the requirement of the ITB, also increases transparency of the process.
- ◆ Reviewing consistent data to improve efficiencies and save time in developing documents at the agency level. Currently, agencies have to fill out similar information, like descriptions of a project, on multiple forms prior to acquisition. This also gives SITSD the ability to link the information provided at each point and oversee changes in the investment as it progresses.

RECOMMENDATION #4

We recommend the Department of Administration improve information technology investment selection and funding processes by:

- A. *Ensuring agency IT plans align with overall agency objectives.*
 - B. *Establishing a process that includes business benefits of and risks to an investment throughout the IT investment management process.*
 - C. *Establishing a comprehensive set of investment data to be used throughout all selection and funding processes.*
 - D. *Establishing a scoring process for selecting high-priority investments.*
-

Chapter IV – Approval of Information Technology Investments

Introduction

Final approval of Information Technology (IT) Investments is important to the overall oversight of IT investments in the state. This approval ensures these investments are in line with IT strategic plans and meet requirements of state law. The Montana Information Technology Act (MITA) requires all state executive branch IT purchases, or investments, be reviewed and approved by the state Chief Information Officer (CIO). Additionally, MITA requires that contracts contain language developed by the Department of Administration (DOA) that references DOA's enforcement responsibilities as described in §2-17-514 (1), MCA. To meet these requirements, investments are reviewed and approved by the state CIO at two points: state agency specifications and procurement methods for the acquisition of information technology resources are reviewed prior to procurement, and all contracts or final purchase documentation are reviewed at the end of procurement. The State Information Technology Services Division (SITSD) developed an IT Procurement Request (ITPR) process to facilitate both of these review points.

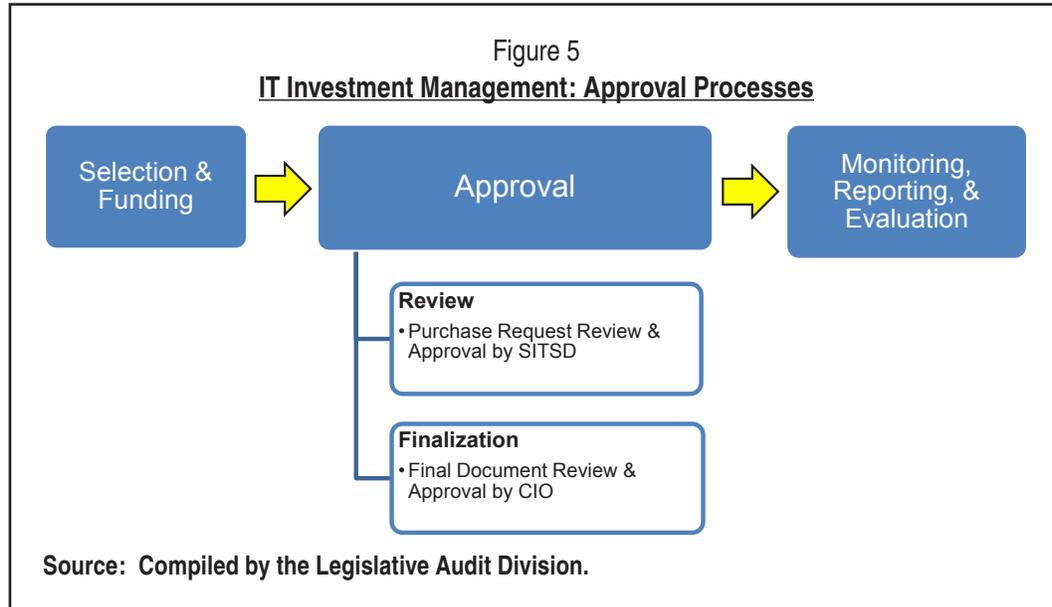
According to SITSD and statute, the intent of the ITPR process is to:

- ◆ Ensure applicable statutes, rules, policies, and procedures are being upheld.
- ◆ Reduce the duplication of IT investments and unnecessary IT-related spending.
- ◆ Ensure a high level of network security by approving investments before agencies implement them.
- ◆ Ensure the state CIO is aware of all state IT-related spending.

The ITPR document itself provides SITSD with the suggested IT investment information including business need, cost, IT plan alignment, and procurement method. This information is then reviewed for completeness, appropriateness, duplication of functionality, and compliance with strategic direction of the state, policies, standards, procedures, and guidelines.

ITPRs are used for any type of IT investment, including a one-time hardware purchase that may not require a contract. It is still important for SITSD to be aware of these investments to ensure they comply with standards and are not duplicating other investments to maintain cost efficiency.

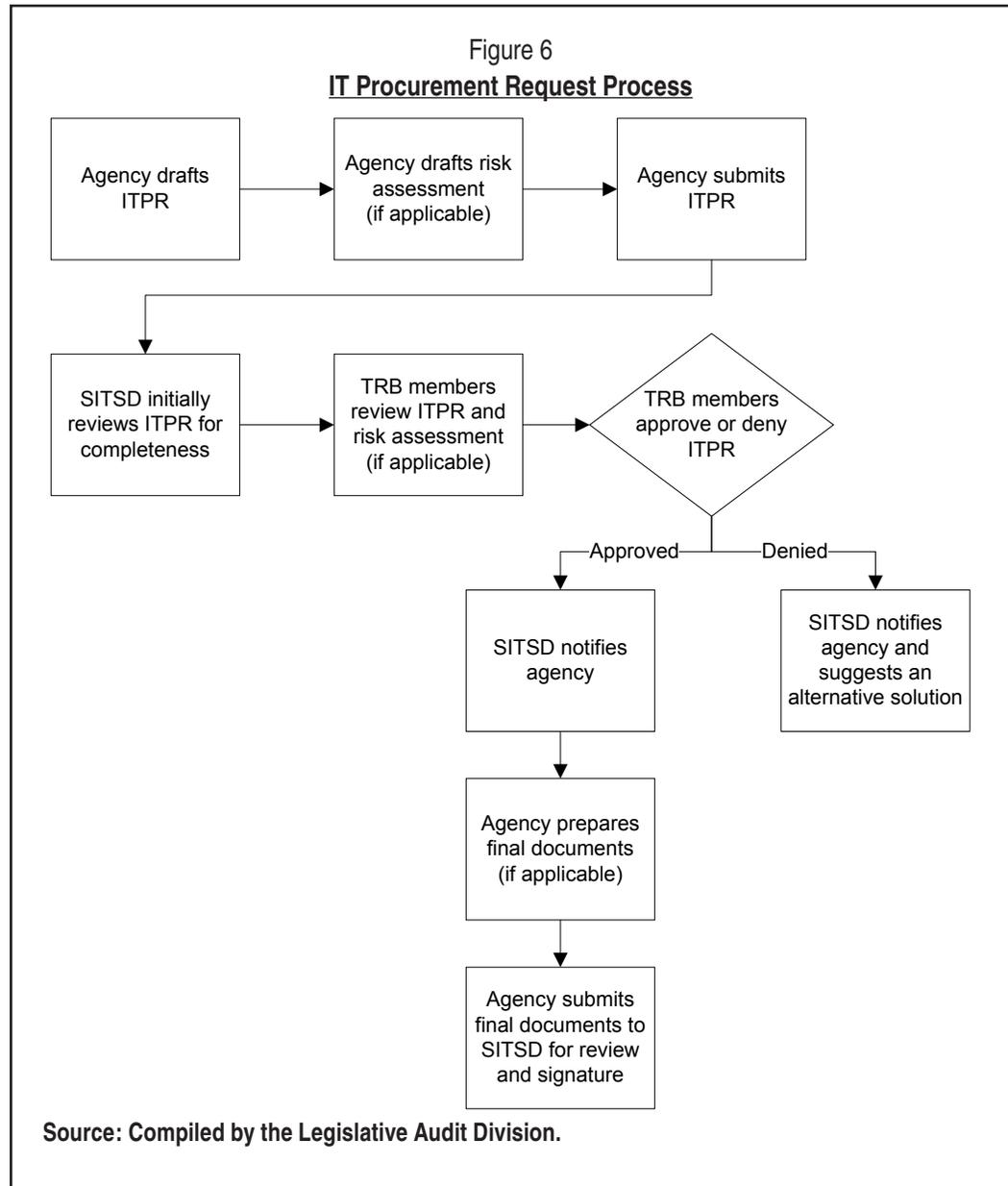
After the ITPR is approved, the state CIO or designee is required to review and approve all formal agreements. This process ensures the state CIO is aware of all IT-related spending. These two processes make up the final approval to purchase IT investments, shown below.



