

# Information Technology Governance in Montana

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Report to the Information Technology  
Management Study Subcommittee  
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## Introduction

House Bill 2 passed by the 56<sup>th</sup> Legislature directs the Legislative Finance Committee (LFC) to study the management of state information technology (IT) resources during the 2001 biennium interim. The study was authorized in response to the legislature's concern of how IT resources of state government are being planned, acquired, and controlled.

The LFC formed a subcommittee, the IT Management Study Subcommittee, to conduct the study. Early in the process, the IT Management Study Subcommittee identified that a review of how IT is governed in Montana and adjustments to the current governance structure would provide the greatest long-term remedy for the legislative concerns that initiated the study.

## Subcommittee Review and Direction

### Governance Defined

The IT Management Study Subcommittee has defined governance as a formal framework for making and administering policy and budget decisions. Information technology governance, then, is the formal framework for making and administering IT-related policy and budget decisions.

### IT Governance in Other States

At its March 8, 2000 meeting, after hearing an "IT Governance Concepts" presentation from the national information technology consulting group, META Group, the IT Management Study Subcommittee identified three governance elements for further research:

- Legislative guiding principles.
- Governing authority, including a chief information officer (CIO), an IT agency or high-level office, and governance boards.
- Legislative oversight.

The IT Management Study Subcommittee directed staff to research how neighboring states have incorporated these elements into their state government's cultures to govern IT. The subcommittee further directed staff to compare how Montana's IT governance structure compares to these states and to use this comparison to formulate recommendations to modify Montana's IT governance structure to address legislative concerns.

Staff researched six neighboring states. In addition to findings related to the above three items, two other governance elements emerged, including:

- Jurisdiction of the governing authority.
- Duties of the governing authority.

Staff examined all five elements when conducting research of neighboring states' IT governance structures.

## **IT Governance in Montana**

The IT Management Study Subcommittee also requested at its March 8, 2000, meeting that the Information Services Division (ISD) of the Department of Administration (DOA) author a white paper describing the advantages and disadvantages of Montana's current IT governance structure. The advantages and disadvantages from the ISD perspective along with observations of trends taken from a survey of other states' approaches to IT governance were used to identify strengths and weaknesses of Montana IT governance statutes. The paper prepared by ISD is included in Appendix A in its entirety. The only change is that the white paper was formatted to match the style of this report.

## **IT Governance – A Legislative Perspective**

The HB 2 language implies how the legislature wants the state agencies' investment in information technology hardware, software, and services governed. The governance of IT should:

- Provide for the setting and adherence of an IT policy direction.
- Enable the legislature to affect IT-related budgets via policy decisions.
- Include a management review and approval process that ensures compliance with policy direction.
- Provide for reviews of the adequacy and appropriateness of policies regarding asset replacement cycles.
- Provide for information technology deployment to minimize costs, reduce duplication, maximize efficiencies, and provide the greatest possible services to the citizens of Montana.

The recommendations contained in Section 4 of this report reflect consideration of the legislative perspective expressed in House Bill 2.

## Research Findings

This section of the report summarizes the research findings from examining other states' IT governance structures and elements. In addition, Montana's current governance structure is examined in light of these governance elements. Finally an evaluation of the strengths and weaknesses of Montana's current IT governance structure is provided.

### Other State Commonalities

Staff researched the IT governance structures of six states (Arizona, North Dakota, South Dakota, Utah, Washington, and Wyoming) with particular emphasis on the five governance elements listed in Section 1 of this report. The following discussion identifies some generalized observations and commonalities that surfaced from the comparison.

#### Legislative Guiding Principles or Intent

Three of the six states include legislative policy statements in statute regarding the development and use of information technology. Principles or policies most frequently cited include infrastructure available to all government levels, public accessibility, security, data sharing and exchange, cost efficiency, accountability, and using IT as the foundation for the state's economic development.

#### Governing Authority

##### Chief Information Officer

All six states have elevated the importance of IT planning and policy functions to the Governor's staff, cabinet, or advisor level. For the most part, the position responsible for statewide governance of IT has been endowed with the title of Chief Information Officer (CIO). However, the title does not seem to be as important as the statutory backing, duties, and placement of the position in state organizational structure.

##### IT Department or Office

In concert with the establishment of a CIO, five of the six states have established either a separate department or an office under the Governor specifically for IT and have named the CIO director of the department or office. The duties assigned to the department or office vary by state depending upon the primary functions attached to the department or office, such as policy and operations.

Three of the states studied placed the CIO in charge of an executive branch agency formed for IT; two states assigned the CIO to the governor's executive staff; and one state made the CIO an advisor to the governor, but placed the position below an agency head. All states under study require these IT authorities to be responsible for developing and implementing IT planning and policy functions. Four states also assigned the IT service delivery, or operations, function to the IT department or office.

### **Governance Board**

Boards created by the states are either a governance board or an advisory board. The boards that have a governance function typically have review and approval authority of IT policies, standards, plans, projects, or budget requests. Advisory boards typically just review and comment on these items.

Four of the states have established a governance board, in statute, to establish state standards and policies for IT. Two states have established a governance board for its educational telecommunications network. Four states have established *two* information technology boards: One is a governance board; the other is an advisory board. One state has only an advisory board reviewing IT policies and activities.

### **Jurisdiction of the Governing Authority**

The jurisdiction of the IT governing authority in the six-state study applies to the executive branch agencies. In some states, the policies and standards applicable to the executive branch are advisory or optional for the legislative and judicial branches of government; in other states, the legislative and judicial branches of government are excluded from statutory provisions requiring statewide policies and review processes.

### **Duties of the Governing Authority**

Within the six states under study, common policy and planning duties assigned to the governing authority (either the CIO/Office/Department and/or a governance board) include:

- Setting and enforcing statewide standards and policies for the acquisition and use of IT resources.
- Developing a statewide IT strategic plan.
- Reviewing and approving agency IT strategic plans for conformance to standards and state policy directions.
- Reviewing agency IT related budget requests for conformance and consistency to approved agency IT strategic plans and providing recommendations and technical support to the budget approving authority.
- Reviewing and approving significant IT projects.
- Communicating the status of statewide IT investments and issues to the governor and the legislature.

As noted previously, four states also place the IT operations function with the governing entity. In addition to the duties just noted, those entities with an operations function commonly are assigned the following duties:

- Providing centralized network services (data, telecommunications, video).
- Providing technical and management assistance and support.
- Providing mainframe services.
- Providing systems development services.
- Providing training.

## **Legislative Oversight**

Legislative oversight of information technology during the interim is achieved primarily in two ways. One way is by legislative representation (nonvoting) on governance boards or legislative participation (voting) on advisory boards. Four of the six states studied have either legislative representation or participation on the IT boards established in their states.

A second way to achieve legislative oversight is through the formation of a standing interim legislative committee charged with IT oversight.

In either case, legislative input is limited to oversight, not control, due to the separation of powers doctrine. This legal concept intends that no person or persons charged with the exercise of power properly belonging to one branch exercise any power properly belonging to any other branch, except as allowed by the state constitution. In the case of legislative oversight of IT, the states studied limit legislative influence to an advisory capacity by making legislators advisory, nonvoting members of a governance board or by making the board that legislators sit on an advisory board.

## **How Montana Compares with Other States**

### **Legislative Guiding Principles or Intent**

Montana does not have guiding principles specifically listed for IT. However, there are instances where IT usage requirements are listed in various statutes that relate to IT, such as:

- Electronic mail to accept public comments (Section 2-3-301, MCA).
- Records management equipment and systems compatible with state government computer and telecommunications systems (Section 2-6-214, MCA).
- Electronic access systems for state agencies to use as a means of conveying information to the citizens of Montana (Section 2-17-322, MCA).
- User-friendly file transfer and message systems for entities regularly interacting with the state to reduce copying and mailing costs for state government (Section 2-17-323, MCA).

- Computer technology to reduce the generation of waste paper (Section 75-10-805, MCA).

## **Governing Authority**

### **Chief Information Officer**

In Montana, the Department of Administration (DOA) and ultimately the department director is most often assigned the authority for governing information technology. Montana does not have a position similar to the CIO as it is used in the other states. The director for the DOA is ultimately responsible for the state IT centralized infrastructure (Section 2-17-501, MCA).

### **IT Department or Office**

DOA is responsible for the operation, maintenance, and management of the central computer center, statewide data network, and state telecommunications systems. Along with these responsibilities the department is also assigned many of the duties for developing standards for the acquisition of IT related hardware and software that interfaces with these physical systems. The assignment of these duties in one department is similar to how the other states are structured to govern IT. The major difference between how Montana is structured to govern IT and how the other states are structured is that the other states have established offices or departments dedicated exclusively to IT.

The Information Services Division (ISD) of DOA is the main organization responsible for statewide IT services in Montana. This function is only one of many in DOA. This function is in addition to the other duties of the department, such as its: statewide accounting; statewide personnel; statewide procurement and printing; general services; architectural engineering; and risk management and tort defense functions (Sections 2-6-214, 2-17-302, and 2-17-501, MCA).

### **Governance Board**

Montana statutes establish an advisory council to represent the interests of state agencies and local government by:

- Reviewing statewide information and data processing policies.
- Recommending applications of new information processing technology in state government.
- Advising DOA on long-term strategic planning for the use of information processing technology in state government (Section 2-17-502, MCA).

The council is designated as an advisory council with the legal authority only to function as a forum for representing the various stakeholder interests and to make non-binding recommendations regarding the use of IT resources in state government.

This advisory status contrasts with governance boards in Arizona, Utah, Washington, and Wyoming that provide some or all of the following governance functions:

- Set policy and standards.

- Review and/or approve IT plans, projects, and budget requests.

