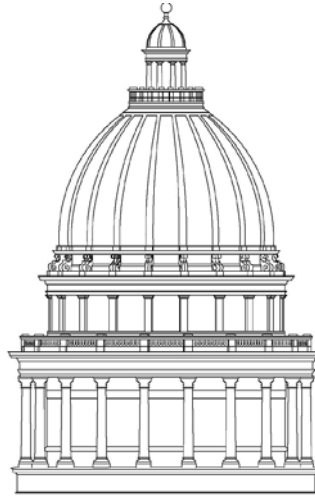REPORT TO THE

UTAH LEGISLATURE

Number 2009-13

A Performance Audit
Of the
Department of Technology Services

August 2009

Office of the
LEGISLATIVE AUDITOR GENERAL
State of Utah

August 18, 2009

TO: THE UTAH STATE LEGISLATURE

Transmitted herewith is our report, **A Performance Audit of the Department of Technology Services** (Report #2009-13). A digest is found on the blue pages located at the front of the report. The objectives and scope of the audit are explained in the Introduction.

We will be happy to meet with appropriate legislative committees, individual legislators, and other state officials to discuss any item contained in the report in order to facilitate the implementation of the recommendations.

Sincerely,

John M. Schaff, CIA
Auditor General

JMS/lm

Digest of
A Performance Audit of the Department of Technology Services

The Department of Technology Services (DTS) was created under the Information Technology Governance Act (H.B. 109) during the 2005 Legislative Session. The Legislature had determined that the operational efficiency and business performance of state information technology (IT) could be enhanced through centralization. The act established an enterprise authority that had governance over all information technology functions and personnel. As a result, DTS was created within the executive branch and given statutory authority to carry out the requirements of H.B. 109.

Consolidation of IT Resources Has Been Slow. In 2009, DTS began to consolidate data centers and servers, which should result in roughly $4 million of annual savings starting in fiscal year 2011. Other redundant systems remain in state agencies, yet DTS has done little to reduce this duplication. Additional IT standards are needed to ensure that added cost savings are obtained and that agencies can share similar technologies and systems to reduce overall duplication where possible.

IT Costs Need to Be Better Managed. DTS has not provided adequate oversight of newly acquired IT assets. Specifically, DTS did not require business case analyses as called for in the *Utah Code* and has yet to track IT assets owned by user agencies. We are concerned that this lack of oversight could have resulted in unnecessary purchases.

Agency IT Plans and Review Process Needs to Improve. Agency-submitted IT plans have not complied with either the *Utah Code* or administrative rules promulgated by DTS. Further adding to the problem, DTS chose to discontinue its formal review of those plans. This pattern of insufficient planning has diminished inter-agency collaboration and weakened DTS' ability to provide the most efficient and effective IT services for the state.

**Chapter I:
Introduction**

**Chapter II:
DTS Should Have Managed State IT Resources Better**

**Chapter III:
DTS Strategic Planning Needs to Improve**

Statewide IT Strategic Plan Can Be Enhanced. The 2006–2008 statewide IT strategic plan lacked adequate guidance on how major agency objectives outlined in H.B. 109 would be implemented. As a result, unnecessary purchases were made by DTS staff where better planning and communication could have prevented waste. Despite the deficiencies of past planning activities, DTS has recently developed a new strategic plan that should better address prior problems.

Improved Performance Measures and Time Tables Are Needed. DTS needs to better track how the agency is working toward implementing the goals of H.B. 109. Reporting additional performance measures and requiring time tables on strategic objectives are needed to further optimize state IT operations.

Chapter IV: Accountability and Oversight over DTS Could Be Enhanced

Business Focus and Structure of DTS Is Problematic. DTS has focused its efforts on customer service but has failed to properly take advantage of opportunities to consolidate and cut the cost of state IT. Cost reduction measures for DTS have not been a priority, since DTS is structured as an internal service fund. DTS needs to work toward reducing the costs of IT while providing adequate security and service for state agencies.

Enhanced Oversight Can Improve DTS Operations. State IT oversight by the legislative branch has been reduced over the last six years. This reduction means that no entity exists to oversee and critique DTS' strategic plan or ensure its compliance with *Utah Code*. More direction from the Legislature could strengthen DTS' authority over state agencies to reduce statewide IT redundancies.

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Appendix

Chapter I
Introduction

The Department of Technology Services (DTS) was created under the Information Technology Governance Act in House Bill 109 (H.B. 109) during the 2005 Legislative Session. The Legislature had determined that the operational efficiency and business performance of state information technology (IT) could be enhanced through the establishment of an enterprise authority that had governance over all information technology functions and personnel. DTS was created within the executive branch of state government and given statutory authority to carry out the requirements of H.B. 109.

DTS was created in 2005 with the enrollment of H.B. 109.

Creation of DTS

DTS was created by merging all agency information technology functions with the former Information Technology Services (ITS), a division of the Department of Administrative Services (DAS), into one department. DTS has been a department now for over four years. In addition to coordinating technology services and governance within the executive branch of state government, H.B. 109 also called for the following:

- An executive director to serve as the chief information officer (CIO) for the state with rulemaking and procurement authority
- An advisory board to DTS
- Executive branch strategic technology plans
- Annual agency information technology plans
- Rates for services and a rate oversight committee

A major objective of H.B. 109 was to enhance coordination between executive branch agencies in the development and implementation of information systems in the state while maintaining a secure environment for sensitive information. DTS functions as an internal service fund (ISF) that establishes rates and operates as an at-cost department. DTS currently administers the IT needs of 30 state agencies and manages over 800 IT employees. Examples of DTS services include:

- Development and support for over 890 business applications
- Support for approximately 1,600 servers
- Help desk support for over 23,000 desktops
- Data storage and archiving
- IT purchasing
- State IT security for all agencies
- Support and development of the state website

DTS Established to Improve Efficiency and Effectiveness of State IT

DTS was established to ensure that the information technology throughout state agencies runs efficiently and effectively. According to *Utah Code* 63F-1-104, DTS is charged to do the following (for a complete list please see Appendix A):

- Lead state executive branch agency efforts to reengineer the state's information technology architecture with the goal of coordinating central and individual agency information technology
- Ensure compliance with the executive branch agency strategic plan
- Reduce data, hardware, and software redundancy
- Develop and implement processes to replicate information technology best practices and standards throughout the executive branch

The overall intent of the goals listed above is to improve service delivery and infrastructure. These improvements should transform government information systems into more efficient and cost-effective vehicles for providing services to the public and conducting state business.