The ITPR process is used by state agencies for IT-related procurements to fulfill business needs. SITSD's review and approval is key to a successful process. Due to this and the ITPR process being the single point of approval for the majority of all IT investments, we focused our audit on the effectiveness of the overall ITPR process, including SITSD review of ITPR documents submitted for approval.

ITPR Process Description

According to procedures established by SITSD, the ITPR process follows the steps represented in Figure 6 (see page 23). In 2017, SITSD implemented an automated process to store information and manage workflow.



Members of the Technical Review Board (TRB) include several bureau chiefs within SITSD. The TRB reviews all ITPRs to ensure the requests comply with requirements and can approve or deny ITPRs during initial review or during TRB meetings. The bureaus that make up the TRB include:

- ◆ Application Technology Services Bureau
- ◆ Network Technology Services Bureau
- ◆ Enterprise Technology Services Bureau
- ◆ Enterprise Support Bureau
- ◆ Information Security Bureau

Every IT investment, with some exceptions, must follow the ITPR process. Per policy, ITPRs are not required for products purchased from an Approved Software List and SITSD-administered enterprise IT contracts due to the vetting and review SITSD performs for such products.

Issues Identified in the Approval Processes

We reviewed ITPRs and contracts, and conducted an agency survey about the process and the Approved Software List. This was all considered when determining the ITPR process effectiveness. For ITPRs specifically, we reviewed the information to identify if the process:

- ◆ Requirements are being met by agencies and SITSD,
- ◆ Is designed to reduce the duplication of IT investments,
- ◆ Is designed to increase network security, and
- ◆ Ensures the state CIO or designee signature is on final documents.

To complete this review, we looked at all submitted ITPRs in 2015 and 2016 from each agency selected in our sample. In these two years, 636 ITPRs were submitted, which consisted of more than 50 ITPRs from 4 agencies and less than 20 ITPRs from 17 agencies. Due to this variance, we wanted to ensure a mix of agencies that submitted fewer ITPRs and agencies that submitted higher numbers of ITPRs were both included in the sample. Of the 25 executive branch agencies not excluded by MITA, 3 agencies with more than 50 ITPRs, 3 agencies with between 20 and 50 ITPRs, and 14 agencies with fewer than 20 ITPRs were selected for a total of 477 ITPRs from 20 agencies.

A sample of IT contracts was also reviewed to identify if:

- ◆ ITPRs were completed,
- ◆ CIO signatures were obtained to signify review and approval, and
- ◆ MITA-required language giving the CIO authority to perform oversight activities were included in the contract.

To complete this review, we obtained a report of IT contracts within the State Procurement Bureau database and selected 131 contracts from the 512 contracts that were currently active or recently closed. Nine contracts were identified as not IT-related, not under MITA's purview, or duplicate contracts, so 122 contracts from the sample were reviewed. While not all state contracts are within the database because agencies have delegated authority up to a certain amount, the sample was still able to provide the necessary information to conduct our review. Table 3 (see page 25) shows the number of ITPRs and contracts selected in the two samples by agency.

Table 3
Sample Items by Agency: 2015-16 ITPRs and Recent Contracts

Agency	IT Procurement Requests	Contracts
Administration	62	78
Agriculture	12	1
Arts Council	1	-
Commerce	33	-
Corrections	8	-
Environmental Quality	35	1
Fish, Wildlife & Parks	-	7
Historical Society	5	-
Health & Human Services	153	12
Justice	-	6
Labor & Industry	36	-
Livestock	2	1
Military Affairs	1	-
Montana State Fund	-	2
Montana State Library	4	1
Natural Resources & Conservation	10	2
Office of Public Instruction	12	1
Public Service Regulation	1	-
Revenue	65	4
Secretary of State	7	1
State Auditor's Office	1	-
State Public Defender	13	-
Transportation	16	5
Total	477	122

Source: Compiled by the Legislative Audit Division.

We surveyed agencies that must follow the ITPR process as required by MITA to further understand the ITPR process. Our survey identified issues agencies have as well. Specific questions in the survey addressed topics including:

- ◆ Agencies' internal ITPR guidelines and policies,
- ◆ SITSD's decision making process and effectiveness of its review,
- ◆ ITPR risk assessment procedures, and
- ◆ IT procurement log procedures.

Survey results are consistent with findings discussed throughout this chapter, but they also identified a negative view of the ITPR process and its ability to reduce costs and solution duplication. Agency responses showed frustration with management and communication throughout the process. Through the review of ITPR and contract samples and survey results, improvements to ITPR process and definition were identified and are discussed in the following sections.

ITPR Process Requirements Not Being Met

Within the review of 477 ITPRs from 2015 and 2016, we identified 79 ITPRs

with the following types of issues:

- ◆ **Limited or no documentation:** 38 ITPRs were missing necessary documentation, including the ITPR form or final document (contract, agreements, statements of work). As such, we were unable to verify required information was provided to review and approve the ITPR nor were we able to verify approval of final documentation.
- ◆ **Unknown Status:** 2 ITPRs contained notes written by SITSD indicating an unknown status. It is unclear if the agency continued on without proper approvals, or postponed or cancelled the investment.

- ◆ **Did not follow ITPR steps:** 12 investments were procured without going through the formal ITPR process. These investments were either procured without review and approval of an ITPR, or the ITPR was submitted after the procurement process started.
- ◆ **No CIO Signature:** 27 ITPRs lacked a final document with a state CIO or designee signature.

Table 4 shows which entity is responsible for each issue based on related policy. The agency provides a complete description of the business need and proposed solution in each ITPR and related documents for approval and signature by the CIO. SITSD business analysts review ITPRs for completeness, TRB members approve ITPRs, and the CIO, deputy CIO, or designee, review draft documents, sign final documents, and communicate the approval or denial of each ITPR. We reviewed each ITPR's process documentation and correspondence between the agency and SITSD to determine who is responsible for the issues identified. Some issues were the result of both the agency and SITSD.