### **Jurisdiction of the Governing Authority**

Like the other states, Montana generally limits the jurisdiction of the IT governing authority, in this case DOA, to the executive branch of state government. The term “generally” is used because throughout statute, exceptions to the requirements of the statute are indicated for various organizations. The most frequent recipients of exemptions are the Board of Regents (university system) and the Office of Superintendent of Public Instruction (Sections 2-15-102, 2-15-104, 2-17-306, 2-17-501(2)(a), 3-2-605, and 5-11-405, MCA).

### **Duties of the Governing Authority**

#### Responsibility

The responsibilities of DOA regarding IT are scattered in Montana statute. The department has clear authority to set policy for communication systems (Section 2-17-302, MCA), records management equipment and systems (Section 2-6-214, MCA), electronic access systems (Section 2-17-322, MCA), and IT security (Section 2-17-503, MCA). However, the department’s role is defined as collaborative when it comes to governance of software and data processing (Section 2-17-501, MCA).

#### IT Plans

Montana statutes direct agencies and DOA to develop and maintain IT plans. However, statute specifies only that the agency plans address data and IT resource security issues. Statute does not specifically require that agencies develop plans for agency utilization of IT resources, other than for data and IT resource security issues. Statute does direct that DOA establish a statewide plan for the operation and development of data processing for the executive branch of state government. However, no specific details are listed for what should be included in the plan or how the plan should be used. (Sections 2-15-114 and 2-17-501, MCA).

Statute also directs that the legislative branch establish a computer system plan as a mechanism for establishing the long-term direction for implementation, use, and coordination of information systems in the legislative branch (Section 5-11-401, MCA).

#### Budget Issues

Montana statutes do not contain any requirements specific to the development of budgets related to IT. There are no explicit requirements to provide linkage between IT plans and IT-related budget requests. Currently, the only requirement relative to IT budgets is the language in HB 2 that requires the Office of Budget and Program Planning to submit the Unified Computer Budget Summary to the 2001 legislature.

### **Legislative Oversight**

Oversight of IT has changed since passage of SB 11 (1999 legislature). Before SB 11, the Oversight Committee on State Management Systems provided legislative oversight of IT. SB 11 eliminated this oversight committee. Except for the temporary interim study of the Information Technology Management Study Subcommittee, no interim committee currently has exclusive oversight responsibilities for IT, from a statewide perspective. The

State Administration, Public Retirement Systems, and Veterans' Affairs interim committee has oversight of DOA, but the focus of this oversight is from the agency perspective and not IT from a statewide perspective. A similar situation exists during legislative sessions. There are no standing committees assigned the exclusive responsibility for reviewing legislation for policy implications associated with the use of IT. HB 2 (1999 legislature) addresses the issue of reviewing statewide IT budgets (the Unified Computer Budget Summary) by a committee made up of members of the House Committee on Appropriations and the Senate Finance and Claims Committee. However, the oversight requirements in HB 2 are only in effect for the 2001 legislature.

## Montana Strengths and Weaknesses

The strengths and weakness of the current IT governance structure are listed below. Staff identified these strengths and weakness during the review of the existing IT governance statutes as they compare to the trends observed in the survey of other states. Also factored into the evaluation were advantages and disadvantages provided by ISD, at the direction of the subcommittee. Appendix A contains a full listing of the advantages and disadvantages of the current IT governance structure from the ISD perspective.

### Strengths

The current IT governance structure in Montana has the following strengths:

- A diverse group of state government IT users are involved in making recommendations for data processing hardware and software standards.
- The advisory capacity of the information technology advisory council (ITAC) allows participation in a statewide forum by all branches of state government without raising conflicts with the separation of powers doctrine.
- Agencies have autonomy to make program level IT decisions without gaining acceptance by a board or other authority, except for initiatives reviewed during the budgeting process and except for program decisions of ISD.
- Centralized data processing and network operations are organized in one department with other centralized services provided statewide.

### Weaknesses

The current IT governance structure in Montana has the following weaknesses:

- The advisory capacity of ITAC does not mandate agency conformance to recommendations made by ITAC.
- The voluntary participation in the enterprise approach to the provision of centralized services produces inefficiencies when duplicate systems are developed by agencies.
- ITAC-recommended policies and standards do not apply to all branches of government and for some IT areas exclude portions of the executive branch.

- Counties are represented by only one ITAC member.
- An IT strategic plan is only required at statewide level – no agency plans are required (except for data and IT resource security).
- There is no statewide review and approval process for agency IT initiatives that would prevent unjustified duplications, except for reviews and approvals in the budgeting process.
- IT strategic planning is not directly tied to the budgeting process.
- Statutes only specifically require that the strategic plan address IT security issues and only generically identify the requirement to develop a statewide plan for the operation and development of data processing for state government.
- The growth in the use of IT in state government generates unique management challenges that require significantly more time to adequately administer.
- The growing reliance on IT in the state's economy continues to require a more specialized set of management tools and competencies than are required for an organization with historical statewide administration functions.

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## Governance Options

### Legislative Guiding Principles

The Montana legislature has not enacted guiding principles specifying its vision for the investment and use of information technology resources by the state. Establishing guiding principles in statute would enable the legislature to specify the direction and general guidelines for how IT is to be used and managed in state government.

Examples of guiding principles or legislative intent from other states are:

- The legislature finds that universal citizen access to information and services is a state public policy goal. This access should be facilitated through a seamless electronic network with open, not proprietary, standards that is:
  - Vertically integrated between the local, state, and federal government entities.
  - Horizontally integrated between all state government entities.
- It is the policy goal of this state that technology should be used to enhance the quality of life for all [citizens] by providing world-class education and life-long learning opportunities, creating quality jobs and a favorable business climate, improving government, and fostering self-reliance, while protecting community values. These public policy goals can be furthered by:
  - Providing information and services by government entities in an electronic format.
  - Coordinating the development, interconnection, and maintenance of government information technology systems and applications between government entities.
  - Initiating state policies and practices that encourage data exchange and systems interconnectivity among private enterprise, unless otherwise prohibited by statute.
  - Using the state's collective bargaining power, rights-of-way, taxing authority, and assets as incentives for the private sector to develop and provide information technology services to citizens.
  - Developing appropriate policies to protect security, privacy, and acceptable use of network services and information.
- It is the intent of the legislature that:
  - Information is shared and administered in a coordinated manner, except when prevented by agency responsibilities for security, privacy, or confidentiality.

- Resources are used in the most efficient manner and services are shared when cost-effective.
- To the greatest extent possible, major information technology projects be implemented on an incremental basis.
- The state maximizes opportunities to exchange and share data and information by moving toward implementation of open system architecture based upon interface standards providing for application and data portability and interoperability.
- Plans, proposals, and acquisitions for information services be reviewed from a financial and management perspective as part of the budget process.
- State government adopt policies and procedures that maximize the use of existing video telecommunications resources, coordinate and develop video telecommunications in a manner that is cost-effective and encourages shared use, and ensure the appropriate use of video telecommunications to fulfill identified needs.

## Governing Authority

### Organization Options and Fiscal Impact

Options the IT Management Study Subcommittee may wish to consider regarding where the governing authority should be placed within the state organizational structure are listed below with a comparison following in Table 1. The subcommittee could combine options, such as establishing an IT office under the Governor and a governance board. The key to effective implementation of combining options would be to define clearly the duties and jurisdiction of the governing authority.

#### **Option1: Status quo**

One option is to keep the statutory structure as it currently exists. This option assumes that the current statutes related to the administration of IT resources can and would work if renewed efforts were undertaken to more stringently enforce and adhere to them.

#### **Option 2: Status quo (with statute changes)**

A second option is to keep the IT authority as it is within DOA, but strengthen the statutes associated with the department's IT-related duties by adding items included in the Duties of the Governing Authority options.

#### **Option 3: IT department**

A third option is to establish a new department specifically for information technology. The IT operations and policy functions of ISD that are currently in DOA would be moved to this new department. The new department would have the authority to control state government's investment in IT resources.

**Table 1. IT Governing Authority Options**

Options	Pros	Cons
Option 1: Status quo	No fiscal impact Highest level of agency flexibility (quicker to adapt to a changing environment)	Legislature's concerns continue Opens the door for duplicating efforts and systems Continue to have a division attempting to exercise authority over agencies
Option 2: Status quo (with statute changes)	Minimal fiscal impact	Continue to have a division attempting to exercise authority over agencies
Option 3: IT department	Close interaction between operating and policy functions Easy to stay abreast of current technology issues Clear line of authority for all centralized IT issues	Potential for operating issues to distract the policy functions Central IT operations is only part of the statewide IT users base Adds a department – perception of growing government
Option 4: IT Office under the Governor	Removes the distraction of the operating functions Minimizes the bias of the central IT operating functions Organizationally placed highest in the food chain Clear line of authority for all IT policy issues Broad perspective of Montana IT issues	Policy function is removed from the day-to-day operations of the central IT functions and issues Harder and possibly more costly to stay abreast of current technology issues than if the policy and operating functions were closely associated Confusion between policy and central IT operating authority
Option 5: Governance board	Decisions would be made by a broad base of users – high potential for buy-in by users	Conflicts with separation of powers doctrine if legislators are members of the board Inherent inefficiencies with decisions made by a committee Could be slow to respond to a rapidly changing environment

**Option 4: IT office under the Governor**

A fourth option is to establish an IT office under the Governor, similar to the Office of Budget and Program Planning. The IT policy functions that currently reside in ISD would be moved to this office. The operations functions would stay with DOA. The new office would assume much of the governing authority currently granted to DOA.

**Option 5: Governance board**

A fifth option is to create, in statute, an IT governance board with authority to control state government's investment in IT resources.