DTS has been given broad oversight over all technology operations for state agencies. *Utah Code* directs the CIO to ensure that agency IT plans coordinate with the executive branch strategic plan. In order to comply with H.B. 109, DTS was asked to develop plans and procedures to help ensure this process is fulfilled. The following tools are included in *Utah Code* 63F-1-104:

DTS was created to coordinate state IT, reduce IT redundancy, and develop strategic plans for future IT investments.

- DTS IT strategic plan – The purpose of the IT strategic plan is to establish processes and key objectives to make IT in state government more organized with the ability to adopt new technologies and adjust to shifting business requirements.

- Agency IT plans – Plans are to be submitted annually to DTS from state agencies. These plans are to provide information to DTS about each agency's IT mission and objectives. The plans also exist to provide DTS with agency performance measures to help DTS better determine if agencies are meeting their annual goals.

- IT procurement process – Under the new bill, the CIO must monitor and approve all IT hardware and software purchases. This new authority allows DTS to better control technology costs throughout the executive branch.

Audit Scope and Objectives

Recognizing the state's increasing reliance on information technology and the corresponding increase in the costs of those resources, legislators asked the Legislative Auditor General to evaluate several aspects of DTS' operations. Specific audit objectives include the following:

1. Determine DTS' compliance with *Utah Code* in regard to implementing the IT optimization goals established in H.B. 109.
2. Review DTS' strategic planning process.
3. Evaluate oversight and accountability of DTS.

Chapter II discusses the areas where DTS can accelerate optimization efforts and establish better cost management practices. Chapter III highlights the inadequacies of DTS' strategic planning process and the need for performance measures to monitor DTS' progress toward implementing H.B. 109. Chapter IV emphasizes the need for greater oversight of DTS and clarification of DTS' authority and focus in *Utah Code*.

This audit examined DTS' compliance with H.B. 109 and accountability to oversight bodies.

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Chapter II
DTS Should Have Managed State IT Resources Better

Optimization of state Information Technology (IT) resources has been slower than expected. Without proper and timely IT standards or direction from the Department of Technology Services (DTS), state agencies have not been compelled to optimize state IT hardware, software, or personnel assets, and DTS has not adequately controlled state IT costs. DTS has not required essential checks and balances to oversee IT acquisitions. These conditions have diminished the potential savings of IT consolidation.

Adopting and executing IT standards across state agencies, if done correctly, can result in cost savings for the state. DTS has adopted some standards that have resulted in cost savings, but more are needed. DTS should look for additional opportunities to consolidate state IT, develop standards where it makes appropriate business sense, and require agencies to comply.

Consolidation of IT Resources Has Been Slow

DTS has recently begun to consolidate data centers and servers, which will bring roughly $4 million in ongoing annual savings starting in fiscal year 2011. Other redundant systems remain in state agencies, yet DTS has not succeeded in reducing these duplications. Additional IT standards are needed to ensure that cost savings are obtained and that agencies can share similar technologies and systems to reduce overall duplication where possible.

Current data center consolidation efforts should bring annual ongoing savings of $4 million.

H.B. 109 directed DTS to lead state executive branch agency efforts to reengineer the state's information technology architecture. The goal was to centrally coordinate individual agency information technology resources to ensure that cost-effective, efficient information systems were being developed for the state as a whole. Specifically, DTS was charged with the following responsibilities:

- Reducing data, hardware, and software redundancy

- Improving system interoperability and data accessibility between agencies

There are an estimated 1,600[1] servers in state agencies operating in roughly 26 different data centers throughout the state. DTS should consolidate or optimize technology resources as much as possible to create an IT organization that is efficient in their operations and effective in carrying out their objectives. We are concerned that this process of reducing redundant hardware throughout state agencies is not farther along.

DTS Has Recently Begun to Consolidate Servers

DTS recently began the process of server and data center consolidation for all state agencies. The urgency of completing the consolidation project at this time is due in large part to the recent budget crisis and legislative pressure demonstrated by the initiation of this audit. DTS stated that they will be able to save $4 million annually by reducing hardware and support costs related to server optimization. We believe that this consolidation was possible years earlier and, as such, state funds may have been unnecessarily expended.

DTS has stated that the server consolidation will consist of two phases. DTS said phasing is necessary to ensure that the systems being moved remain stable and operational. In phase I, DTS will move servers from locally based agencies to the data center located on Capitol Hill. This consists of removing most, if not all, server hardware and operating system software from the agencies. DTS plans to have the first phase of the server consolidation completed sometime in fiscal year 2010. Once this is complete, DTS will monitor the computer systems to ensure all services are working satisfactorily before they move onto phase II.

After consolidation of physical servers, DTS plans to reduce the number of operating system licenses.

DTS told us that in phase II of the server consolidation process, they will try to reduce the number of operating systems and software licenses currently in use. Optimizing server utilization can be achieved by monitoring usage; servers that are underutilized could be combined. When this is accomplished, the state will benefit from the

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[1] As a result of DTS' reliance on manual counts of agency hardware, we obtained various server counts. DTS stated that 1,600 servers was their best estimate.