Table 4
Determination of Responsibility for ITPR Issues

ITPR Issue Type	Total Issues Identified	Responsible for Issue		
		Agency	SITSD	SITSD/Agency
No CIO signature	27	2	25	0
Documentation	38	23	12	3
Did not follow ITPR steps	12	1	7	4
Unknown status	2	1	0	1
Total	79	27	44	8

Source: Compiled by the Legislative Audit Division.

As shown above, ITPRs are categorized by issue type and the entity responsible for the issue. For example, if documentation for an ITPR requiring a final document, such as a contract, is missing, the agency is at fault for not submitting it to SITSD. If the final documents associated with an ITPR lacked the state CIO signature, the responsible entity is SITSD. If there was evidence of multiple issues caused by both entities, we included those ITPRs in the "SITSD/Agency" group shown in Table 4. As shown in the table, SITSD is responsible for more than half of the issues identified, but the agencies still have the responsibility of providing required documentation in a way that SITSD can make a determination.

Additionally, our contract review also identified instances in which the approval process was not initiated or completed. This included final documents without CIO approval and signatures, instances where the ITPR process was not initiated prior to procurement, and contracts that did not have the required language as required by rule and MITA. The specific results are shown below in Table 5.

Contract Issue Type	Occurrences	Contract Value (in millions)
Contracts without ITPR	71	84.6
Contracts/User License without CIO signature	15	17.7
No CIO Oversight Clause	35	37.3
No DOA Compliance Clause	27	28.8

Source: Compiled by the Legislative Audit Division.

Contracts were categorized by the following issue types:

- ◆ **Limited or no documentation:** The contract sample identified 71 contracts with a total value of at least \$84 million without the required ITPR.
- ◆ **No CIO signature:** The contract sample also identified 8 contracts and 7 user license agreements with a total value of at least \$17 million without the required CIO signature.
- ◆ **Lacked MITA requirement for CIO Oversight:** Several contracts and user license agreements also lacked specific language related to oversight.
 - ◇ 28 contracts (37 percent) and 7 user license agreements with a total value of at least \$37 million had no CIO oversight clause.
 - ◇ 21 contracts (28 percent) and 6 user license agreements with a total value of at least \$28 million had no DOA compliance clause.

Without all documentation gathered during the ITPR process, SITSD is unable to ensure that both review points within the approval of IT investments occur and that state contracts have the necessary language to protect the state.

SITSD is accountable for these approvals to occur; however, completing all of the approvals from 25 agencies requires agency support and compliance with policies. While we did not review individual agency compliance during this audit, we identified causes that can be addressed by SITSD, including:

- ◆ Unclear internal procedures leading to inconsistent documentation, unknown statuses, and undocumented and inconsistent approvals, and
- ◆ Incomplete definition of agency procedures that ensure the process is completed with documented approvals at each review point.

Improvements to Management Procedures Would Ensure Process Completion

When we discussed the issues from the ITPR sample with SITSD, program staff could not clearly define detailed procedure steps for how SITSD manages the ITPR process. There is currently a flow chart describing the process at a high level for agencies to use; however, we identified incomplete details in several areas. These included:

- ◆ What specific documentation is necessary to complete the ITPR review and should be retained by SITSD for accountability.
- ◆ Who is responsible for ensuring all steps are complete.
- ◆ What follow-up procedures are in place to ensure SITSD is aware of agency decisions regarding ITPR status to ensure the process is complete.

We also conducted a survey of all executive branch agencies to gather information on the ITPR process and understand more about the potential issues they were having. When asked for internal formal or written guidelines or policies for the ITPR process, only 6 of the 21 responding agencies indicated they had them. With so few agencies documenting formal procedures to support state policy and SITSD, it is even more important SITSD clearly define what is expected of agencies throughout the process to ensure no misunderstandings occur.

While other causes exist for an agency failing to follow ITPR procedures, SITSD can make procedural improvements to assist agencies and increase awareness to decrease these kinds of issues. Clearly defining the process for ITPRs through final documentation signatures and how SITSD will verify these reviews occur will help ensure unauthorized investments do not occur. This, along with SITSD's efforts to automate the process and define the overall investment framework to streamline the process should make it more understandable and efficient for agencies. SITSD indicated it is working on establishing such an ITPR check prior to the CIO signing final documentation.

Improvements to DOA Procedures Would Help Ensure Conflict of Interest Does Not Occur

The ITPR sample review also indicated that ITPRs submitted by the Department of Administration (DOA) had one of the highest error rates, as shown in Table 6 (see page 29). Errors consisted of limited or missing documentation, unknown status, ITPR process not followed, and lack of CIO signature on final documentation, if present.

Table 6
Top ITPR Error Rates by Agency

Agency	Issues Identified	Total ITPRs	Error Rate
Dept. of Administration	16	62	26%
Dept. of Health & Human Services	13	153	8%
Dept. of Revenue	8	65	12%
Dept. of Commerce	8	33	24%
Office of Public Instruction	5	12	42%
Dept. of Natural Resources & Conservation	5	10	50%
Agency Average	4	24	17%

Source: Compiled by the Legislative Audit Division.

Through audit work, we identified SITSD was using a different internal process than the ITPR process, thus creating the issues identified during the review. These issues were identified by SITSD as well and, in 2017, they updated internal procedures. The procedures are still not formal or defined, as the agency is waiting for the results of this audit and for automation processes to be completed.

SITSD is responsible for procuring IT solutions for DOA. Therefore, SITSD is both the customer and manager of the process. Without a formal procedure, there is no verification that SITSD is approving internal investments. These procedures need to be established formally so SITSD is consistent with other agencies. While this is important, the process also needs to ensure risks, or appearance of risks, created by being both manager and customer are identified and addressed.

Policy and guidelines have been developed for the process, yet SITSD's definition of the internal management process requires further details. This definition will alleviate inconsistencies in ITPR review and documentation, like missing documentation or CIO signatures. It will also allow for documentation necessary to prove compliance with MITA and to prove an appropriate decision was made on the IT investment.

RECOMMENDATION #5

We recommend the Department of Administration develop internal procedures to define their own procurement request process, responsibilities for managing agency procurement requests, and ensure potential conflicts of interest are mitigated.

Specific Improvements to the ITPR Process

In addition to SITSD developing internal procedures for management of the ITPR process, we also identified improvements to specific stages of the ITPR process. The need for improvement was identified in the following specific stages of the process:

- ◆ Ensuring consistent results in TRB determinations,
- ◆ Ensuring risk assessments are completed when needed, and
- ◆ Improving communication of the significance of the ITPR process across state agencies.

Improve ITPR Approval Completed by the TRB

When reviewing the ITPR sample, we identified ITPRs without the TRB's bureau chief approvals. SITSD's procedure requires each bureau chief to review and approve the ITPR. Without this approval noted, we were unable to confirm the ITPRs were reviewed by the necessary individuals. This review is important to ensure investments are in the best interest of the state.