**Fiscal Impacts of Governance Structure Options**

Table 2 summarizes the fiscal impacts of the options for changing the structure of IT governance in Montana. Assumptions and more details on the estimates are included in Appendix B.

**Table 2. Governing Authority Options Incremental Fiscal Impacts**

Option	Annual Incremental Costs			
	New FTE	General Fund	Proprietary Funds	Total Funds
Option 1: Status quo	0.00	\$0	\$0	\$0
Option 2: Status Quo (with statute changes)	0.00	0	0	0
Option 3: IT Department	2.50	0	103,500	103,500
Option 4: IT Office Under the Governor	4.00	430,500	-204,000	226,500
Option 5: Governance Board	0.00	30,500	0	30,500

## **Jurisdiction of the Governing Authority**

Three options are presented below for addressing the issue of jurisdiction of the governing authority as it relates to IT governance.

### **Option 1: Status Quo**

One option for addressing the issue of jurisdiction is to retain the exclusions from IT related provisions that currently exist in statute. If an entity is currently excluded from the requirements of an IT requirement or duty, the entity would continue to receive the exception for any expanded requirements that relate to existing requirements. For example, if an entity is excluded from the requirement to participate in IT planning functions, the entity would also be exempt from any expanded IT planning functions.

### **Option 2: Impose Information Sharing Requirements**

A second option for addressing the issue of jurisdiction is to provide authority to the governing entity to require information from entities that are currently exempted from IT governance statutes. Under this option entities currently exempt from an IT governance requirement would continue to be exempt from requirements imposed by the governing authority, except they would be required to provide IT-related information requested by the governing authority.

### **Option 3: Eliminate Exceptions from IT Governance Statutes**

A third option for addressing the issue of IT governance jurisdiction is to eliminate exemptions that entities currently enjoy in statute from certain IT governance requirements. This option would require careful consideration when eliminating each exemption so the separation of power doctrine is not violated.

## **Duties of the Governing Authority**

Options for changing the scope of authority and duties of the governing entity are presented below. Pros and cons for each option are included in Table 3 following the narrative.

### **Option 1: Clarify and Strengthen Governing Authority**

The responsibilities and accountability of the IT governing authority to govern the development and use of state IT resources was “loud and clear” in statute in the

neighboring states studied for the comparison. For example, governing authorities have clear statutory authority to develop and enforce policies, standards, and other guidelines applicable to IT resources in executive branch agencies. As reported earlier, the responsibilities and authority of DOA regarding IT are scattered in Montana statute and are unevenly granted (i.e. a “leader” in the telecommunications and electronic access systems areas, for example; and a “collaborator” in the data processing area). The disorganization of Montana’s IT statutes may have occurred due to governing statutes being enacted as the technology has evolved. The uneven granting of IT governing authority to DOA may have occurred for the same reason, or it may have been intentional. Either way, the result is a governing authority with clouded authority.

#### Option 1a: Consolidate IT Governing Authority Statutes

One option is to consolidate all relevant IT governing authority statutes into one chapter or section of Montana statute. This would enhance the general understanding of IT governance in the state. At a minimum, the following statutes would be consolidated:

- Public Records – Department of Administration – powers and duties (Section 2-6-214, MCA).
- Supervision of mailing, duplicating, copying, and telephone facilities (Section 2-17-301, MCA).
- Communication systems (Section 2-17-302, MCA).
- Communication systems – Responsibilities (Section 2-17-323, MCA).
- Responsibilities of director of Department of Administration for data processing (Section 2-17-501, MCA).
- Security responsibilities of Department of Administration (Section 2-17-503, MCA).

#### Option 1b: Strengthen Governing Authority

Another option is to strengthen the statutes defining the responsibilities and accountability of the governing authority for the data processing area. One way would be to eliminate the references to “in collaboration with other state agencies” and “in cooperation with state agencies” as used in the duties of DOA (Sections 2-17-323 and 2-17-501, MCA).

Another option would be to require the governing authority to review all existing and proposed electronic management information systems of state agencies to verify that they are not duplicating the functions provided by a centralized system. This option would also provide authority to disapprove new systems that duplicate existing functions if adequate justification is not provided for developing a duplicate system. It could also include authority to recommend to the Governor and the legislature to eliminate existing systems the function of which could be provided by a centralized system.

#### **Option 2: Expand and Define Agency and Statewide IT Planning Requirements in Statute**

Montana statute currently directs executive branch agencies to develop and maintain IT plans. Statute specifies only that the agency plans address IT security issues. This kind of plan has limited usefulness for agency and statewide planning.

Statutes in other states include specific requirements for agency IT plans that are useful for statewide planning and legislative policy decisions, such as:

- IT goals, objectives, and activities of the agency for the current biennium.
- A list of IT assets owned, leased or employed by the agency.
- Interim updates to its plan if major IT changes occur which affect its plan.
- Life cycle analysis of IT projects.

Montana statute also directs that DOA establish a statewide plan for the operation and development of data processing for the executive branch of state government. However, no specific details are listed for what should be included in the plan or how the plan should be used. Statutes in other states include specific requirements for statewide strategic IT plans, such as:

- Establish a statewide mission, goals, and objectives for the use of information technology.
- The plan should be developed in accordance with the standards and policies established by the governing board, and are amended as necessary.
- Include a disaster recovery plan.
- Include a list of approved agency projects by priority category.

### **Option 3: Tie IT Budgets to IT Strategic Plans**

Montana statutes do not contain any requirements specific to the development of budgets related to IT. There are no explicit requirements to provide linkage between IT plans and IT-related budget requests. Other states studied *do* have statutory provisions linking IT plans and IT-related budget requests. Statutory provision examples are presented below:

- Require the agency budget request and the governor's budget recommendation to include supporting information describing in detail how the IT plan relates to the budget request and recommendation.
- Require any budget adjustment by the budget office to include a corresponding change to the IT plan.
- As part of a state agency's budget request for IT funding, the agency shall provide to the governor and the [legislative] IT committee a report describing:
  - The agency's need for appropriations for IT.
  - How the agency's development of IT coordinates with other state or local government entities.
  - Any performance measures used by the agency for implementing IT goals.
  - Any efforts to develop public/private partnerships to accomplish IT goals.

#### Option 4: Require Periodic Reporting by the Governing Authority to the Legislature

Montana statutes do not require any periodic reporting by the IT governing authority to the legislature. Again, other states included in the comparison have statutory provisions requiring reports from the IT governing authority to the legislature, including:

- Periodic updates or reviews of the statewide IT plan.
- A summary of the state’s current and projected uses of information technology and includes a description of major changes in state policy.
- Performance audits of state IT management, planning, and the use of IT resources.
- A summary of the state’s investment in IT resources.

**Table 3. Duties of the Governing Authority – Potential Statutory Changes**

Options	Pros	Cons
Strengthen authority	Clear line of authority Could lead to more consistent use of IT resources Could reduce duplication	Agencies' flexibility would be reduced
Expand and define requirements for IT strategic plans	Could lead to a reduction of duplications Legislative input into plan content requirements Reporting mechanism to keep legislature abreast of state's IT investment	Increased workload for agencies and ISD
Tie IT budgets to IT strategic plans	Could add consistency to IT-related budget request Could be a mechanism to allow the legislature to impact budgets by making policy decisions	Could limit the flexibility to respond to a rapidly changing environment
Specify periodic reporting and report contents by the IT governing body to the appropriate legislative membership	Could provide a mechanism for providing legislative oversight during the interim A mechanism for communicating to the legislature the policy and plans for investing in IT resources	Could become a forum for lobbying for additional resources if critical evaluation is not undertaken

## Legislative Oversight

Table 4 provides a listing of the significant pros and cons of three options for providing legislative oversight of IT during the interim. The key to effective oversight of IT would be to develop a core group of legislators knowledgeable of IT issues who would serve on both interim and session committees.

#### Option 1: Add Legislators to the Membership of ITAC

One option for providing legislative oversight of IT would be to add legislative members to the Information Technology Advisory Council (ITAC). This option would require that the

enabling statute for the ITAC (Section 2-17-502, MCA) be changed to establish the criteria for selecting and paying legislators for participation on ITAC.

**Option 2: IT Oversight Assigned to an Existing Committee**

A second option for providing legislative oversight of IT would be to assign the responsibility for statewide oversight of IT to an existing interim committee formed under the statutes that came out of SB 11 (Sections 5-5-202, 5-5-215, 5-5-223 through 5-5-228, 5-11-105, and 5-12-205, MCA).

**Option 3: IT Oversight Assigned to a New Committee**

A third option for providing legislative oversight of IT would be to assign the responsibility for statewide oversight of IT to a new interim committee established exclusively for this purpose.