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overall cost savings of the reduction in server hardware, software, and support personnel and increased IT security. This reduction will be an ongoing process that DTS said they will continually monitor to determine when and where it is feasible to reduce redundancy. The State of Utah and its agencies will all benefit when DTS completes this consolidation process.

DTS Has Been Slow to Develop IT Standards as Required by *Utah Code*

DTS has been slow to promulgate and enforce IT standards for state agencies. When DTS was created four years ago, one of its mandates was to develop and implement best practices and standards throughout the executive branch for computer hardware and software. By creating and adopting standards for all IT user agencies, DTS can reduce overall costs and help diminish the time it takes to support information systems.

The DTS Architectural Review Board (ARB) Has Been Slow In Its Approval of Technology Standards. The ARB meets at least once a month to discuss and review pending IT standards that need their approval in order to become standards. DTS has chosen to build consensus among agencies when developing these standards and the progress has been slow. For example, the ARB recently approved a new antivirus software program as a state standard, but it took DTS almost 15 months to get it approved and adopted.

The creation of IT standards has been slow and should be accelerated.

Figure 2.1 outlines five standards and the time taken for adoption of each. From the ARB minutes, we were able to identify when each standard was first discussed. The approval dates were obtained from the standards portion of DTS' website.

Figure 2.1 Elapsed Time of Approval for Five Standards. The ARB took over a year to establish these standards.

Standard	Date First Discussed	Date Approved	Time Elapsed In Months
Laptop Encryption	11/28/07	2/25/09	15
Antivirus Software	11/28/07	2/25/09	15
Office Suite	1/16/08	4/29/09	15
Application Servers	1/16/08	3/08/09	14
Linux Server OS	1/16/08	4/20/09	15

DTS has been hesitant to establish standards; DTS' CIO stated that they do not want to put edicts on the types of technologies agencies are permitted to use. However, *Utah Code* 63F-1-104-2(c) states that DTS should "develop and implement processes to replicate information technology best practices and standards throughout the executive branch."

We believe that DTS should accelerate the development of IT standards where it makes appropriate business sense for the state as a whole. The ARB should review and approve standards in a timely manner which, in turn, could save the state money in the future. For example, the Division of Purchasing was able to negotiate a purchasing contract for desktop computers once DTS established a desktop standard. From this contract, the state saved an estimated $2.7 million in 2008 and will have additional cost savings in the future. In addition, quantity purchases of the new antivirus software that recently was adopted as a standard, if enforced, should save the state over $200,000 per year. Had these standards been adopted earlier, the state undoubtedly would have saved significant funds.

Other States Have Better Developed IT Standards. With IT moving from an agency-specific focus to an enterprise focus within the state, IT standards are one of the tools that DTS can use to help move this process forward. There are many IT standards that DTS still needs to adopt and move through their approval process. Figure 2.2 lists Utah standards and compares them to those of other states that either have gone or are going through a similar consolidation process.

The creation of standards has resulted in cost savings of $2.7 million in desktop purchases in 2008.

Figure 2.2 IT Standards of Three States That Have Gone Through a Consolidation Process Similar to Utah's. DTS needs to do a better job of identifying and approving IT standards for state agencies.

Standard	Utah	Michigan	Kentucky	Indiana
Database	*	yes	yes	yes
Office Suite	*	yes	yes	yes
PC Hardware	yes	yes	yes	yes
PC Replacement	no	yes	yes	yes
Server Hardware	*	yes	yes	yes
Server OS	*	yes	yes	yes
Storage Backups	*	yes	yes	yes
Switches	no	yes	yes	yes
Telephones	yes	yes	yes	yes

* *Standard is pending for approval.*

As seen in Figure 2.2, other states have a more comprehensive list of written IT standards for their state agencies to follow. Conversely, Utah's DTS has some written standards but mainly relies on what they classify as standard business practices and technical bulletins. Since these standards have not been through the ARB process for approval, we believe they cannot be considered enforceable. It should be noted that DTS does have some standards that have been approved and implemented, and DTS is more aggressively working toward adopting others. We found that DTS has adequate standards for their on-line environment but can do more to create standards for the rest of the enterprise. Written standards will enhance DTS' ability to make state IT more efficient and cost-effective.

DTS should continue to create enterprise standards and communicate them to the agencies.

Communication of Standards Is Important. Once IT standards have been adopted, DTS needs to do a better job of alerting agencies and IT directors to the new standards. Most IT directors were unable to show us any written standards set by DTS. Furthermore, until recently, there was no central location where all of the existing standards were maintained.

From the states that we sampled, it was found that they post their IT standards on their web sites. During this audit, DTS started posting more of their IT standards on the Internet. We believe that DTS should continue this practice to ensure that the user agencies are aware of IT changes.

In keeping with this direction, DTS should do more to create and enforce IT standards. Once standards are adopted, DTS should work toward implementing them across the enterprise. Agencies should phase in newly adopted standards as existing contracts expire. By creating and enforcing standards for IT hardware and software, DTS can improve consolidation and optimization of IT resources in state agencies.

Duplication and Redundant Systems Still Exist

DTS has not made adequate progress in identifying or eliminating aging computer systems or application programs, which are considered to be legacy systems. DTS has continued to support redundant IT systems throughout state government and has only recently made plans to address this problem. Some of this duplication between user agencies can be addressed by reducing or combining existing systems to gain economies of scale.

DTS can do more to reduce redundancy in IT systems throughout the state.

DTS has maintained that "not breaking the agency business" has been their primary goal when managing the change to DTS. While it is important to not cause unnecessary disruptions to state agencies, DTS has been tasked with reducing redundancy. The following are some non-prioritized areas to illustrate where DTS can save the state money by consolidating specific IT resources and phasing out legacy systems.