SITSD explained a business process exists to move an ITPR forward to approved status if an approver does not take action within a two-week time frame. This agreement is set at two weeks to show responsiveness to agencies. SITSD also explained that ITPRs without individual bureau chief approvals could indicate verbal approval during TRB meetings. However, the specific ITPR notes within the database are not always updated to reflect these processes or the final, verbal approval. Additionally, the TRB does not document meeting minutes. Without approvals documented for each ITPR or TRB meeting minutes to reference, we were not able to distinguish between ITPRs that passed through the process without review and bureau chief approval, and ITPRs that were discussed and approved during TRB meetings.

While conducting the review, audit work also identified two separate ITPRs for the same product from the same agency were reviewed by TRB within a six-month window. The first ITPR was approved through the process without any question or TRB review; however, the second ITPR was questioned for further information. When the duplication was discovered, no further information was provided and the second ITPR was cancelled. This example further indicates a need for a more documented TRB review to ensure consistency. Additionally, in our survey of agency staff, 10 of 18 respondents indicated a need for more communication and insight into the TRB final decision.

Industry standards suggest using a defined scoring system in the selection process. By documenting the TRB review process in a detailed and structured way and requiring

a response from each bureau chief, SITSD will be ensuring consistent reviews and documented approvals occur. This will also eliminate the ability to approve ITPRs without bureau chief approval and will result in decisions made during TRB meetings being documented. Additionally, SITSD will have more information to provide to agencies when a decision on an ITPR has been made.

Further Clarify the Risk Assessment Process

Certain ITPRs require a more in-depth look at risks related to the purchase. This is done through a risk assessment and is required by policy. The risk assessment addresses industry standard areas, including threat and vulnerability identification, likelihood and risk determination, and control and impact analysis.

According to how the ITPR process flow is currently structured, any solutions that store data outside of SITSD's network, like cloud storage, require a risk assessment be filed by the agency. Further clarification is given for purchases that have already been acquired by other agencies. However, when reviewing ITPRs, we identified an instance in which further criteria was taken into account and the risk assessment was not necessary, but occurred. Conversely, four ITPRs from our sample discussed the need for a risk assessment, yet had no documentation of an assessment or that an assessment was reviewed and approved.

Agencies appear to be confused about risk assessment procedures as well. When asked in the survey, 8 of the 19 agencies that responded indicated that SITSD's guidance and policy is unclear when determining whether a solution requires a risk assessment.

Through further clarification of the ITPR internal process, SITSD can ensure necessary risk assessments occur for ITPRs; however, further definition needs to be given to the risk assessment process for agencies to follow as well. This will decrease the amount of time spent on unnecessary risk assessments and ensure agencies are aware of when and how to fill out a risk assessment.

Better Communication Surrounding the Importance of the ITPR Process Needs to Occur

Priority and importance of the ITPR process also needs to be clear to agency CIOs. Creating more awareness of agency ITPRs through a procurement update to the Information Technology Managers Council (ITMC) and providing information to the Information Technology Board (ITB) would help ensure this occurs. ITMC members include IT managers representing state agencies in the executive branch, legislative branch, judicial branch, university system, and local government. The council is responsible for reviewing and providing feedback on information management policies

and enterprise IT issues, among other activities. Sharing information with agency CIOs directly through the ITMC would improve communication on ITPR activity, ITPRs with unknown statuses, and other investment information.

Additionally, MITA requires discussion of policy noncompliance with the ITB. Providing a summary of procurement information to the ITB will also increase the importance of the process, in line with MITA, and keep the board apprised of the effectiveness of the approval process.

Improving the ITPR Process Increases Awareness of IT Spending

As a result of the issues identified in audit work, SITSD is neither aware of all IT spending within the state nor able to review or approve IT investments prior to acquisition. By improving these areas of the ITPR process, SITSD will better ensure:

- ◆ Each ITPR is handled consistently and each entity involved knows and understands their responsibilities and expectations of the process steps.
- ◆ All ITPRs are reviewed consistently and the approval is documented.
- ◆ All IT purchases have an approved ITPR and final documents have been reviewed for appropriate language and approved by the CIO.
- ◆ Higher-risk investments have an appropriate risk assessment and the assessment process is clear.

RECOMMENDATION #6

We recommend the Department of Administration improve the Information Technology Procurement Request process by:

- A. *Establishing a documented scoring process that requires review from Technical Review Board members.*
 - B. *Defining and documenting the process through obtaining, reviewing, and approving risk assessments and final procurement documentation.*
 - C. *Establishing a procurement review by the Information Technology Board.*
-

Reduce Duplication of IT Investments

MITA requires the development of IT resources in the state be conducted in an organized, deliberative, and cost-effective manner. Reducing duplication of IT investments is one method SITSD uses to reduce unnecessary IT costs. The ITPR process is intended to do this. For example, if an agency has a business need for image

editing software and submits an ITPR for a specific vendor's product, SITSD would review the ITPR and suggest an alternative product available through an existing enterprise agreement, if applicable. This suggestion of an alternative product reduces duplication of IT investments that address the same business needs while reducing spending of IT resources.

To identify if the ITPR process is reducing the amount of duplicated IT investments, audit work reviewed three areas:

- ◆ **TRB Meetings:** These weekly meetings are intended to review investments if any of the bureau chiefs within SITSD request more discussion. This evaluation by TRB should include review of duplication. At the TRB meetings we observed, focused discussion occurred on flagged ITPRs led by bureau chiefs that would be considered most familiar with the ITPR. TRB members then voted to approve the ITPR, research further, or request further information from the agency. ITPRs that required follow-up from previous meetings were also discussed. The meetings were consistently attended by all TRB members. Duplication considerations are discussed regarding solutions from the approved software list and enterprise-wide contracts; however, similar requests from other agencies are only discussed if the member recalls them. The duplicate ITPR, discussed earlier, that made it through to TRB review twice before being identified by the agency is an example of a case for which further duplication review needs to occur.
- ◆ **IT Inventory Logs:** According to state policy, inventory logs documenting all IT assets within an agency should be submitted yearly to SITSD. We reviewed how the IT inventory reports are used for duplication review. Agency IT inventory information should be stored in the Enterprise Information Technology Inventory Database, per state policy; however, this database no longer exists and multiple spreadsheets are manually collected and consolidated by SITSD every other year for legislative reporting.

When reviewing the inventory reports that were available, we noted the reports included appliance, server, storage, and device information, but lacked purchase information such as cost, date of procurement, and method of procurement. Investments, such as software licensing agreements and applications, are not listed in the inventory. Additionally, fields were missing data, resulting in incomplete records. While the inventory reports can be used to find duplications, due to the spreadsheet process, data is not complete and the process of comparing them would be inefficient for SITSD. Requiring consistent and complete information with a reference to the ITPR or procurement log on these inventory reports would also provide a mechanism for SITSD to verify IT investments went through all required procedures.

- ◆ **IT Procurement Logs:** According to state policy, agencies should submit quarterly logs to identify purchases that did not require an ITPR. These purchases should be from pre-approved sources including those in the approved software list or enterprise level contracts. By using these pre-approved sources, agencies would be reducing duplications.