**Table 4. Interim Legislative Oversight of IT**

Options	Pros	Cons
Option 1: Expanding the membership of an IT advisory counsel to include legislators	Legislators would have input into executive IT policies and standards  Mechanism for communicating directly between legislators and IT advisory council the reasoning behind IT standard and investment decisions	Fiscal impact for legislator per diem  Contrary to SB 11 (1999 legislature) – legislative interim committees – increase legislator interim workload  Potential for lobby type pressure on legislative members
Option 2: Assigning oversight of IT to an existing committee	Stays within intentions of SB 11 (1999 legislature)  Develop IT specific knowledge base of IT investments and issues  Could provide continuity  No or little fiscal impact	Conflicts from committee assignment (fiscal verses non-fiscal issues and committees)  Adds workload to committee  Knowledge gained is in addition to other committee issues
Option 3: Establishing a new committee exclusively for IT	Develop IT specific knowledge base of IT investments and issues	Contrary to SB 11 of 1999 legislative session – legislative interim committees  Adds one more committee in the interim and may not provide continuity between interim and session committee membership to share knowledge of issues  Fiscal impact

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## Recommendations

Staff evaluated Montana's current governance structure in the context of the five governance elements. The results of this evaluation and a comparison of Montana's governance structure against the structures of six neighboring states have yielded the following recommendations for modifying how Montana governs IT in state government. The recommendations include three major governance components and statutory changes:

- 1) The legislature should enact "legislative guiding principles" statements to steer the development of IT resources in Montana state government, including:
  - Citizen access
  - Economic development
  - Individual privacy
  - Security
  - Efficiency
  - Statewide standards
  - Long-range planning
  - Accountability
- 2) The governance "authority" should include:
  - An Office of Information Technology in the Governor's Office directed by a Chief Information Officer, appointed by the governor and confirmed by the senate.
    - Primary duties of the CIO/Office should include:
      - Develop and maintain a statewide strategic IT plan.
      - Review and approve agency IT plans.
      - Establish statewide policies and standards for IT use and procurement, information and data sharing, and security.
      - Assist the Office of Budget and Program Planning in evaluating agency IT budget requests.
      - Present issues and status reports to the legislative oversight committee on a regular basis.
    - The jurisdiction of the CIO/Office should extend to the executive branch (as defined in 2-15-102, MCA). By statute, the judicial and legislative branches of government should be required to participate in the IT planning and reporting process and encouraged to adopt the statewide standards established for the executive branch.

- A broad-based advisory board that includes representatives of all three branches of state government, federal and local government, and private businesses.
    - Primary duties of the advisory board should include:
      - Review and advise the CIO/Office on proposed IT standards and policies.
      - Review and advise the CIO/Office on the statewide strategic IT plan.
    - The advisory board should advise primarily the executive branch (including elected officials and the board of regents). However, statute should authorize the advisory board to require, at its discretion, information and reports from any entity using or having access to the state network.
- 3) The legislature should provide oversight of state IT by:
- Assigning the interim oversight duties to an existing interim standing committee.
  - Requiring the CIO/Office to report issues and status reports to the interim oversight committee on a regular basis.
  - Assigning the session oversight duties to either a select committee or a standing committee with expanded jurisdiction and duties.
- 4) The legislature should amend Montana statutes to authorize or implement the governance recommendations and to consolidate IT management statutes.

A visual representation of the organizational structure and relationships resulting from this recommendation is shown in Appendix D. The remainder of this section of the report discusses these recommendations in more detail.

## Legislative Guiding Principles

Legislative guiding principles for information technology articulate the vision of the legislature regarding the development and use of information technology in the state. Guiding principles should be direct and clearly stated. To clearly communicate the intentions of the legislature, legislative guiding principles should be included in statute.

The following statements are minimum recommendations for the legislature to adopt as guiding principles:

- It is the policy of the state that technology be used to improve the quality of life of Montana's citizens by providing education opportunities, creating quality jobs and a favorable business climate, improving government, and protecting individual privacy.
- It is the policy of the state that the development of information technology resources in the state be conducted in an organized, deliberative, and cost-effective manner. The following concepts shall be used:
  - There are statewide IT policies, standards, procedures, and guidelines applicable to all state agencies and other entities using the state network.

- Common data shall be entered once and shared among all state agencies.
- In order to minimize unwarranted duplications, similar data processing systems and data management applications shall be implemented and managed in a coordinated manner.
- Planning and development of IT resources must be in conjunction with budget development and approval.
- It is the policy of the state that the information technology governing authority shall be accountable to the governor, the legislature, and the citizens of Montana.

## **Governance Authority**

### **CIO/Office of Information Technology**

#### **Organization and Staffing**

An Office of Information Technology should be created in the Governor's office (Option 4). A director appointed by the Governor and confirmed by the Senate, as in Section 2-15-111, MCA, should administer the office and carry the title and function as the Chief Information Office (CIO) for the state. The CIO should be ultimately accountable for all responsibilities and duties of the office.

The office, of approximately 8.00 FTE, should be created by moving four positions of the IT policy and planning staff from DOA to the new office. The CIO, an administrative support position, and two new IT analyst positions would be newly created positions and not part of the transfer of existing staff.

The office should develop IT policies and standards and should perform statewide IT strategic planning to guide the use of IT in state government. Statewide policies and strategic plans should be developed to use IT resources as intended by the legislature according to the legislative guiding principles. The office should also work closely with other agencies and policy advisors to enable the use of IT as a leveraging tool for economic development. The office should also promote and coordinate the development of system and application development projects that provide a common function for multiple agencies. More specific recommendations for the scope of authority and duties of the CIO and the office are included below.

#### **Duties of the CIO/Office of Information Technology**

##### **Develop and Maintain a Statewide Strategic IT Plan**

The Office of Information Technology should be responsible for developing the strategic direction for the state in the area of information technology. The office should develop and maintain the master IT strategic plan for the state. Agencies should be required to develop strategic plans that follow the policies and principles included in the state plan to control the development and use of IT in the business functions of the agency. The office should review and approve the agency IT plans for conformance to the state IT strategic plan.

## Review and Approve Agency IT Plan Requirements

Statute should include the minimum information required for agency IT plans. The following agency IT plan requirements are recommended:

- 1) Agency information technology plans shall reflect:
  - Links among an agency's objectives, business plan, and technology.
  - Analysis of the effect of an agency's proposed new technology investments on its existing infrastructure and business functions.
  - Analysis of the effect of proposed information technology investments on the state's information technology infrastructure.
- 2) Agency plans shall include, but not be limited to, the following:
  - A baseline assessment of the agency's information technology resources and capabilities that will serve as the benchmark for subsequent planning and performance measures.
  - A statement of the agency's mission, goals, and objectives for information technology, including goals and objectives for achieving electronic access to agency records, information, and services.
  - An explanation of how the agency's mission, goals, and objectives for information technology support and conform to the state strategic information technology plan.
  - Projects and resources required to meet the objectives of the plan.
  - Lifecycle cost analysis for new IT projects and resources to include initial investment, maintenance, and replacement costs
  - Where feasible, estimated schedules and funding required to implement identified projects.

## Establish Statewide Policies and Standards

The Office of Information Technology should assume the responsibilities and duties for setting policies and standards for all areas of IT, including equipment and software acquisition, information and data sharing, file management systems, and information and data security. The authority of the CIO and the office to establish statewide policies and standards should be clearly identified in statute.

## Evaluate IT Budget Requests

Approved agency IT strategic plans should be the basis for executive approval of agency IT-related budget requests. If an IT-related budget request is not incorporated in an approved agency IT strategic plan either the plan should be modified and approved or the budget request should be denied.

## Coordination Function

The Office of Information Technology should promote the development of shared systems for providing similar functions for multiple agencies. The office should coordinate the sharing of information regarding the existence of systems that satisfy emerging needs of agencies. In its capacity the office shall review justifications for new systems or applications and disapprove agency IT plans containing projects for developing new systems or applications the needs for which can be met by an existing system or application.

## Report to Interim Legislative Oversight Committee

The CIO should be required to provide and present regular reports on the state's IT to the interim legislative oversight committee. The information provided to the committee should include at a minimum:

- Updates of the statewide IT plan to include:
  - A summary of the state's current and projected use of IT.
  - A summary of the state's investment in IT resources.
  - A description of emerging technologies the state is pursuing for use;
- Descriptions of new standards and policies since the last report, including an estimate of the fiscal impacts of the policy changes, using life cycle costing principles.
- Updates of performance audits of state IT management, planning, and use of IT resources since the last report.
- IT issues and recommendation related to the impacts of state IT policies on the state's economy.

## Jurisdiction of the CIO/Office of Information Technology

The jurisdiction of the IT governance authority should remain as it currently exists, executive branch on executive branch. However, statute should be amended to add the requirement for information sharing by the judicial and legislative branches and all other entities currently exempt from IT governance statutes. This recommendation would add to statute the requirement that all entities will provide all IT-related information, except for information that would compromise security or confidentiality (Option 2).

## Information Technology Board

Current statutes authorizing the ITAC should be rewritten to rename the board and to expand its membership and responsibilities as described in the following paragraphs.

### Membership and appointments

The IT board should be broad-based with representatives of the three branches of state government, including the university system; local and federal government; and private industry. The board should meet at least quarterly. The Office of Information Technology

should provide staff support for the board. Table 5 summarizes the recommended membership and appointing authority.

**Table 5. Information Technology Board**

<b>Number</b>	<b>Representing</b>	<b>Appointed by</b>
1	Chief Information Officer (Chair)	Statute
1	House of Representatives	Speaker of the House
1	Senate	Senate President
1	Legislative Branch	Legislative Branch Computer System Planning Council
1	Judicial Branch	Supreme Court
1	University System	Board of Regents
1	K-12 Public Education	Superintendent of Public Instruction
6	State Agencies, one must be from ISD	Governor
2	Local Government	Governor
1	Federal Government	Governor
1	Private Sector	Governor
17	Total Membership	

**Duties of the IT Board**

The IT board should serve both an advisory and an oversight role. As noted earlier, the CIO should have the ultimate responsibility to establish statewide policies and standards and to approve or disapprove agency IT plans. However, the CIO and the IT board should work together closely while carrying out their respective duties. At a minimum, the following duties and responsibilities should be statutorily assigned to the IT board:

- Review and advise the CIO on statewide IT standards and policies.
- Review and advise the CIO on the statewide IT strategic plan.
- Study Montana’s present and future IT needs and advise the CIO on the use of emerging technology in state government.
- Review and advise the CIO on major IT budget requests.
- Review the implementation of major IT projects and advise the respective governing authority of any issues of concern to the IT board relating to the project implementation.