GroupWise Mailboxes – There are currently 107 email post offices in state agencies running on servers. DTS could save on hardware and support costs if unnecessary post offices were eliminated. DTS said that they are planning on doing this, but not in the immediate future.

Antivirus Software – According to DTS, agencies are currently using four different software packages to scan for virus protection. DTS also found that one of the brands that agencies were using was running five different versions of the same software. This is an area of concern that can be easily fixed by adopting a standard software package for the state and requiring all agencies to comply. Since the initiation of the audit, DTS has established an official standard.

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Application Servers – DTS says about 21 different application servers are being used throughout state agencies. Application server consolidation is an area that DTS can look at, decide on a standard, and then reduce the number of application servers being used.

DTS needs to do a better job of identifying areas that are redundant and optimizing hardware/software and services when it makes sense for the state. In addition to saving state funds, there are many other benefits for consolidating hardware/software, including:

- Improved operational efficiency
- Reduced complexity
- Improved staff productivity
- Reduced power costs
- Reduced disaster recovery inefficiencies

DTS is utilizing the Business Enterprise Group, composed of representatives from DTS, the Governor's Office of Planning and Budget, the Department of Administrative Services, and the Department of Human Resource Management. This group is charged with identifying issues within the enterprise scope and potential initiatives that should be included in the enterprise plan. By addressing these issues and optimizing agencies' hardware and software systems where feasible, DTS can improve its own efficiencies and those of user agencies.

IT Costs Need to Be Better Managed

DTS has not provided adequate oversight of newly acquired IT assets. Specifically, DTS did not require a business case analysis which was called for in *Utah Code* and has yet to track IT assets owned by user agencies. We are concerned that this lack of oversight could have resulted in unnecessary purchases. DTS has also been able to avoid some cost increases by expending funds from their retained earnings.

Business Case Analysis Not Compliant with Code

Utah Code directs DTS to oversee purchases for all new technology projects by requiring each purchase to undergo a business case analysis. Specific business case analysis requirements include:

- Needs analysis
- Consistency within budget submissions and planning processes
- Statement of work to be done and total cost of system
- Savings and other advantages of the project
- Source of funding and scope within agency's budget

Once a business case analysis is completed, DTS' CIO and the Division of Purchasing and General Services should work together to monitor and approve the new acquisition. In order to assess DTS' compliance with the cost-benefit analysis requirements, we conducted a limited random sample of 25 purchase orders from the 282 purchase orders that were submitted between January 1, 2008, and October 31, 2008. All submitted purchase orders were over $50,000, and the average purchase order was over $170,000. The results of this analysis are shown in Figure 2.3.

Figure 2.3 Analysis of Business Cases' Compliance with *Utah Code*. *Utah Code* requires nine elements of information to be contained within every business case analysis. Out of the 25 sampled plans, only two plans were compliant with all the requirements in section 63F-1-205.

Element Present	Yes	No
Needs Analysis	3	22
Budget Submission Consistency	3	22
Strategic Plan Compliance	4	21
Statement of Work	25	0
Cost of System	25	0
Cost Savings	3	22
Additional Advantages	10	15
Sources of Funding	2	23
Scope Within Budgets	3	22

The majority of the 25 reviewed IT project plans lacked the required information outlined in *Utah Code*; only two plans contained the minimum required information dictated by *Utah Code*. Twenty-two out of the sampled 25 plans did not contain crucial information; in particular, a cost savings analysis that would justify the IT project.

DTS monitors and tracks new IT purchases with the aid of a software package called Remedy. The information contained within the Remedy database includes the requestor of the project, project

description and cost, vendor information, and the approval history of each project. Contained within Remedy and the record of project authorization is the following statement:

By submitting this requisition, the CIO certifies that the needs analysis required in Section 63F-1-205 was completed where required.

We questioned DTS concerning the needs analysis mentioned in that statement and are concerned by this lack of accountability and oversight, since a proper business case analysis was not required. In addition, the Division of Purchasing and General Services never questioned the appropriateness of a project, because an adequate business case analysis was believed to have been completed. Without this accounting control in place, there is no assurance that approved IT projects were prudent and warranted.

DTS has drafted a new business case policy that requires agencies to submit all required information outlined in *Utah Code*. Based on the information gathered in the business case template, we believe DTS should monitor if projects are needed and coordinate sharing and cost efficiencies where possible. Once IT assets have been purchased, DTS should monitor and track them. The Remedy software package DTS uses is capable of tracking all approved projects, but DTS has not yet enabled that feature.

During the course of the audit, DTS has drafted a new business case analysis template to comply with state code.

Tracking of Agency IT Assets Not Set in Place

The Remedy software package can be utilized to monitor IT assets statewide. DTS currently tracks department-owned assets but has not yet begun to tag and track user agency assets. Without proper scrutiny of IT inventory, potential waste or theft of IT resources could occur. We believe that it is imperative for DTS to begin tracking the agency IT assets that they are responsible for supporting.

During the course of the audit, we had a difficult time obtaining an accurate statewide inventory count of items including servers, desktops, and software. Maintaining inventory counts is difficult for DTS since they are a pass-through department and do not take physical possession of the IT assets (excluding DTS-specific assets). However, DTS could sustain accurate inventory levels through regular

agency counts during the transition to a more effective asset tracking system. According to a DTS staff member, phase II of Remedy has the capability to track the specifications of all hardware and software features on the various IT units. The ability to have specific information about IT assets could aid in optimizing the following areas:

- DTS desktop support- DTS help desk representatives would know all programs and operating systems on every desktop.
- Warranty and licensing- DTS could monitor IT equipment and renew or update it when needed.
- IT budget and equipment projections- Asset counts and depreciation schedules will allow DTS to forecast future costs and maintenance for agencies.
- Individual unit accountability- Unique asset tags will deter theft.
- IT sharing- DTS can increase cooperation and sharing of IT assets with specific knowledge of asset inventory.
- Software costs- With a specific count and analysis of needs, DTS can eliminate unnecessary software purchases.