Improve and Enforce Log Processes to Enable Duplication Review

In calendar year 2015, only five agencies submitted IT procurement logs. Four agencies submitted logs in calendar year 2016. The information included in the logs varied by agency. While there were improvements to the ITPR process in 2017 and SITSD reiterated reporting requirements during council meetings with agencies, there were still only five agencies that submitted logs for purchases in the first quarter of 2017.

When reviewing policy, we identified differing statements as to who should submit the procurement logs. DOA policy states, “state agency CIO’s shall submit” them, yet SITSD guidelines state the “procurement delegation liaison, as identified in the State Procurement Bureau (SPB) Procurement Delegation Agreement, shall submit the log of IT activities and procurements.” Agency survey responses indicated that 9 of 18 agencies do not submit logs, and 6 of those were not aware of the requirement, which could be an effect of the unclear guidelines and policy. Clearing up the responsibility of submitting logs would give SITSD a consistent contact for requesting information and addressing issues with individual agencies.

Reducing duplication in IT investments is one of the intents of the ITPR process that leads to reducing costs overall. The TRB review reduces duplication with approved solutions, and the ITPR process was recently moved to a database so agencies now have a better way to identify similar procurement requests from other agencies. While these reduce some duplication, SITSD needs to improve the processes for the IT inventory logs and procurement logs so these tools can be better used to identify duplications as well. Both processes need to be better explained and more organized to assist agencies and increase adherence to policy.

As discussed in previous sections, creating more awareness of agency ITPRs through a procurement update to the ITMC and providing any further needs for information to the ITB would help ensure necessary approval processes occur. This type of review could also increase agency participation in both log processes. Through this review, updates to the inventory and procurement log processes can be discussed with agencies and necessary information can be requested by SITSD in a more consistent and open manner.

RECOMMENDATION #7

We recommend the Department of Administration:

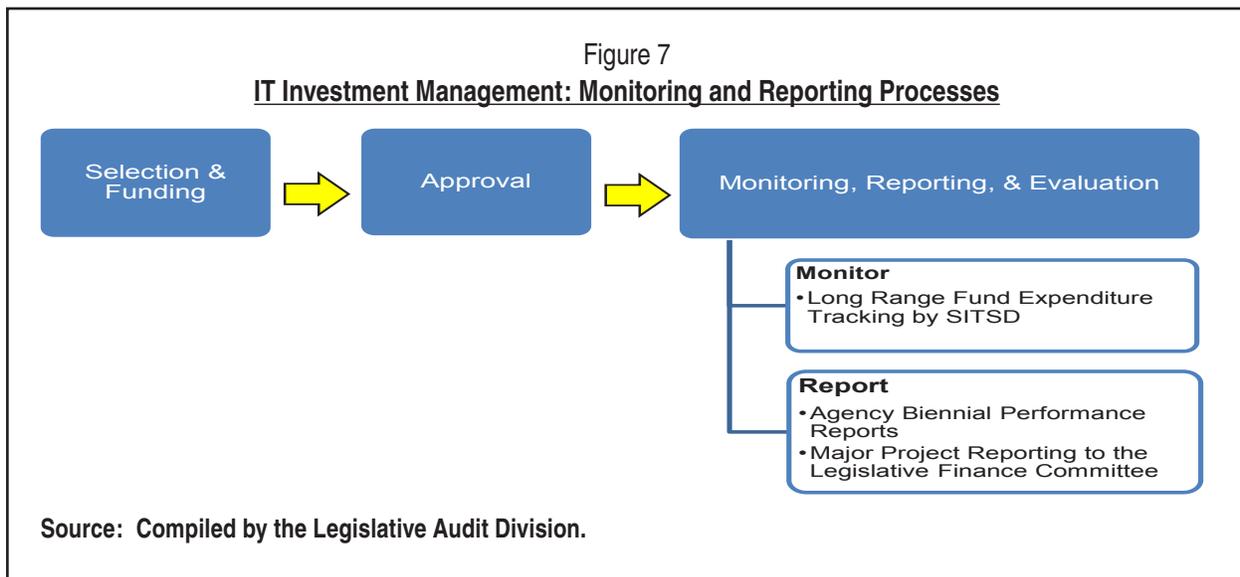
- A. *Define procedures, responsibilities, and accountability actions for the procurement and inventory log processes.*
 - B. *Include periodic updates to the procurement and inventory log process in the procurement update presented to the Information Technology Board.*
 - C. *Use log information to establish duplication reviews.*
-

Chapter V – Monitoring, Reporting, and Evaluating Information Technology Investments

Introduction

Monitoring, reporting, and evaluating are important procedures to ensure Information Technology (IT) investments are delivering benefits and meeting expectations throughout the entire life-cycle. Clearly defining expectations and benefits up front and updating them as changes occur is crucial, but without formal, structured reporting, identifying and correcting underperformance is not possible. Structured reporting also adds to the ability to be organized and deliberate with the development of IT resources while making IT more cost-effective.

While monitoring is the responsibility of the agencies, the processes for reporting those metrics is managed and defined by SITSD. The current processes for reporting IT investments is shown below:



By reviewing this process, we identified various, independent forms of reporting and key processes that can be implemented to improve efficiency for agencies and make the process more effective. This chapter addresses establishing a reporting framework to clarify reporting processes and implementing initial key practices necessary to progress to more mature investment practices.

Reduce Reporting Issues by Establishing a Reporting Framework

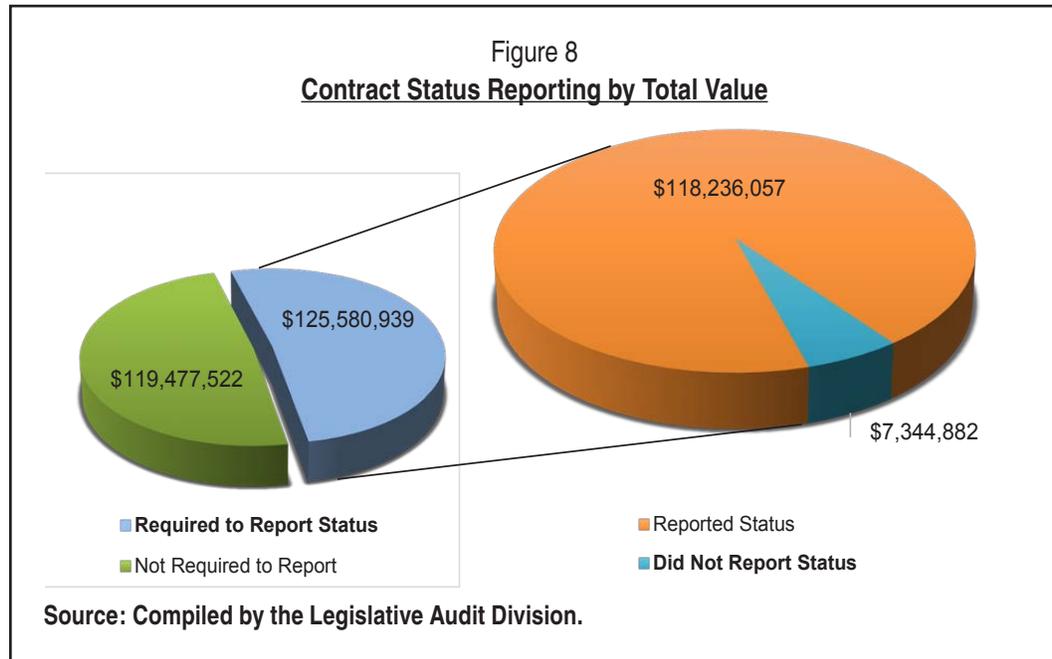
While there are different processes for reporting IT investments to SITSD, the most notable and extensive process is the IT Project Portfolio report provided to the Legislative Finance Committee (LFC). Agencies with projects that have development costs over \$500,000 or receive long-range funds must report specific metrics to SITSD every quarter that represent the status of the project. SITSD then reports this information to LFC. Audit work focused on this reporting process, but considered the other processes and how they contribute to IT investment management when reviewing the overall framework.

