

INFORMATION TECHNOLOGY DRAFT STRATEGIC PLAN OVERVIEW

A Report Prepared for the

Legislative Finance Committee

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INTRODUCTION

This report is written to advise the Legislative Finance Committee of potential impacts to fiscal policies and fiscal impacts implied within the 2006 update of the state information technology strategic plan. Montana state government currently operates under the direction of the second statewide plan developed after passage of the Montana Information Technology Act of 2001, which is titled the State of Montana Strategic Plan for Information Technology 2006-2007.

The Montana Information Technology Act of 2001 requires updates and distribution of statewide information technology plan updates to agencies by April 1 of each even-numbered year. Agencies are required to develop and have approved by the Department of Administration strategic plans for managing agency information technology resources in compliance to the statewide plan. Agency plans should provide a strategic direction for agencies to manage their information technology resources with the same strategic direction as the entire state government enterprise, but with specifics addressing the agency missions and services.

The statewide plan sets the strategic direction for the state in the use of information technology resources to provide the services and programs of the state. The goals, objectives, and action items of the statewide plan imply fiscal policies and fiscal impacts the committee may want to consider. Because the state plan is intended to provide general strategic direction for the state, it is not possible to evaluate with any certainty the fiscal impacts or whether a policy change will be proposed. Instead of identifying a specific impact, only an indication of whether the item would increase or decrease the budget pressure will be indicated, when implied. It will not be until after agencies have updated their plans and evaluated the funding options that specific fiscal impacts will be apparent and included in budget or legislation requests.

The report identifies several issues the committee may want to consider for future meeting or work plan topics. For at least one issue raised in the report, the committee may also consider recommending that the plan be modified to address concerns raised. The report identifies the following issues for committee consideration:

- Unknown risks associated with the planned adoption of an open-source software standard
- Alternative funding plans for information technology resources could reach across agency boundaries and impact legislative processes for prioritizing funding
- An initiative to provide state business continuity in case of disasters or emergencies could cost \$25 million

2006 PLAN UPDATE

The update of the state information technology strategic plan (plan update) is very brief compared to previous plans, and is limited to a statement of Montana's information technology vision along with goals, objectives, and action items to achieve the vision. One or more objectives are listed for each goal and several action items are listed for each objective. The goals and objectives provide general strategic direction for managing and developing information technology resources and the action items provide the expected actions. Staff has evaluated each associated action item to identify if the item implies a departure from current fiscal policy or a potential change of fiscal commitment by the legislature.

ISSUE – MEASURABILITY OF GOALS

Montana law specifies that the state strategic information technology plan must specify the statewide mission, goals, and objectives that establishes the strategic direction for the use of information technology resources to provide state government services. The update does not specify the mission, but identifies Montana's information technology vision. The goal identified in the plan update and the objectives that support the goals are general statements not readily adaptable to developing measures that could be used to determine success or failure. This is relevant since Montana law also requires development of a biennial report on information technology, and specifies that the biennial report assess the progress toward implementing the state strategic information technology plan. Without measurable goals, how can the required assessment be made?

Options - Goal Measurability Issue

If the committee chooses to take action on this issue, it may want to consider the following options:

- Request that the Department of Administration provide a list of measures that would be used to access the plan goals and objectives
- Request that the department amend the plan to include more measurable goals or measures for the goals

GOALS OF PLAN UPDATE

The goals identified in the plan update to attain the Montana information technology vision are listed below and followed with descriptions and discussions of any potential fiscal impacts or policy implications apparent in the associated action items:

- Create quality jobs and a favorable business climate
- Develop information technology resources in an organized, deliberative, and cost-effective manner
- Improve the quality of life of Montana citizens
- Protect individual privacy and the privacy of information contained within information technology systems
- Improve government services

CREATE QUALITY JOBS AND A FAVORABLE BUSINESS CLIMATE

Plan Objective and Action Items

The objective and action items for the goal to create quality jobs and a favorable business climate focus on expanding Montana's SummitNet network. An expansion of SummitNet would provide its reach into more Montana communities to improve access to public data.

Implications of Plan Objective and Action Items

Expansion of the network will entail costs to purchase and maintain new network connection and routing equipment. Without a specific proposal, it is not apparent if the expansion would result in higher fees for use of the network.

DEVELOP INFORMATION TECHNOLOGY RESOURCES IN AN ORGANIZED, DELIBERATIVE, AND COST-EFFECTIVE MANNER

Plan Objectives and Action Items

The goal to develop information technology resources in an organized, deliberative, and cost-effective manner lists four objectives: 1) implement best practices; 2) implement new technologies; 3) provide stable funding; and 4) implement a workforce development plan.

Implementing best practices focuses primarily on the concepts of developing and expanding information technology project management disciplines and staff, statewide and within agencies. The centerpiece of the objective to implement new technologies is the development of business cases and policies to move toward open-source software and open-document and data exchange standards as state standards. The objective to provide stable funding for information technology mainly involves evaluating current funding levels and approaches, and developing strategies for alternative approaches to enhance funding stability. The objective to implement a workforce development plan involves developing an appropriately sized and competent state employee workforce for information technology.