Although DTS is capable of implementing all of these items, some may be cost prohibitive. The expectation is that DTS will determine which of these are economically beneficial and adopt them across the enterprise.

DTS Has Reduced FTE Costs, but Additional Personnel Expenses Have Offset Savings

When DTS was formed in 2006, 876 of the 914 budgeted full-time equivalent (FTE) positions were filled at the end of the fiscal year. The related expense for these employees was over $69 million. Since the creation of DTS, IT personnel who were previously under ITS or within a state agency have been captured under DTS' management.

As called for in H.B. 109, DTS paid a three-step increase to any eligible IT career service employee who would transition to at-will (AT) status. These additional steps resulted in higher personnel costs until fiscal year 2009, when staff reduction savings exceeded the cost of the additional steps. Since the 2006 fiscal year-end, DTS has

eliminated approximately 75 FTE positions. Figure 2.4 highlights the trend of FTE costs and count through fiscal years 2006-2009.

Figure 2.4 FTE Counts and Expenses Through Fiscal Years 2006-2009. DTS has reduced the FTE count by roughly 75 since the 2006 fiscal year-end. The cost of the three-step increase given to employees who transitioned to AT status equates to $3.5 million annually. This figure does not include the compensation packages given to DTS employees during the 2007-2009 fiscal years.
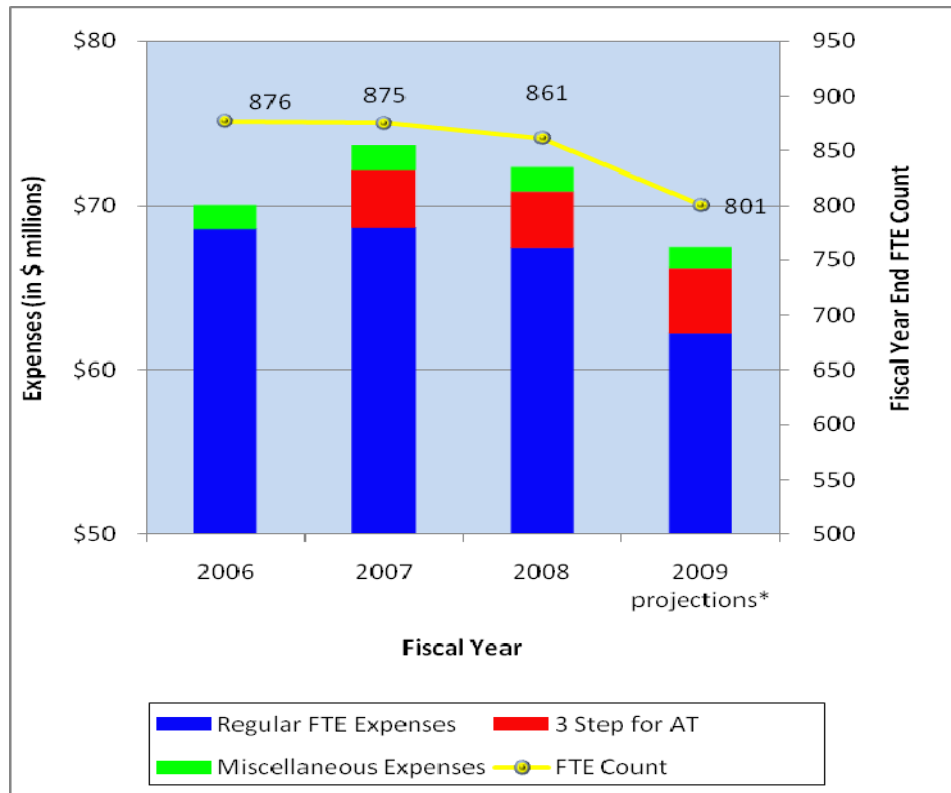
*   *Fiscal year 2009 projections were based off of actual totals as of 5/15/2009 (1840 hours)*

As seen in Figure 2.4, FTE expenses are projected to decrease by around $2.5 million by the 2009 fiscal year-end. Actual personnel costs for the period 2006 to 2009 also increased due to statewide compensation increases that resulted in higher DTS costs. These costs would have been built into user agency budgets prior to the creation of DTS. Figure 2.5 does not include the cost of these statewide compensation packages. The percentage increase and compensation package totals for the years were:

* Fiscal year 2007 – 9.48 percent ($6.7 million)

Compensation package increases represent an ongoing expense of $15.9 million.

- Fiscal year 2008 – 6.45 percent ($4.5 million)
- Fiscal year 2009 – 5.00 percent ($4.7 million)

The compensation package increases represent an annual ongoing cost to DTS of $15.9 million. It is important to note that DTS, as an internal service fund, did not have any control over the state-mandated packages and does not receive additional state-appropriated funds. Additional compensation funding must come from other sources such as rate increases. The cost of the compensation packages, coupled with the three-step increase, has raised the cost of compensating DTS employees. Without a large retained earnings reserve, DTS would have needed to raise agency rates to cover their true costs.

Retained Earnings Have Been Used To Supplement Step Increase for At-Will Employees

DTS spent surplus retained earnings to supplement the initial 3-step increase for AT employees.