MITA requires that implementation of major IT projects be reviewed and rule states that agencies shall report progress of software and management system procurement or development in accordance with policies, procedures, and guidelines. We found no such policies, procedures, and guidelines were formally documented; however, SITSD and the recently established project management advisory workgroup were developing a policy to define agency procedures for reporting major projects. Based on the limited direction for reporting, audit work used the generally accepted rules for reporting major projects.

Review Identified Concerns With Current Reporting

To review the LFC reporting process, investments that met criteria established by the committee from the sample of contracts were reviewed. The information reported to the LFC was compared to contract information and any changes made through amendments. A survey was also sent to agencies to gather information on their perception of the LFC reporting process.

Of the 122 IT contracts we reviewed, 15 contracts, totaling almost \$126 million, met the criteria for a major project and required status reports. Our review of the 15 contracts determined 3 have not been reported to the LFC. Additionally, 5 of 12 reported contracts provided cost and date changes either inaccurately or in an untimely manner, and 11 of the 12 reported contracts did not follow the correct procedure to provide the committee extra information when changes occurred on the report. The dollar amounts for these contracts are shown in Figure 8 (see page 39).



These findings show that the legislature is not getting useful and consistent information to understand, review, and make decisions. Industry standards require accurate, timely, and verified data be used for effective reporting, and, through discussions with SITSD, it was identified that agency reported information is not verified to ensure either of these. However, SITSD does try to ensure information is consistent from prior information reported and that the data is reasonable.

Establishment of Overall Reporting Framework Needed

Issues identified by SITSD's review result from varying internal reporting procedures at agencies, trying to gather information at the last minute, or confusion related to required metrics. This is consistent with our review of contracts and the survey of agencies. It does not appear that agencies are trying to hide information through false reporting. Instead, the issues identified appear to be caused by a poorly designed reporting process.

- ◆ Agencies use varying monitoring practices due to differences in agency resources and project characteristics. Agencies then try to adjust these varying practices into one standard form on a quarterly basis. The metrics and tracking may be different, so having to redefine or restructure the data to fit a different method takes time and increases the likelihood of incorrect reporting and inconsistent reporting between agencies.
- ◆ The timing of reporting and requests for information hinder some agencies. Large agencies may not have enough time to gather three months' worth of information for all of their projects. Agencies using varying types of monitoring may not have enough time to gather information and prepare it for reporting.

Establishing a framework for reporting that starts by defining the reporting process and metrics at project initiation can mitigate some of the causes for incorrect reporting. Industry standards indicate the framework should include defined procedures of monitoring and reporting, consistent and defined metrics used throughout the life cycle, and verification of reported metrics to ensure the framework is being implemented. While SITSD does not currently have the resources to verify all of the details reported, establishing a formal framework with more definition for agencies and the current review of information should improve issues we identified. Establishing the overall framework will also coordinate the multiple forms of reporting, like LFC reporting, ITB reporting, and agency performance reports, to reduce redundancy, inconsistent metrics, and confusion for agencies.

Industry standards also discuss the option of defining monitoring and reporting based on characteristics of investments. By defining the minimum monitoring and reporting procedures based on investment characteristics, like type or size, SITSD can allow for smaller agencies with limited resources to be consistent with overall reporting.

RECOMMENDATION #8

We recommend the Department of Administration establish a reporting framework that:

- A. *Defines criteria, metrics, and procedures for all IT investment-related reporting, based on investment characteristics.*
 - B. *Coordinates timing and uses consistent metrics.*
 - C. *Provides agencies guidelines and support for reporting.*
-

Reporting Process Design Improvements

Similar to the review of selection and funding, initial key practices for reporting were not identified within the state's investment management process. Some of the key practices needed in selection and funding carry over to reporting, including the identification of business benefits and risk. Once these are identified, reporting the status and evaluating the investment based on these metrics, as well as on cost and schedule, will give a better overall picture of project success and benefit realization.

Improvements specific to the reporting process that will increase the effectiveness of reporting were identified in:

- ◆ How and which investments are evaluated.
- ◆ How underperforming investments are monitored.

Include Investment Check-Points and Final Evaluation of IT Investments

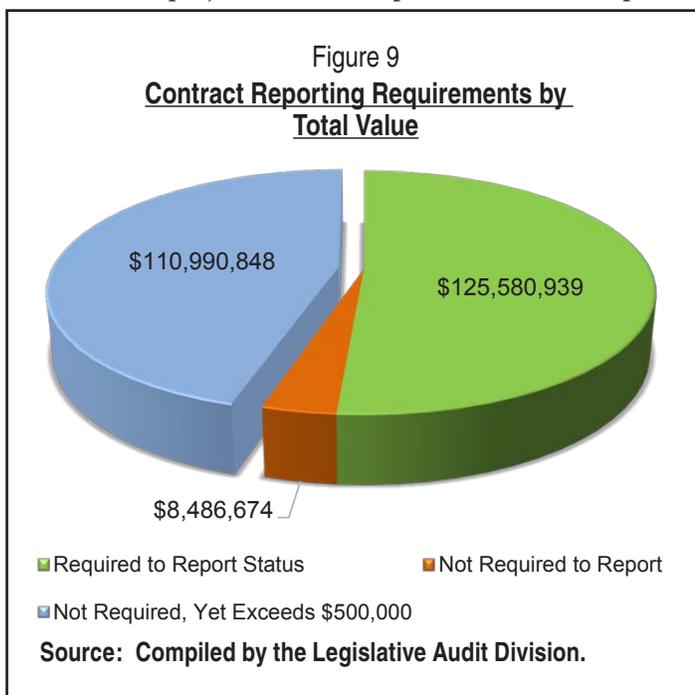
Currently, there is no final evaluation of IT investments or review of investments other than development projects over a specific threshold. Post implementation reports are provided to the LFC six months after implementation and an update on projects from the previous IT plans are provided in agency performance reports. However, after implementation or the one-year update from the performance report, there is no further review.

We also identified a significant amount of investments that are not reviewed after approval of the investment at the ITPR stage in our sample of contracts. Our work reviewed \$247 million in recent contracts and identified a significant amount of investments did not qualify for reporting because they were licenses, services, hardware, or other types of investments that are not considered development projects, shown in the figure below. The majority of the investments that were not reported are over \$500,000, which is similar criteria to projects that are reported. These unreported contracts were not reviewed by an oversight body at any time after the procurement approval.