Implications of Plan Objectives and Action Items

Several of the action items for the above listed objectives imply either a fiscal impact or a change in policy. The objectives and implications are discussed below.

Project Management

The plan calls for expanding agency project management expertise and the project management services of the Information Technology Services Division (ITSD). The plan implies an increase in staff or contracting to provide project management services within agencies or to agencies unable to justify developing the expertise, and to support agency project management staff. Expanding ITSD and agency project management staff implies increased budget pressures to fund additional FTE and training costs. Instilling a stronger emphasis on project management would also increase initial costs for information technology projects, but the intended outcome would likely be more well managed projects, leading to lower risks and overruns in schedule and costs.

Open-source

One item of the plan that may potentially be controversial is the implied move toward open-source software and open-document and data exchange standards. Open-source software is software for which the underlying programming code is available to the users so that they may read it, make changes to it, and build new versions of the software incorporating their changes. Open-source software is in contrast to software of a proprietary nature, such as Microsoft Windows operating system, in which the source code is encrypted to prevent users from adapting or modifying the programming code. Potential controversy arises because the move would be a departure from existing practices, which is only being tested in one other state government, Massachusetts. Massachusetts established a state standard that mandates the use of open-document-based products by January 1, 2007. Microsoft doesn't support open-document standards and will not in its next office suite release, due by the end of 2006. Open-source software is not untested; it's just not tested in state government where Microsoft products have enjoyed dominance for years. The decision by Massachusetts to mandate the use of open-document products has drawn international attention and criticism from within the Massachusetts legislature. The decision also led to the resignation of the state chief information officer.

Developing a state standard that requires open-source software is a departure from current practice and policy, and could have significant, but unknown consequences. A complete analysis that compares both the benefits and costs, as well as the risks and operational impacts between staying with a proprietary software approach, moving to an open-source approach, or a hybrid of both is needed prior to proceeding with such a significant policy change. The plan calls for developing business cases that would be used to evaluate moving to open-source software and open-document and data exchange standards. Converting to an open-source software standard could result in savings to the state in software licensing costs. The evaluation, called for in the plan, should identify risks and the costs to convert to and operate under a new standard. Until an evaluation is completed the fiscal implications are not available.

The strategy implies a direction that may expose the state to significant but yet unknown risk. The committee may want to have the state chief information officer (CIO) elaborate more on the plans to evaluate and adopt open-source software and open-document and data exchange standards. Because the initiative could have far reaching impacts across all state agencies the committee may want to monitor the evaluation and resulting business cases as the initiative proceeds.

Committee May Want to Monitor the Open-source Software Initiative

The committee may want to direct the CIO to include updates of the open-source software evaluation as part of regular updates to the committee. Assumed if the committee directs the updates from the CIO is direction to staff to monitor the initiative and identify any issues and concern for the committee.

Alternative Information Technology Funding Approaches

The plan implies a shift in culture from viewing information technology as a discretionary cost to viewing it as an infrastructural asset integral to effective and efficient government operations. Action items in support of the objective for stable funding of information technology focus on developing alternative approaches to funding information technology assets, both management systems and equipment. Under current practices, funding requests for systems in agencies are evaluated and approved in relative isolation and separately based on the agency and program structure of HB 2, except when they are included in the capital projects or bonding legislation.

Issue – Alternative Funding Approaches for Information Technology

Under current practices when multiple agencies collaborate on a system, each agency requests funding for its portion of the system. The plan implies a different approach that may include reviewing all information technology requests in one legislative committee, developing an information technology funding pool with a dedicated source of revenue, or other approaches that would provide more stability to the funding of critical information technology projects that have a statewide impact or for agencies with more restrictive fiscal resources. Since the plan provides no specific alternatives, the impacts are not apparent. Potential impacts could range from directing a portion of new or existing revenue to a special information technology fund to changing the process for reviewing information technology budget requests during the legislative session. For some alternatives, statute would need to be amended, while other alternatives could be implemented through agreements between the legislature and other branches of state government that specify agreement on budgeting processes and procedures.

Options - Alternative Funding Approaches for Information Technology

As the interim legislative committee charged with evaluating policies for information technology and budgeting processes, the objective directly impacts the committee's powers and duties as stated in

statute. The committee may want to consider any or all of the following options for monitoring and evaluating actions of the objective:

- Direct the CIO to include actions and progress for the alternative-funding objective in regular updates to the committee
- Form a subcommittee to evaluate any proposals brought forward by the executive on the objective
- Appoint a subcommittee and direct staff to formulate specific criteria for legislation to study information technology funding for the next interim

Implement a Workforce Development Plan

The plan lists two action items for the objective to implement a workforce development plan that imply fiscal impacts beyond current funding: 1) expand information technology training; and 2) establish appropriate employee/contractor balance. To reach the goal, the plan first calls for determining the information technology skills and staffing needs of the state, then determining the most appropriate balance between contracted and state FTE staff resources. Once an appropriate FTE level has been determined, the plan calls for evaluating the skills of the existing state FTE and developing, through training and recruitment, the appropriate skills and proficiencies as identified in the needs assessment.