**Jurisdiction of the IT Board**

The IT board should advise and oversee primarily the executive branch (including elected officials and the board of regents). However, statute should authorize the advisory board to require, at its discretion, information and reports from any entity using or having access to the state network.

## Legislative Oversight

### Interim Oversight Committee Assignment

The legislature should provide oversight of state IT by assigning the interim oversight of statewide IT to an existing interim standing committee (Option 2). Because of the statewide nature and significant budget implications of IT, staff recommends that the oversight of IT be assigned to the Legislative Finance Committee (Section 5-12-205, MCA).

### Jurisdiction of the Interim Oversight Committee

Legislative Finance Committee oversight of IT should primarily be directed through the CIO, but should also encompass all statewide issues related to IT. The Legislative Finance Committee should not function as a problem resolution vehicle to resolve disputes that may arise from decisions made by the CIO. However, the Legislative Finance Committee should also hear concerns from all state interests in the area of IT that could be addressed by future legislative action or establishment of legislative policy through legislation.

### Duties of the Interim Oversight Committee

Listed in the recommended duties of the CIO is the requirement to provide and present regular status and information reports to the committee. While reviewing the reports provided by the CIO on the status of the state's IT investment and IT policies the committee should:

- Evaluate any IT policy changes paying particular attention to the fiscal implications.
- Determine committee concurrence or concerns regarding the IT policy changes.
- Provide a written response to the CIO of the committee's position on the policy changes. The response should identify any concerns the committee has with the policy changes.

In addition to reviewing, evaluating, and commenting on reports presented by the CIO, the Legislative Finance Committee should also hear other IT-related issues that would lend themselves to future legislative action. In this light, the committee should prepare bills and resolutions that, in its opinion, the welfare of the state may require for presentation to the next regular session of the legislature.

### Legislative Session Committee Assignment

The legislature should provide oversight of state IT during legislative sessions by assigning oversight responsibilities to either a temporary select committee or a permanent standing committee with expanded jurisdiction and duties. The IT Management Study Subcommittee should debate these options and arrive at a recommendation it deems most suitable for the legislative process and body. Staff proposes:

- A select committee be formed for the purpose of reviewing all substantive and appropriations bills related to IT and making a recommendation to respective standing

and appropriations committees. The committee would be comprised of members from both chambers and both parties.

- All IT-related bills (substantive and appropriations) be referred to one standing committee in each chamber, such as State Administration. The committees' jurisdiction could be expanded to include all statewide IT issues. The committees, renamed State Administration and Technology, would review IT appropriations bills and make a recommendation to respective appropriations committee in each chamber.

## Statutory Changes

### Implement Governance Recommendations

The legislature should enact statutes to authorize or implement the governance structure recommendations contained in this report. At a minimum this would include new statutory provisions for:

- Establishing legislative guiding principles.
- Defining information technology.
- Authorizing and creating the CIO and the Office of Information Technology.
- Authorizing and creating the IT Board.
- Assigning the legislative IT oversight function to the Legislative Finance Committee.
- Establishing agency and statewide IT planning requirements
- Establishing IT budget request requirements
- Establishing CIO reporting requirements to the legislative oversight committee

### Consolidate Existing IT Management Statutes

In addition to enacting new statutes, the legislature should consolidate existing IT-related statutes that are scattered throughout the Montana Codes Annotated. The sections of law recommended, at a minimum, for consolidation are listed on page 14 of this report.

Consolidation of existing IT-related statutes should consider the IT governance changes approved by the legislature. The overall goal of this recommendation is to have an "Information Technology" section in law that contains legislative guiding principles; authorizes the CIO, Office of Information Technology, and IT Board; establishes the duties and jurisdiction of the governing entity; and establishes ongoing legislative oversight.

## Rationale for Staff Recommendations

This report contains several recommendations that result in a major change from the status quo of IT governance in Montana. Staff recommends this change because, in our

opinion, the status quo inadequately addresses the concerns expressed by the legislature regarding information technology management in the state of Montana. In particular, the legislature has observed there is a need for a framework to make and enforce statewide IT policies. Also high on the legislature's list is for there to be a connection between IT policies, long-term IT planning, and agency IT budget requests. The IT governance status quo in Montana does not examine the relationship of IT policies, planning, and budget requests. Furthermore, the ability of the Department of Administration to make and enforce statewide IT policies is hampered by outdated and contradictory state statutes.

## **Guiding Principles**

Staff recommends the legislature enact guiding principles for two reasons. First, enacting the guiding principles into law permanently records the public policy choices made by the legislature regarding the development and use of information technology in Montana. Enacting guiding principles is the best opportunity for the legislature to articulate its vision of how IT should be used and managed in the state.

Second, the guiding principles do just that --- they provide guidelines for the executive branch to use when managing the development and use of information technology in Montana. When the inevitable dispute arises over strategy or policies, the legislative guiding principles should help clarify the resolution.

## **Governing Authority**

In Section 3, Governance Options, staff presented five governing authority options including: status quo, status quo with statute changes, a CIO directing an IT department, a CIO directing an IT office under the Governor, and an IT governance board. Staff discarded the status quo options for the reasons noted in the first paragraph of this Rationale section. Placing IT governance into the hands of an IT governance board was eliminated because of the inherent decision-making inefficiencies and diffused accountability associated with committees. Of the remaining two options, a CIO directing an IT department with both policy and operations functions or a CIO directing an IT office under the Governor with policy functions only, the latter was recommended over the former for the following reasons:

- We believe that, in Montana, placement of the CIO/Office in the Governor's Office gives more validity to the statewide nature of IT policy development than placing it in a department.
- The CIO/Office organizational structure will best allow the development of a statewide vision and long-term strategy for using IT in Montana as it allows a policy and planning focus that is not distracted by day-to-day operations issues.
- Policy decisions should direct operations, not the other way around. Separating the functions will allow policy development to occur without undue influence by operations. It should be noted that the CIO/Office should work with all IT operations units, including DOA/ISD and other agencies with a distributed network (i.e., outside Helena), when developing and evaluating statewide policy options. Ultimately, however, the CIO/Office should determine the policies and guidelines that the operating units use to deliver IT services.
- The CIO/Office under the governor will allow for a closer relationship with the Office of Budget and Program Planning than the CIO/Department model.

- The CIO/Office organizational structure will likely result in a CIO that has a closer relationship with the governor than the CIO/Department model, and will be in a better position to articulate the governor's information technology vision for the state.

## **Legislative Oversight**

The rationale for establishing legislative oversight of information technology includes the legislature's expressed desire to become more aware of how information technology is being used in state government, the management policies directing that development, and the budgetary implications of executive branch policy decisions. As expressed earlier in this section of the report, the rationale for recommending the oversight function be assigned to the Legislative Finance Committee is because of the statewide nature and significant budget implications of information technology in state government.



Section

**5**

# Appendices

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# Appendix A

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## ISD Evaluation of Current IT Governance Model

### Strengths and Weaknesses of Current IT Governance Model

The current governance model is a division level organization for enterprise IT activities (ISD), with a statutorily established advisory council (ITAC) comprised primarily of cabinet level members.

#### Strengths

##### **Centralized Location of Internal Service Organizations**

ISD is currently located within the Department of Administration (DofA). With a few exceptions (motor pool, etc.), the DofA contains all of the internal service organizations (state personnel, state procurement, state-wide accounting, etc.). To the extent these functions share common management requirements, this structure provides the opportunity to bring a consistent management perspective to the delivery of these services.

##### **Balance of Agency Autonomy and Enterprise Standards**

The current structure strikes a balance between the autonomy agencies desire in deploying IT in support of agency programs and the advantages of enterprise-wide infrastructure managed by a central organization (ISD). Agencies currently do not share decision making authority on program level IT initiatives with a central IT agency, board or authority other than the budget development process (Office of Budget & Program Planning and the legislative process). ISD has legislative authority for enterprise issues that can impact agency initiatives but conflicts normally are resolved. Too much agency autonomy or too much central control would shift the “balance of power” too far in either direction.

##### **Conflicts Regarding Authority**

The combination of the current structure of a division level IT organization (ISD) and the absence of a cabinet level Chief Information Officer (CIO) reduces potential conflicts regarding authority to make decisions related to IT projects to be deployed by agencies.

### **Constitutional Prohibitions Avoided**

An oversight council with advisory status eliminates the potential for conflicts with the constitutional requirement for clear lines of departmental authority and responsibility.

### **Decision Making Efficiency**

Currently, enterprise IT decisions are made by ISD under general guidance from ITAC, an executive council with advisory status. The creation of a board, with broader membership that would likely include legislators and private sector representatives, could politicize and lengthen the decision making process.

### **Conflict of Interest of a Commission**

ITAC's current membership is comprised entirely of state and local officials whose responsibilities are directly related to the role of the council and the services provided by ISD. A board, with broader membership, would have potential conflicts of interest for individual members such as private sector members who could be a potential provider of goods or services to the State.

### **Linking of Policy and Operational Responsibilities**

ISD is responsible for developing and presenting policy issues to ITAC for their consideration. Some issues are first identified by the technical community as a result of their technical expertise. Other issues are recommended for consideration by senior agency program managers based on their knowledge of agency program requirements. In either case, issues developed by ISD or the agencies and acted on by ITAC normally require some kind of deployment effort by the technical staff. ISD's dual responsibilities of developing policy issues for consideration by ITAC and deploying the enterprise technology necessary for implementing these policy decisions helps ensure that technology will be deployed as desired by policy makers.