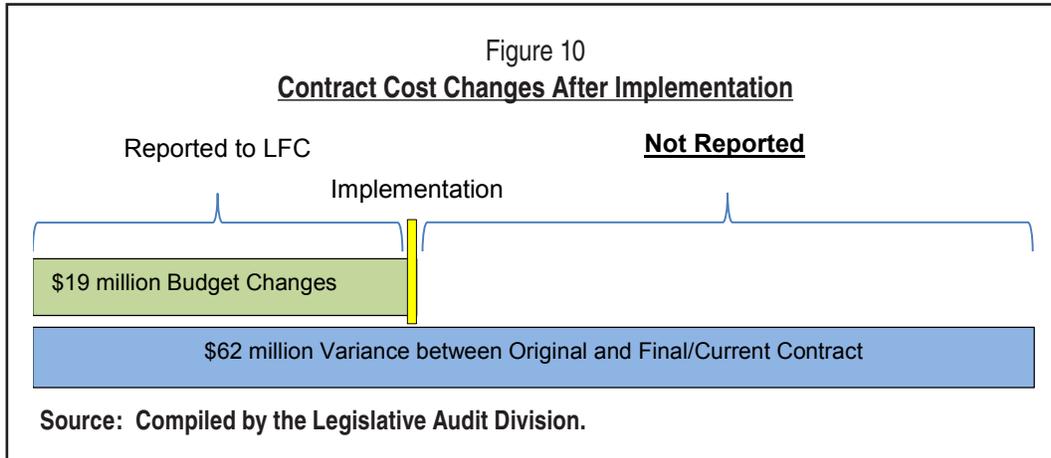
To understand the amount of cost changes occurring during the life-cycle of these investments, we compared the cost of the original contract to the cost at the end of the contract or through the last amendment. Due to the updated cost information within the contract database being the responsibility

of the agency to enter, only contracts where original and final cost could be verified through documentation were compared. We verified the cost for 9 contracts reported to LFC and 31 unreported contracts.

LFC reported contracts underwent a larger increase from original to final contract than unreported contracts. Their cost increased \$62 million over the life of the nine contracts. During the time contracts were monitored by LFC, a \$19 million increase



in budget was reported. There can be other costs included in the reported budget numbers so we were not able to calculate an amount for unreported cost changes; however, the variance is still significant due to only a portion of the life-cycle being reported, shown in the figure below.



There was an \$11 million increase in contract costs to the 31 non-reported contracts for which we verified cost. Because the nondevelopment cost changes are smaller than the cost changes seen in development contracts, frequent reporting may not be necessary. However, \$11 million is significant and a mid-point review or periodic check points should be established to ensure the investment is still delivering against the intended metrics.

SITSD does require all amendments, extensions, or addenda to contracts to go through the approval process, including an ITPR and CIO signature. A more comprehensive review that is consistent with the investment process could be implemented for nondevelopment projects to ensure money is still being spent efficiently on the right IT investments.

Define Criteria and Corrective Actions for Underperforming Investments

Currently, when a project reported to the LFC changes status, a supplemental report is required to describe the change in terms of milestones, scope changes, and issues or risks. It is up to the agency to determine a plan to solve the issue and continue to update the same status report for LFC every quarter. In some cases, the agency will rebaseline the project, which then adjusts the budget and completion date.

When reviewing LFC meetings, it is clear that this process has led to frustration with LFC members because the new health status for the project will be compared to the

new goals, even though the project will not hit original targets. This is consistent with the information received from the survey sent to LFC members.

Industry standards require defined criteria and corrective action steps be established and monitored by an oversight body. Within the duties of the IT Board (ITB), these corrective actions can be closely monitored, and the decision to rebaseline can be made in conjunction with appropriate oversight as part of a corrective action plan.

Improving Reporting Processes

Industry standards indicate the investment management process should apply to all IT investments, not just to development projects. While they all do not need to be the same specific process, definition of how each investment category is managed through the life cycle to ensure the same high-level goals of the process should be established. The purpose of the evaluation at the end of the life cycle is to determine if the investment delivered what was expected through benefit realization, as well as identify any lessons learned. These lessons can concern either the investment level or the investment process.

Initiating corrective actions when specific criteria are met through a defined process and ensuring those corrective actions are monitored and reported in more detail will provide consistency to the IT investment process. By assigning this oversight responsibility to the ITB, SITSD would be in compliance with MITA. While it does not replace what is provided to LFC, it can simplify the process to have more technical and metric-driven review given to the technical board, and more verbal, impact-driven summaries given to the LFC. These improvements will allow for more predictability of projects, thereby increasing the repeatability of successful projects and decreasing the financial impact of changes throughout the investment life cycle.

RECOMMENDATION #9

We recommend the Department of Administration improve IT Investment reporting processes by:

- A. *Defining and documenting periodic reviews after investment approval.*
 - B. *Defining and documenting final evaluation based on characteristics that align with overall reporting framework.*
 - C. *Expanding periodic review of investments to more than development projects through implementation.*
 - D. *Defining and documenting the criteria and corrective action process for underperforming investments.*
-

DEPARTMENT OF
ADMINISTRATION

DEPARTMENT RESPONSE



MONTANA DEPARTMENT OF
ADMINISTRATION

A-1

"the backbone of state government"

Director's Office

Steve Bullock, Governor • John Lewis, Director

January 25, 2018

Angus Maciver, Legislative Auditor
Legislative Audit Division
PO Box 201705
Helena, MT 59620-1706

RECEIVED

JAN 25 2018

LEGISLATIVE AUDIT DIV.

RE: Audit 17DP-02 Governance Practices for Information Technology Investments

Mr. Maciver,

The State Information Technology Services Division (SITSD) in the Department of Administration reviewed the Governance Practices for Information Technology (IT) Investments audit. You will find the response to the recommendations below.

Recommendation #1

We recommend the Department of Administration establish and define an overall IT Investment framework.

Department Response:

We concur. SITSD plans to create an overall IT investment management framework that is scheduled to be completed by the end of calendar year 2018. SITSD has evaluated and is in the process of procuring IT investment management tools that will be leveraged and integrated to accomplish this goal. These tools include capabilities for managing and monitoring ITIL processes and the state's portfolio of projects, which are currently reported to the Information Technology Board (ITB) and the Legislative Finance Committee (LFC). These new tools will allow for the management, selection, and prioritization of IT investments and projects. The project portfolio management tool will be integrated into the planned investment framework. In addition, the State Procurement Bureau included an IT Procurement Request (ITPR) reference for all contracts related to the state's eMACS e-sourcing system. The State Procurement Bureau and SITSD will continue to work closely to ensure appropriate stage gates are present throughout the approval process. SITSD is creating a new automated purchase order and invoicing system that requires an approved ITPR prior to issuing an SITSD purchase order, along with other controls that insure a properly vetted purchase is being made. SITSD intends to model its framework after the industry standard known as COBIT.

Recommendation #2

We recommend the Department of Administration work with the Information Technology Board to:

- A. Define and document the responsibilities of the Information Technology Board relating to overseeing the IT investment management process.
- B. Include responsibilities within the selection and reporting of IT investments in accordance with statute.