Expanding training to keep staff current with the changing technology would put increased pressure on agency budgets to fund more training. Based on information contained in the State of Montana Biennial Report for Information Technology for Periods FY2004-FY2005, state agencies spend \$317,000 per year on information technology training, or \$437 per year for each of the 725 information technology employees¹. The biennial report equated the spending to roughly one day of training per employee.

Establishing an appropriate balance between contracted and FTE staff levels would likely lower budget pressures, assuming the current staffing level, made up of state FTE and contractor staff, is adequate to meet state needs and the appropriate balance between state FTE and contractor staff is achieved with cost effectiveness a major factor in determining the balance.

IMPROVE THE QUALITY OF LIFE OF MONTANA CITIZENS

Plan Objectives and Action Items

The goal to improve the quality of life of Montana citizens focuses on improving public safety communications in Montana. The action items for improving public safety communications with implied fiscal implications involve expanding wireless enhanced 9-1-1 emergency telecommunications services to all Montana public safety answering points and identify funding scenarios for interoperable public safety radio and are discussed below.

Improve Public Safety Communications

The plan calls for identifying and exploring additional funding scenarios for interoperable public safety radios. The 2007 biennium budget for the Department of Administration included \$3.5 million of one-time-only general fund moneys as a direct state contribution to the Northern Tier Interoperability Project. The project is a collaborative project between several government entities and funded with a variety of state, federal, and other grant funds. The general fund provides only a portion of the funding

¹ All state expenditures for training (SABHRS account 62809 – Education/training costs) was \$2.96 million for FY 2005 for 12,569 FTE, or \$236 per FTE. Other costs not included are expenditures for travel, lodging, meals, and other incidental costs associated with training.

for the estimated \$13.4 million total project costs. The basic purpose of the project is to improve communications between local law enforcement, state and federal government, and tribal authorities by providing interoperable digital voice and data radio capabilities along the Montana/Canada boarder. It has been estimated that \$150 million from all sources would be needed to develop interoperable radio communications across the entire state. So, the action item of the plan would imply some level of state fiscal impact to continue the developing interoperability across the state. The specific level of state funding cannot be determined from the plan details.

PROTECT INDIVIDUAL PRIVACY AND THE PRIVACY OF INFORMATION CONTAINED WITHIN INFORMATION TECHNOLOGY SYSTEMS

The objectives and action items for the goal to protect individual privacy and the privacy of information contained within information technology systems focus on adopting standards, assessing risk, and developing a security risk mitigation plan. As long as existing state FTE are used to carry out the planned activities, the goal should not impose an appreciable fiscal impact beyond present law funding. The security risk mitigation plan could recommend policy changes that may need statutory changes to implement, but specific policy impacts cannot be identified until the risk mitigation plan is developed.

IMPROVE GOVERNMENT SERVICES

Plan Objectives and Action Items

The goal to improve government services lists three objectives: 1) expand electronic government services; 2) expand geographic information systems; and 3) expand business continuity and disaster recovery planning.

Expanding electronic government services focuses on providing services via the official state Internet website by proving an intuitive common look and feel, improving accessibility for the visually impaired, and increasing the variety of services offered via electronic means. Most electronic government services are provided through a self-funded cooperative effort between the state and private industry, so new services would not likely have direct fiscal impacts to the state. Expanding geographic information systems involves efforts to include geographic information into new state information technology system designs and to make geographic information more readily available to citizens and other state agencies via electronic means. Expanding business continuity and disaster recovery planning involves expanding agency and local government planning to remain operational during natural or man-made disasters and emergencies or recoverable following a disaster or emergency.

Implications of Plan Objectives and Action Items

The action items with an implied fiscal implication for the above objectives are described below.

Geographic Information as a Part of System Design Requirements

Requiring new agency applications and systems to consider geographic information system data as a part of their design would likely increase the complexity and costs of new systems during the development phase and would add costs to maintain the systems and data after development and implementation.

Expand Business Continuity and Disaster Recovery Planning

An action item of the objective to expand business continuity and disaster recovery planning calls for replacing the state's existing data center in Helena with a new state of the art data center and

establishing a redundant data backup and recovery site outside of Helena. Rough estimates to build a new data center and a recovery site remote from Helena total \$25.0 million.

CONCLUSION

The plan update provides strategic direction for state agencies to develop agency information technology strategic plans to administer their information technology resources to meet the agency specific missions but consistently across state government. Because the plan update provides broad strategic guidance with few specific requirements and contains no specific initiatives, budgetary and policy impacts of the plan are speculative. The plan update implies that a policy shift may be investigated and proposed as to how information technology projects are funded. Several of the action items that support plan objectives would imply increased fiscal commitment by the state, such as a new data center and recovery site for state data, electronic applications, and computer equipment and networks. The plan implies that increased financial commitment may be sought to enhance information technology staff training and project management skills. Alternative funding models and process may be developed and proposed that would add stability and predictability to information technology project funding.

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