When H.B. 109 was passed, DTS inherited a retained earnings balance of $10.4 million from ITS. This conflicted with the federal government allowance for 45 days worth (or $3.5 million) of working capital in retained earnings. To reduce the balance, DTS chose to fund the initial three-step increases for AT employees from the retained earnings. Figure 2.5 shows the growth of retained earnings during ITS and the linear decline in the 2007, 2008, and 2009 fiscal years.
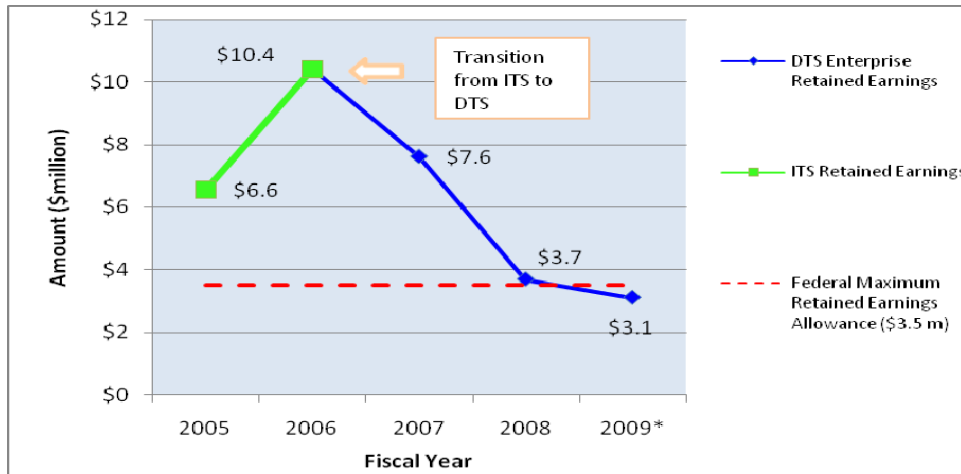
Figure 2.5 Retained Earnings Through the 2005-2009 Fiscal Years.
Under ITS, retained earnings grew to $10.4 million. DTS consumed $2.8 million in 2007, $3.9 million in 2008, and $0.6 million in 2009.

* Projected retained earnings balance in 2009

DTS is projected to use an additional $590,000 in fiscal year 2009, which would lower the retained earnings to within the federal maximum acceptable level. By reducing FTEs, DTS has been able to eliminate their dependency on retained earnings. In addition to FTE reductions, DTS will need to identify and reduce its more expensive services.
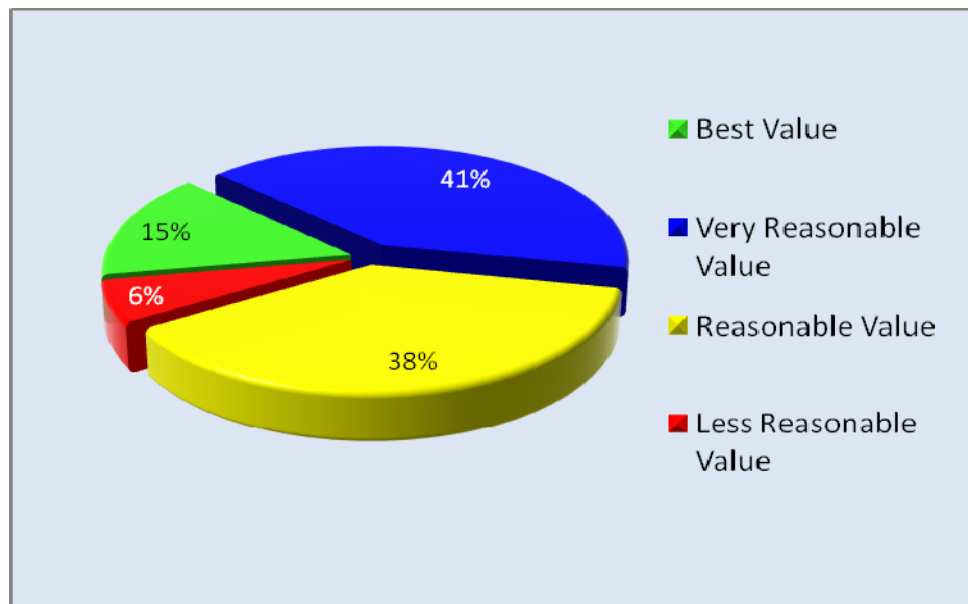
DTS Should Focus Efforts on Decreasing the Cost of Necessary Services. A number of DTS' enterprise rates were identified as average when compared to the rates of peer states and private IT providers. The expectation among lawmakers was that through economies of scale, created by the consolidation of state IT, user agency IT expenses would decrease. However, only slightly more than half of DTS' enterprise rates are considered better than average.

In order to ensure that DTS' rates charged to state agencies are fair and competitive, *Utah Code* directs DTS' CIO to conduct a periodic market analysis of DTS' rates with other public and private providers. DTS hired an outside consultant to perform an annual analysis. If certain services are deemed expensive or cost recovery is not feasible, DTS can either recommend to the Information Technology Rate Committee a rate adjustment or DTS can opt for outsourcing of the service. As an example, DTS has outsourced IT training and video conferencing because the service was neither feasible nor competitive.

Furthermore, rates must be submitted to both the Governor's Office of Planning and Budget and the Office of the Legislative Fiscal Analyst (and the Legislature) for additional approval.

The 2009 fiscal year rate analysis breaks down each enterprise rate and compares it to equivalent rates charged by private IT organizations, service providers, and peer states. Every rate is given one of four rankings (best value, very reasonable value, reasonable value, and less reasonable value). Figure 2.6 below was adapted from the 2009 rate analysis and summarizes the findings of the study.

Figure 2.6 Evaluation of DTS Enterprise Rates in the 2009 Fiscal Year. 56 percent of DTS enterprise rates were judged to be best or very reasonable value. DTS should continue to monitor and improve the rates that fall into the reasonable and less reasonable value categories.

Fifty-six percent of DTS enterprise rates were either rated as best or very reasonable value. However, 44 percent of the rates (categorized as reasonable and less reasonable) were either similar to or worse than rates of other service providers.