Department Response:

- A. We concur. SITSD officially introduced investment oversight responsibility to the ITB on December 7, 2017. This responsibility is included in the ITB's Operating Procedures that were approved by a majority vote during the December meeting. The project portfolio dashboard, as it exists in SharePoint and Excel, is included in the review and oversight process.
- B. We concur. SITSD will collaborate with the ITB to rate and prioritize projects that request funding. As an advisory board, the ITB will make recommendations regarding the projects to the Governor's Office and the Legislature. For future reporting of IT investments, the planned portfolio management tools will be used to capture and present IT project and investments for consideration by the board. The results of ITB's review of the progress of state IT investments and projects will be included as part of the State CIO report on the LFC agenda.

Recommendation #3

We recommend the Department of Administration:

- A. Include all required IT Investments and investment information within the Governor's Budget and requests for long-range funding.
- B. Define the procedures, templates, and responsibilities for approving allocation of long-range funds ensuring the state CIO signs required documents.
- C. Coordinate with the Information Technology Board and Office of Budget and Program Planning to define and document criteria for a "major" project to be used throughout the IT investment life cycle.

Department Response:

- A. We concur. SITSD will continue to work with agencies and ITB to ensure IT investments are captured for consideration by OBPP during the executive planning process. No major IT projects were approved for the 2019 biennium budget and therefore, no major projects were reported per MCA 2-17-526. When major IT projects are approved for the Governor's budget, they will be incorporated into Volume 10.
- B. We concur. SITSD will define the procedures, templates, and responsibilities for recommending projects for long-range funding. SITSD intends to utilize a portfolio investment tool to aid in this process. State CIO review and approval will be incorporated into the workflow process for IT investments. SITSD will ensure the review and recommendation of long-range IT investments is properly documented.

- C. We concur. The current criteria for a “major” project was developed in collaboration with SITSD and OBPP and has been routinely reviewed and modified several times since the inception of MITA. As stated in the Department’s response to Recommendation #2 A and B, SITSD will work with OBPP and the ITB to ensure the criteria relates to the identification, prioritization, and recommendation of “major” IT projects.

Recommendation #4

We recommend the Department of Administration improve information technology investment selection and funding processes by:

- A. Ensuring agency IT plans align with overall agency objectives.
- B. Establishing a process to include business benefits and risks to an investment throughout the IT investment management process.
- C. Establishing a comprehensive set of investment data to be used throughout all selection and funding processes.
- D. Establishing a scoring process for selecting high-priority investments.

Department Response:

- A. We concur. SITSD will update the requirements for the agency IT plans to ensure alignment with overall agency objectives.
- B. We concur. SITSD will develop a process to include the risks and benefits to the business from the IT investment.
- C. We concur. SITSD will work with the ITB to determine the investment data required for the IT investment recommendation process. How this data is utilized will be at the discretion of the decision makers that are in authority to select and approve investment spending.
- D. We concur. SITSD will work with the ITB to develop a process for scoring high-priority IT investments for recommendation to the Governor’s Office and the Legislature. Ultimately, the Governor will decide which projects are included in the executive budget and the Legislature will decide which projects are funded.

Recommendation #5

We recommend the Department of Administration develop internal procedures to define their own procurement request process, responsibilities for managing agency procurement requests, and ensure potential conflicts of interest are mitigated.

Department Response:

We concur. SITSD converted the procurement request process from the Acquisition Decision Process to the ITPR process during 2017. Accordingly, DOA and SITSD utilize the same process as agencies, therefore mitigating any conflict of interest.

Recommendation #6

We recommend the Department of Administration improve the Information Technology Procurement Request process by:

- A. Establishing a documented scoring process that requires review from Technical Review Board members.

- B. Defining and documenting the process through obtaining, reviewing, and approving risk assessments and final procurement documentation.
- C. Establishing a procurement review by the Information Technology Board.

Department Response:

- A. We concur. SITSD is utilizing a mandatory checklist process that is integrated into the automated ITPR form and process. This process will be enhanced with additional criteria and requirements.
- B. We concur. As noted in the Department response to Recommendation #6 A above, approval processes are defined and documented as an integrated aspect of the automated ITPR form and process. This process will be enhanced with additional criteria and requirements.
- C. We concur. During the December 7, 2017 ITB meeting, the State CIO informed the ITB that procurement review will become a standing item on the board's agenda.

Recommendation #7

We recommend the Department of Administration:

- A. Define procedures, responsibilities, and accountability actions for the procurement and inventory log processes.
- B. Include periodic updates to the procurement and inventory log process in the procurement update presented to the Information Technology Board.
- C. Use log information to establish duplication reviews.

Department Response:

- A. We concur. SITSD will update the procedures to align with the current automated ITPR review and approval process.
- B. We concur. SITSD will include an update on the procurement and inventory log as a standing item on the ITB agenda.
- C. We concur. SITSD intends to incorporate the procurement and inventory logs into a portfolio management tool which will provide reporting capabilities that include the identification of duplicate purchases.

Recommendation #8

We recommend the Department of Administration establish a reporting framework that:

- A. Defines criteria, metrics, and procedures for all IT investment-related reporting based on investment characteristics.
- B. Coordinates timing and uses consistent metrics.
- C. Provides agencies guidelines and support for reporting.

Department Response:

- A. We concur. The current criteria, metrics, and procedures were approved by LFD and LFC. SITSD will collaborate with the State of Montana Project Management Advisory Workgroup to expand the current reporting of all IT investments based on investment characteristics. SITSD will submit the recommendations to the ITB, LFD, and LFC for approval.

- B. We concur. SITSD aligns the reporting timeframes with the scheduled meetings of LFC and ITB. Currently, agencies are allotted one month to provide requested information with multiple follow-up reminders and requests for clarification. The Information Technology Project Management and Reporting Policy, published on January 9, 2018, outlines the standards for reporting progress on projects, which utilizes industry standard earned value techniques. Calculations are reviewed and verified before reports are submitted to ITB and LFC.
- C. We concur. SITSD provides standards for reporting in the IT Project Management and Reporting Policy. A key function of the Business Operations Bureau within SITSD includes agency support for reporting.

Recommendation #9

We recommend the Department of Administration improve IT Investment reporting processes by:

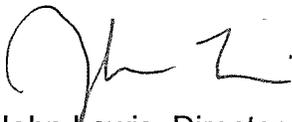
- A. Defining and documenting periodic reviews after investment approval.
- B. Defining and documenting final evaluation based on characteristics that align with overall reporting framework.
- C. Expanding periodic review of investments to more than development projects through implementation.
- D. Defining and documenting the criteria and corrective action process for underperforming investments.

Department Response:

- A. We concur. SITSD will define and document a process for periodic review of investments in the development of the IT investment framework.
- B. We concur. SITSD will expand on the current supplemental reporting requirements by defining and document a process for final evaluation of all IT investments.
- C. We concur. SITSD will expand on the current project reporting requirements by defining and document a process for periodic review of all IT investments.
- D. We concur. SITSD will collaborate with the State of Montana Project Management Advisory Workgroup to define and document the criteria and corrective action process for underperforming investments.

Thank you to you and your staff for conducting the audit in a professional manner and providing SITSD with valuable information regarding our IT investment framework.

Sincerely,



John Lewis, Director

cc. Ron Baldwin, State Chief Information Officer