## **Weaknesses**

### **Unique Challenges of IT Issues**

The location of ISD within the DofA enables internal service agencies to be managed with a common perspective (a strength), but also ignores the unique characteristics of an IT organization which often require different different management strategies. These characteristics and/or problems include a very fast pace of "technology turnover", severe recruiting and retention problems, a high degree of technical complexity, rapidly growing dependence on the IT function in accomplishing user agency program needs, and greater resources dedicated to the IT function (FTEs, budget dollars, etc.) as agencies increasingly rely on IT to carry out agency program responsibilities.

### **Enterprise Focus Relies on Cooperation**

There are many advantages to taking an "enterprise focus" in managing an organization's IT infrastructure (economies of scale in state-wide contracts, reduced technical staff support requirements, reduce hardware and software resources, a state-wide pool of trained technical staff, policies and standards that reduce compatibility issues, etc.). The enterprise focus the State currently enjoys is based primarily on the cooperative attitude of

most agencies in capitalizing on these enterprise opportunities. It is difficult to get agencies that don't want to cooperate to participate in the governance processes of ITMC and ITAC and there is no guarantee that the cooperative attitude now prevalent in these groups will continue in the future.

### **Disconnect from Agency Budgeting Processes**

With the exception of the unified computer budget summary requirement included in HB0002 of the last legislature for the 2003 biennium, there is no state-wide coordination of agency IT budget initiatives. Agencies can and often do submit budget proposals without any coordination with similar initiatives in other agencies or ISD (which has responsibilities for the IT infrastructure).

### **Less Than Cabinet Level Status**

The current division status makes it difficult to engage agency heads on major IT issues, which are becoming increasingly important to government operations. A great many of the issues associated with managing the IT enterprise now get addressed at the cabinet level, requiring the director of the DofA to become personally involved. The significance of IT issues has grown (agency impact, budgetary requirements, etc.) and the potential to realize greater economies of scale have increased as IT is deployed to an ever-increasing degree. However, the IT function continues to be managed at the same level (division level) within the organization. From a legislative perspective, ISD is relied upon to an increasing degree to describe the expanding scale and importance of the state-wide IT infrastructure to legislative committees and individual legislators but the service continues to be managed as a division within the DofA.

### **Lack of Effectiveness in Carrying Out Statutory Responsibilities**

ISD's enabling statute provides for a greater level of authority over IT activities than is actually exercised by the division. The current view of many agencies of ISD's authority in carrying out its statutory responsibilities is that the authority can be ignored or simply appealed to the director. In many cases, the decision centers on whether a division (ISD) or a department should prevail rather than a decision be negotiated based on the correct interpretation of statute, existing policy, etc.

### **Advisory Role of ITAC Reduces Effectiveness**

The advisory status of ITAC reduces its effectiveness in directing IT activities as ITAC decisions are limited to the status of a recommendation. Although the history of ISDs relationship with ITAC has been to treat ITAC recommendations as directives, the view has been expressed that a vote on a particular ITAC issue doesn't really mean much. Some ITAC members have even complained that ITAC has been reduced to a "rubber stamp" for decisions that have already been made by ISD.

### **Lack of Cabinet Level Commitment**

The advisory role of ITAC and possibly other factors results in a lesser commitment of cabinet officials to serve, attend and/or become familiar with IT issues. An oversight council, with specific authority, and with legislative membership, would encourage greater commitment by senior state officials.

### **Limited Membership Scope of ITAC**

ITAC membership is currently limited to state agency, university system, and local government officials. Expanded membership from areas such as the private sector and legislators would provide a broader range of perspectives for influencing state IT activities.

Last Update: May 22, 2000

# Appendix B

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## Governance Structure Options: Fiscal Impact Estimates

### Option 1: Status quo

No fiscal impacts are anticipated.

### Option 2: Status quo (with statute changes)

No fiscal impacts are anticipated. This option assumes that any workload increases resulting from statute changes will be absorbed by the existing resources of ISD.

### Option 3: IT department

Based on information provided by DOA, ISD is essentially self-supporting. Its functions and resources can be used to create a new department with minimal new FTE and fiscal impacts. ISD currently supports 27 percent of 1.33 FTE in the Legal Services Unit (0.36 FTE) and 0.50 FTE in the State Personnel Division. It is assumed for this estimate that these functions in DOA would continue even if ISD were moved to a new department. In addition, a 1.00 FTE lawyer, 1.00 FTE personnel specialist, and 0.5 FTE payroll and benefits technician would be needed in the new department. Besides these additional FTE a reorganization that created a new department would be done with the management structure being created with reassignment of current staff.

**Table B1. Assumed New Staffing for IT Department (incremental)**

FTE	Position	Grade (equivalent)	Annual Cost Payroll	Annual Operating Costs
1.00	Lawyer	19	21,000	5,000
1.00	Personnel specialist	15	43,000	3,000
0.50	Payroll and benefits technician	10	28,500	3,000
2.50	Total		\$92,500	\$11,000
	Grand total			\$103,500

## Assumptions

Operating costs were estimated as:

- Conferences (travel, lodging, registration, etc.) \$2,000 per conference (with lawyer attending one per year).
- Each employee a basic cost for computer replacement, office supplies, training etc. of \$3,000 per year.

## Option 4: IT office under the Governor

If the policy and planning functions that currently reside in ISD are moved to a new IT office under the Governor, similar planning functions would need to backfill this vacancy. ISD would need a portion of the planning staff to administer and operate the central computer system and statewide data network. The following table shows that assumed staffing changes that would result from this reorganization.

**Table B2. Assumed New Staffing for IT Office (incremental increase)**

New FTE	Position	Grade (equivalent)	Annual Cost Payroll	Annual Operating Costs
1.00	IT director (CIO)	Exempt	\$85,000	\$11,000
1.00	Administrative support	9	27,500	3,000
2.00	Information system specialist	16	78,000	14,000
0.00	Information system specialist - conferences			8,000
4.00	Total		\$190,500	\$36,000
	Grand total (general fund)			\$226,500

**Table B3. Assumed Moved Staffing from ISD to IT Office**

Moved FTE	Position	Grade (equivalent)	Annual Cost Payroll	Annual Operating Costs
2.00	Information system specialist	18	106,000	10,000
2.00	Information system specialist	16	78,000	10,000
4.00	Total		\$184,000	\$20,000
	Grand total (proprietary decrease general fund increase)			\$204,000

## Assumptions

Operating costs were estimated as:

- Conferences (travel, lodging, registration, etc.) \$2,000 per conference (with director 4 per year and information system specialists each attending two per year).
- Each employee a basic cost for computer replacement, office supplies, training etc. of \$3,000 per year.

- When transferring positions from ISD to the new office, the basic costs plus the costs for one conference per position were transferred and the cost for one additional conference was added as a new cost.

## Funding

If an Office of Information Technology were created under the Governor, the general fund would be a more appropriate funding source. Increases of general fund would be partially offset by decreases in proprietary funds in ISD and subsequently in the data network rate. However, this function could be included in the cost allocation plans: Statewide Cost Allocation Plan (SWCAP) and the State Fund Cost Allocation Plan (SFCAP). This would allow allocating a portion of the IT office expenditures to federal and non-general funded programs.

## Option 5: Governance board

### Board membership

The following membership for an IT governance board was assumed for developing fiscal impact estimates for this option:

**Table B4. Proposed Governance Board Membership**

Number	Member	Appointed by	Voting Member	Chair
1	CIO	Statute	Yes	X
2	House	Speaker of the House	No	
2	Senate	President of Senate	No	
1	Judicial Branch	Supreme Court	No	
1	University system	Board of Regents	Yes	
1	Public education	Superintendent of Public Instruction	Yes	
3	State agencies	Governor	Yes	
2	Local government	Governor	Yes	
1	Federal government	Governor	No	
1	Private sector	Speaker of the House	Yes	
1	Private sector	President of Senate	Yes	
16	Total Membership			

### Assumptions

Mileage estimates for legislative, local government, and private sector members to attend meetings are based on the distance between Billings and Helena, or 450 miles for a round trip. The mileage reimbursement rate of \$0.325 per mile was used to calculate mileage reimbursement costs.

In addition to the mileage rates and mileage estimates listed above, the following reimbursement rates were used to estimate member costs:

- Member compensation \$59.67 per day for legislative members.

- Member compensation \$50.00 per day for local government and private sector members.
- Lodging \$36.40 per night.
- Meals \$23.00 per day.

It is assumed that the board would meet quarterly for two days per meeting. Members traveling to meetings would receive lodging reimbursement for three nights, compensation for three days, and meals for three days for each meeting.

#### Mileage

Four meetings per year at 450 miles per meeting and \$0.325 per mile for four legislators, two local government, and two private sector members = \$9,360 per year.

#### Lodging and Meals

Four meetings per year for three nights per meeting at \$36.40 per night for lodging and \$23.00 per day for meals for 4 legislators, 2 local government, and 2 private sector members = \$5,702 per year.

#### Compensation

4 meetings per year for 3 days per meeting at \$50.00 per day for 2 local government and 2 private sector members and at 59.67 for 4 legislators = \$5,264 per year.

#### Total

Mileage =	\$9,360
Lodging and meals =	5,702
Compensation =	<u>5,264</u>
Total member costs =	\$20,326
Board administration costs =	\$10,000
Total cost (rounded up) =	\$30,500

# Appendix C

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## Summary of Other States' Governance Structure, by State

### Arizona

Information Technology governance in Arizona is vested in the Chief Information Officer (CIO), the department he directs, and a 14-member governance board.

#### Chief Information Officer

The CIO is appointed by the governor and is the director of the Arizona Government Information Technology Agency (GITA). The GITA addresses policy and planning issues only. (The Arizona Department of Administration is designated as the central information technology **services** provider. State agencies are not required to use its services) The CIO/agency's jurisdiction extends to the executive branch, excluding the higher education units.