Most DTS Enterprise Rates Have Generally Stayed the Same. As mentioned before, once the rate changes have been proposed by the Information Technology Rate Committee, a legislative body needs to approve the new rates. Since the creation of DTS' current rate system, the majority of enterprise rates have been constant. However,

44 percent of DTS' enterprise rates are similar to or worse than rates of peer entities.

starting in the 2010 fiscal year, agency service rates will be merged within the enterprise rate. As a result, some enterprise rates will increase to cover the expenses previously charged as agency services. Figure 2.7 displays how the enterprise rate levels have changed since DTS was created.

Figure 2.7 Enterprise Rate Trends – 2007 to 2010 Approved Rates. The majority of rates maintained 2007 levels or decreased. Only 11 rates, or just over 10%, of rates increased. These rates are charged by various measures (e.g., megabit/month, per minute, device/month).

Rate Level	Increased	Decreased*	Fluctuated	Stayed the Same	Discontinued	Changed to Special Billing Agreement	Total
Count	11	26	5	34	8	9	93

* *The majority of rate reductions were for storage and microwave services (19 rates).*

Figure 2.7 indicates that most enterprise rates have stayed the same. DTS has made the greatest improvements (and thus lowered rates) in reducing the cost of storage and microwave services. Throughout the years, DTS has discontinued the service and rates for eight services in addition to adjusting certain services as special billing agreements. A special billing agreement indicates a unique service that does not fall within DTS' established service mix. DTS should continue to evaluate the rates that fall within the reasonable and less reasonable categories and determine how each related service can be improved.

Recommendations

1. We recommend that DTS accelerate consolidation efforts that focus on reducing redundancy, increasing resource sharing, and improving efficiency.

2. We recommend that DTS continue to create and promulgate IT standards.

3. We recommend that DTS require a business case analysis for purchases over $50,000 as required in *Utah Code*.

4. We recommend that DTS work with agencies to tag and track agency IT assets.

5. We recommend that DTS continue to evaluate rates that fall within the reasonable and less reasonable categories and determine how the related service can be improved.

Chapter III
DTS Strategic Planning
Needs to Improve

Individual agency Information Technology (IT) plans do not meet code requirements and lack sufficient review by the Department of Technology Services (DTS). In addition, the required statewide IT strategic plan does not adequately outline how agencies can improve the efficiency of state IT. DTS should strengthen its internal planning process through improving its review of agency IT plans, developing statewide actionable performance and progress measures, and establishing time tables for meeting major strategic objectives.

Agency IT Plans and Review Process Needs to Improve

Agency-submitted IT plans have not been in compliance with either the *Utah Code* or the administrative rules promulgated by DTS. Further adding to this concern, DTS chose to discontinue its formal review of agency-submitted plans. We believe this insufficient planning has diminished interagency collaboration and weakened DTS' ability to provide the most efficient and effective IT services for the state.

Agency IT Plans Do Not Fulfill Code Requirements

Agency IT plans submitted for fiscal years 2008 and 2009 were not in compliance. State agencies are required to create and submit annual IT plans to DTS. *Utah Code* specifies the information that must be included in agencies' IT plans. DTS provided more detail for IT plans in administrative rules, and agencies are also not complying with these guidelines. Figure 3.1 lists the minimum elements that must be included in an agency IT plan.

Agency IT plans were not compliant with *Utah Code* from 2008-2009.

Figure 3.1 IT Plan Requirements Listed in *Utah Code* 63F-1-204. The following seven items are required by code to be included in state agencies' IT plans, which are to be reviewed annually by DTS.

- The information technology objectives of the agency

- Any performance measures used by the agency for implementing the agency's information technology objectives

- Any planned expenditures related to information technology

- The agency's need for appropriations for information technology

- How the agency's development of information technology coordinates with other state and local governmental entities

- Any efforts the agency has taken to develop public and private partnerships to accomplish the information technology objectives of the agency

- The efforts the executive branch agency has taken to conduct transactions electronically in compliance with section 46-4-503

DTS' agency IT plan template only contained 2 of the 7 required elements of information required by *Utah Code*.

As shown in Figure 3.1, the code requires DTS to review agency IT plans for seven specific pieces of information. The template that DTS used in fiscal year 2009 only covered two of the seven required areas. Agency IT plans submitted prior to 2009 were also found to have similar deficiencies. In addition, the information provided by state agencies and accepted by DTS could be characterized as a list of IT projects rather than a guiding IT plan. We interviewed all agency IT directors and discovered that many are not using the agency IT planning process intended by the code. We were told that, once completed, the plan provides little value to the agency, and some directors do not look at the plan until it is due again the following year. Finally, IT directors stated that DTS senior management did not provide any feedback regarding these plans.

An IT plan is a tool that helps an agency address its changing technology needs. IT plans are also used for carrying out an agency's mission and objectives. Commonality of annual plan design and purpose for all agencies creates a systematic approach for change across the entire enterprise as well as a forum for aligning agencies with overall enterprise goals and standards. Figure 3.2 highlights the benefits and value of IT planning.

A Performance Audit of the Department of Technology Services (August 2009)

Figure 3.2 Benefits of IT Planning. The five items below list the value of IT plans as outlined in H.B. 109.

- Create and track performance measures to monitor agency success or failures in implementing goals for the coming year

- Help agencies track their IT expenditures

- Align agency IT plan with the state's strategic IT plan

- Help agencies determine if there are similar projects that they can partner with in other state agencies

- Help agencies plan for upcoming IT expenditures

DTS needs to better communicate to agencies the importance of IT plans and how proper planning can help both user agencies and DTS align enterprise and agency goals and objectives. In this instance, the most beneficial outcome would be better coordination of agency IT plans and the overall statewide IT strategic plan.