Primary duties assigned to the Government Information Technology Agency include:

- Develop, implement and maintain a coordinated statewide plan for information technology. This includes:
  - Adopting statewide technical, coordination and security standards for information technology.
  - Serving as statewide coordinator for information technology resources.
  - Developing a list of approved agency projects by priority category.
  - Developing a detailed list of information technology assets owned, leased or employed by this state.
  - Evaluating and either approving or disapproving executive branch agency information technology plans.
  - Evaluating specific IT projects relating to the approved executive branch agency and statewide information technology plans. The agency approves or rejects projects with total costs of at least twenty-five thousand dollars but not more than one million dollars and may establish conditional approval criteria including procurement purchase authority. If the total project costs exceed one million dollars the agency evaluates the project and makes recommendations to the

governing board. Projects cannot be artificially divided to avoid review by the agency.

- Require that executive branch agencies incorporate life cycle analysis into the IT planning, budgeting and procurement processes.
- Monitor IT projects that the agency considers major or critical, including expenditure and activity reports and periodic review.
- Temporarily suspend the expenditure of monies if the agency determines that the information technology project is at risk of failing to achieve its intended results or does not comply with the requirements of state law.
- Continuously study emergent technology and evaluate its impact on the state's system.

## **Governing Board**

Arizona's governance board, the Information Technology Authorization Committee (ITAC), has both "review only" authority and "review and approval" authority. The board's jurisdiction extends to the executive branch (excluding higher education units) and the legislative and judicial branches of state government.

Primary duties outlined in statute include:

- Review established statewide information technology standards and the statewide information technology plan.
- Approve or disapprove all proposed information technology projects that exceed a total cost of one million dollars:
  - Require expenditure and activity reports from executive branch agencies or the legislative or judicial branches of state government on implementing information technology projects approved by the committee.
  - Conduct periodic reviews on the progress of implementing information technology projects approved by the committee.
- Develop a report format that incorporates life cycle analysis for agency use in submitting project requests to the committee.
- Temporarily suspend the expenditure of monies if the committee determines that the information technology project is at risk of failing to achieve its intended results or does not comply with the requirements of state law.
- Report to the governor, the speaker of the house of representatives, the president of the senate, the secretary of state and the director of the department of library, archives and public records at least annually on all matters concerning its objectives.

## North Dakota

Information technology governance in North Dakota is achieved through its Chief Information Officer, the agency he directs, and two advisory boards.

### Chief Information Officer

The CIO is appointed by the governor and is the director of the North Dakota Information Technology Department (ITD). North Dakota statute assigns both IT policy and IT operations functions to the ITD. The CIO/department's jurisdiction extends to the executive branch agencies, excluding institutions under control of the board of regents.

All entities desiring access to wide area network services are required to use the Information Technology Department. Each agency is required to comply with the IT policies and standards developed by the department. *(Note: administrative organizations within the institutions under the control of the board of regents are required to comply with this requirement.)*

Primary duties assigned to the CIO/Information Technology Department include:

- Review and approve agency IT plans (including higher education institutions and IT plans submitted by the legislative and judicial branches);
  - Plans must include agency IT goals, objectives, and activities for current and two subsequent biennia.
  - Each state entity is required to prepare its budget request for the next biennium based on its IT plan. The agency's budget request and the governor's budget recommendation must include supporting information describing in detail how the IT plan relates to the budget request and recommendation. Any budget adjustment by the budget office must include the corresponding change to the IT plan.
- Develop a statewide information technology plan based on agency IT plans, with an emphasis on long-term strategic goals and objectives.
- Conduct agency IT management compliance reviews, addressing the entity's planning effectiveness, conformance to its IT plan, compliance with statewide policies and standards, and, if applicable, the entity's contract management system and the contractor's compliance with contract provisions.
- Request information on or review information technology, applications, system development projects, and application development projects of executive branch agencies.
- Study emerging technology and evaluate its impact on the state's system of IT.

## **Governing Board**

North Dakota has two information technology advisory boards: A 12-member Statewide Wide Area Network Advisory Committee and an 8-member Information Technology Committee. Both boards are authorized in statute.

### **Statewide Wide Area Network Advisory Committee**

This committee is directed to advise the Information Technology Department with respect to planning and implementation of wide area network services provided by the department.

### **Information Technology Committee**

The Information Technology Committee is a legislative committee, appointed biennially by the legislative council. All members are legislators, except for the state CIO. The committee has continuing existence and may meet and conduct its business during the legislative session and in the interim between sessions.

Primary duties outlined in statute include:

- Reviews:
  - The business plan of the information technology department.
  - The activities of the information technology department.
  - Statewide IT standards and the statewide IT plan.
  - The cost benefit analysis of any major IT project of an executive or judicial branch agency (Cost of \$250K or more in one biennium or a total cost of \$500K or more).
- Conduct studies of IT efficiency and security.
- Performs periodic reviews to ensure that a major IT project is on track and within cost.

## **South Dakota**

Information technology resources in South Dakota re governed by the Commissioner of Information and Telecommunications, the bureau he directs, and three boards.

### **Chief Information Officer**

South Dakota has designated its CIO as Commissioner of Information and Telecommunications. The commissioner is appointed by the governor and serves at his pleasure. Situated in the Governor's Office of Executive Management, the commissioner administers the Bureau of Information and Technology.

Primary duties assigned to the commissioner and the bureau include:

- Operate the Rural Development Telecommunications Network including design of a video network structure compatible with the existing telecommunications infrastructure, the administration of a billing service system for users of the network and issues related to operation of the network.
- Provide technical and management assistance to state agencies and institutions regarding systems or methods to be used to meet information and communication requirements efficiently and effectively.
- Develop and propose operational technical standards for the state information systems which will ensure the interconnection of computer networks and information of state agencies.
- Develop and administer a service agency whose primary purpose shall be to serve statewide needs relating to automatic data processing services and to provide such services for any department, agency, commission, institution, or any other units of state government and for any of the political subdivisions of the state.
- In cooperation with the appropriate state agencies, plan, design, and conduct experiments in information services, equipment, and technology, and to implement enhancements in the state information system.

## **Governing Board**

South Dakota has created three boards to govern or advise the governance of information technology development and use. A description of the boards and respective responsibilities are presented below.

### **Information Technology Standards Committee**

This committee is created by executive order and advises the commission on IT standards for use in South Dakota State government. The commissioner evaluates the committee recommendations for compliance with the state's strategic direction and makes a final decision.

### **Rural Development Telecommunications Network**

This board is established by statute; the governor appoints all members of this 7-member board. The board is charged with the responsibility to establish policies and rules to implement the state's Rural Development Telecommunications Network.

### **South Dakota Board of Directors for Educational Telecommunications**

This board is also established by statute. The governor appoints six of the nine members; three members are designated in statute. The primary function of the board is to consider and establish policy for and exercise all necessary control over the state educational telecommunications network.

Information technology governance is vested in the chief information officer (CIO), and two advisory boards.

## Chief Information Officer

Utah's CIO, a statutorily created position, is appointed by the governor and is assigned to the Governor's Office of Planning and Budget. The CIO's authority extends to the executive branch, excluding the education boards and units. The CIO addresses IT policies only; central IT services are provided by the Division of Information Technology Services.

Statutory duties include:

- Developing specific information technology objectives, policies, procedures, and standards to guide the development of information systems within state government to achieve maximum economy and quality while preserving optimum user flexibility.
- Coordinating the preparation of agency information technology plans within state government, encompassing both short-term and long-term needs that support the agency's and the state's strategic plans, including Utah Tomorrow.
- Requiring each state agency to submit semiannually an agency information technology plan containing the information required (by law) before the legislative session in which the budget request will be heard and no later than the June 15 after the legislative session in which the budget request was authorized.
- Reviewing and approving or disapproving agency information technology plans to ensure that these plans are the most economically viable and are the best solution to the agency's needs and the state's needs.
- Facilitating the implementation of agency plans.
- Establishing priorities in terms of both importance and time sequencing for the development and implementation of information systems.
- Monitor information systems development to promote maximum use of existing state information resources.
- Advising the governor on information technology policy and make recommendations to the governor regarding requests for appropriations for information technology equipment and personnel.
- Maintaining liaison with the legislative and judicial branches, the Board of Regents, the State Board of Education, local government, federal government, business and industry, and consumers to promote cooperation and make recommendations regarding information resources.
- Preparing an annual report to the governor and to the Legislature's Public Utilities and Technology Interim Committee and the Information Technology Commission that:

- Summarizes the state's current and projected use of information technology.
- Includes a description of major changes in state policy and a brief description of each state agency's plan.

## **Governing Board**

### **Utah Information Technology Commission**

The Information Technology Commission is a legislative committee and serves an advisory function for the Utah legislature. While the CIO sits on this commission, he does not chair it; two legislators co-chair the commission. Statutory duties include:

- Study Utah's present and future information technology needs.
- Make recommendations regarding the coordination and governance of the information technology needs for the Executive, Legislative, and Judicial Departments.
- Solicit and consider recommendations made by the governor, Judiciary, Legislature, and the public regarding information technology.
- Consider the scope of the Public Service Commission's authority to regulate information technology.
- Consider issues of economic development with regard to information technology.
- Receive reports concerning expenditures for information technology and appropriation requests from the Executive Department; and Judicial and Legislative Departments.
- Make recommendations to Executive Appropriations and the appropriate appropriations subcommittees of the Legislature.
- Review, analyze, and study any issue concerning or related to information technology or practice that is of interest to the commission.
- Submit to the Legislature before the annual general session its reports and recommendations for information technology projects or legislation.
- If needed, prepare legislation concerning information technology for submission to the Legislature in its annual general session.

### **Information Technology Policy and Strategy Committee**

The Information Technology Policy and Strategy Committee serves a governance function for the executive branch. Although representatives from the legislative and judicial branch are statutory members of this committee, only executive branch representatives have voting rights on policies binding the executive branch. The enabling statute further states that no action by this committee shall be binding on any other branch of government.

Statutory dues of this committee include:

- Evaluate and approve or disapprove recommended information technology policies, procedures, and standards to govern the operation of information technology in the executive branch.
- Act as a high-level forum for information technology issues.
- Create, and receive recommendations from, multi-agency work groups on specific information technology issues.

## Washington

Information technology governance in Washington is achieved through the appointment of a chief information officer (CIO), the formation of an executive branch agency dedicated to information technology, and the creation of two boards.

### Chief Information Officer

The director of the Department of Information Services (DIS) is the CIO in Washington. Although Washington statutes do not label this position as a CIO, the position is a CIO for our research purposes because it performs statewide functions similar to those assigned to CIO's in other states.

The CIO and the DIS work closely with the Information Services Board (see Governing Board section below). In addition, the CIO/DIS assists the Governor's Office of Financial Management with reviews of budget requests for major IT projects.

Primary statutory powers and duties of the department include:

- Review agency information technology portfolios and related requests.
- Implement statewide and interagency policies, standards, and guidelines.
- Make available information services to state agencies and local governments on a full cost-recovery basis.
- Establish rates and fees for services provided by the department to assure that the services component of the department is self-supporting;
  - A billing rate plan shall be developed for a two-year period to coincide with the budgeting process.
  - The rate plan shall be subject to review at least annually by the customer advisory board.
- With the advice of the information services board and agencies, develop a state strategic information technology plan and performance report.
- Develop plans for the department's achievement of statewide goals and objectives set forth in the state strategic information technology plan. The department shall seek the advice of the customer advisory board and the board in the development of these plans.

- Assess agencies' projects, acquisitions, plans, information technology portfolios, or overall information processing performance as requested by the board, agencies, the director of financial management, or the legislature. Agencies may be required to reimburse the department for agency-requested reviews.
- Develop planning, budgeting, and expenditure reporting requirements, in conjunction with the office of financial management, for agencies to follow.
- Assist the office of financial management with budgetary and policy review of agency plans for information services.

## **Governing Board**

The Information Services Board (ISB) is the primary IT governing board in Washington. The board develops standards and establishes policies for IT resources in Washington. The board's jurisdiction extends to the executive branch.

Primary powers and duties of the board include:

- To develop standards governing the acquisition and disposition of equipment, proprietary software and purchased services, and confidentiality of computerized data.
- To develop statewide or interagency technical policies, standards, and procedures.
- To review and approve standards and common specifications for new or expanded telecommunications networks.
- To provide direction concerning strategic planning goals and objectives for the state. The board shall seek input from the legislature and the judiciary.
- To establish policies for the periodic review by the department of agency performance which may include but are not limited to analysis of:
  - Planning, management, control, and use of information services.
  - Training and education.
  - Project management.
- Establish technical standards to facilitate electronic access to government information and interoperability of information systems. Local governments are strongly encouraged to follow the standards established by the board.
- Require agencies to consider electronic public access needs when planning new information systems or major upgrades of systems.
- Govern, operate, and oversee the technical design, implementation, and operation of the K-20 network.

## **K-20 Educational Network Board**

The purpose of the K-20 board is to ensure that the K-20 educational telecommunications network in Washington is operated in a way that serves the broad public interest above the interest of any network user.

Primary statutory duties include:

- Establish goals and measurable objectives for the network.
- Prepare and submit to the governor and the legislature a coordinated budget for network development, operation, and expansion.
- Adopt and monitor the implementation of a methodology to evaluate the effectiveness of the network in achieving the educational goals and measurable objectives.
- Authorize the release of funds from the K-20 technology account for network expenditures.

## **Wyoming**

Information technology governance in Wyoming is accomplished with the appointment of a CIO and two governing boards. The jurisdiction of this governance structure extends to the executive branch.

### **Chief Information Officer**

Wyoming's CIO is appointed by, and serves at the pleasure of, the Director of the Department of Administration and Information (DOAI). This is the only CIO in the six-state survey that appointed the CIO in this manner. Although the CIO position is appointed by a department director, the position serves as an advisor to the governor. The CIO in Wyoming heads up the DOAI Information Technology Division and serves as the primary manager of IT policy and operations for the state.

Primary duties administratively assigned to the CIO include:

- Coordinate the state's information and telecommunications activities including the development of and implementation of enterprise level objectives, procedures, and standards.
- Lead the state's data services and telecommunications short and long range planning efforts.
- Advises and assists the governor with IT policy.
- Coordinate the preparation of state agency IT plans which support agency and state strategic plans.
- Review and make recommendations on IT budgets of all executive branch agencies;
- Assist the budget division with evaluating technology based budget requests.

- Act as the state's chief liaison officer for technology with the legislative branch, judicial branch, local and federal government, private sector, and consumers.

In addition the CIO's duties administratively assigned, Wyoming State statutes contain the following duties assigned to the DOAI Information Technology Division:

- Develop and provide computer services to the judiciary, the legislature, and agencies, excluding the University of Wyoming and community colleges.
- Subject to review by the governor's Computer Technology Oversight Panel, provide uniform standards for the economical, efficient, and coordinated utilization of all IT resources by executive agencies, the judiciary, and the legislature.

## **Governing Board**

Wyoming statutes provide for two IT-related governing boards: the Governor's Computer Technology Oversight Panel and the State Telecommunication Council.

### **Computer Technology Oversight Panel**

This three-member panel is appointed by the governor. The panel is charged with overseeing the activities of the Information Technology Division and is responsible for reviewing and approving proposed uniform IT standards.

### **State Telecommunications Council**

This nine-member advisory council is appointed by the governor. The council is responsible for developing goals and plans, both short and long range, to meet the telecommunications needs of the state and its citizens. The council is required to report annually to the governor and others regarding its recommendations on the infrastructure, needs, practices, and technologies for providing telecommunications services:

- In the most efficient manner possible.
- To accommodate economic growth and development in the state.
- To enhance educational opportunities at all levels of instruction.



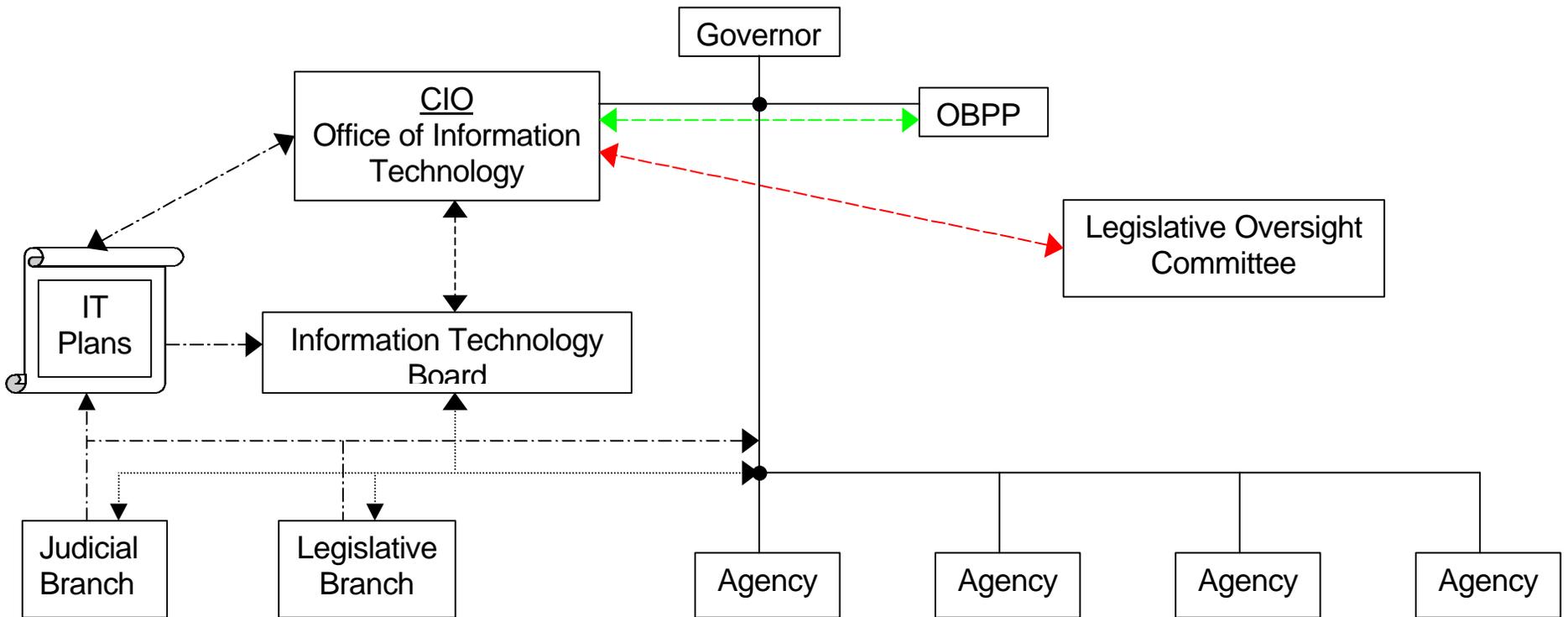
# Appendix D

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Proposed Information Technology Governance Structure  
Organizational Chart



# Legislative Guiding Principles



Legend			
Organizational line of reporting and operational communications	—————	Oversight communications	- - - - -
IT plan information and approval (no arrow means no approval)	- - - - -	IT budget coordination	- - - - -
	—————	Communications of IT interests between stakeholders and IT board	.....