Discontinuation of Formal IT Plan Review Has Resulted in Diminished Oversight and Efficiency

DTS has not conducted a formal written review of agency IT plans as required in section 63F-1-204 of the *Utah Code* for the last two years. The code specifically requires the DTS Division of Enterprise Technology and the Division of Integrated Technology to provide the CIO with a written analysis of each IT plan submitted. The last time IT plans were reviewed was in August 2006 for the fiscal year 2007 IT plans. We believe that since DTS did not formally review the IT plans, agencies were not fully aware that they were not complying with *Utah Code*. In addition, by not reviewing the plans, DTS has not benefited from the value of the IT planning process as the legislation intended.

DTS senior management had previously been made aware of deficiencies in IT plans. During the 2006 review of 2007 IT plans by the Division of Enterprise Technology, the following recommendations were given in the report:

Formal review of agency IT plans has not been completed for 2008-2009.

In general, agency plans do not provide detail that is adequate for impact analysis. Agency plans do not seem to emphasize effective utilization of shared infrastructure nor do they adequately seem to leverage other agency centers of excellence and related statewide and other agency projects. **Visibility into agency project details by all agencies would improve communication and reduce project duplication**. (emphasis added)

This internal analysis highlighted problems and concerns with the existing IT planning process. Specifically concerning is the lack of interagency IT project collaboration and a general pattern of disregard for the need for IT plans. We believe that this warning of IT plan deficiencies should have prompted senior DTS management to improve the planning process earlier in DTS' development.

Statewide IT Strategic Plan Can Be Enhanced

The 2006-2008 statewide IT strategic plan gave insufficient guidance and lacked time lines on how major agency objectives outlined in H.B. 109 would be implemented. As a result, purchases were made by both agencies and DTS where better planning and interagency communication could have prevented unnecessary expenditures. The strategic plan developed in 2009 addressed a number of these issues and should provide better direction.

Past DTS Strategic Plan Was Neither Actionable nor Measurable

DTS is required to create a strategic IT plan for the executive branch. *Utah Code* requires this plan to be coordinated with the agency IT strategic plans. It was our understanding that this strategic plan would be the guiding document that directed how DTS would carry out the optimization of state IT resources. However, many of the staff we interviewed were unfamiliar with the plan. Further interviews with the state's 19 IT directors revealed that several were unaware of both the existence of the plan and how their agencies were responsible for the plan's execution.

The 2006-2008 statewide IT strategic plan broadly defined the direction DTS was proceeding in reshaping state IT but did not

establish time lines as to how and when the agency would accomplish legislative expectations. The result was that many of those expectations regarding the reduction of duplication and increasing efficiencies have not been completed. In addition, there are limited performance measures available to aid toward DTS meeting its goals in a reasonable time frame.

Lack of Timely Strategic Plan Led to Avoidable IT Purchases

One significant effect of the previous planning process was that some agencies upgraded their data centers without knowledge of the upcoming consolidation. Senior DTS management maintains that the data center consolidation currently in process was always part of the broader long-range IT strategic plan and that efforts were made to communicate that plan to user agencies. Yet, interviews with IT directors revealed that the majority were unaware of the plan to consolidate data centers until approximately January 2009. As a result, some agencies made acquisitions to upgrade their data centers, unaware that the consolidation of all data centers was forthcoming. These data center improvements were costly and may have been unnecessary. We believe that DTS could have done more to communicate a change of this significance to user agencies.

We have identified three agencies that expended funds on data center upgrades that could have been reduced had the agency been better informed about the data center consolidation. In early 2008, the Department of Corrections spent approximately $700,000 on new servers and storage equipment (which may be incorporated in the new data center), and the Department of Workforce Services spent over $112,000 on a new air conditioning system and other upgrades for their data center. Furthermore, in 2007, the Department of Natural Resources expended $24,000 for a new data center air conditioning unit. In addition to the above examples, other agencies have purchased new servers that do not fit the consolidation plan model. As a result, some purchased equipment will be surplus because it does not fit the current consolidation model.

Server consolidation plan and timetables were not sufficiently communicated to IT directors and agencies.

It appears that DTS senior management's communication with user agencies concerning the upcoming data center consolidation was vague and resulted in an unclear message. A review of the IT

directors' meeting minutes from January 2008 to November 2008 found no mention of the plan to consolidate data centers.

We believe that consolidating the state's data centers is an important and appropriate step by DTS in making state IT more efficient. However, we are concerned by DTS' lack of planning and appropriate communication. Because DTS did not effectively communicate the details of the data center consolidation, some state agencies invested in their facilities with the expectation that with new equipment their facility would not be consolidated. The statewide strategic plan is intended to be a long-range vision that DTS uses to communicate the direction it is taking state IT to state agencies. We believe that better planning by DTS could have prevented unnecessary purchases.

New Strategic Plan Should Provide Better Direction for State IT

New strategic plan addresses enterprise direction for DTS and state agencies.

In 2009 DTS developed a new strategic plan that more adequately addresses IT planning concerns. We believe that the 2009-2012 plan better addresses concerns mentioned throughout this report. The new plan appears to contain more actionable performance measures and better coordination of the plans DTS produces.

In preparation for improving their IT planning process, DTS will develop organizational plans that specifically address how each agency will meet overall strategic planning objectives. These execution plans will need to be interconnected to the organizational goals that DTS lays out in the state strategic plan. With this level of planning, DTS can better facilitate the collaboration of interagency projects and thus increase the sharing of resources. This has not been done enough in past years, but DTS has made several improvements to their IT planning area that should work to address concerns.

DTS' new IT planning coordinator will ensure that DTS and agencies comply with *Utah Code* requirements.

DTS has created an IT planning coordinator position that will be responsible for ensuring that DTS goals are incorporated into DTS operations. Specifically, the planning coordinator will oversee the DTS annual IT planning process as well as the annual report/ accomplishments. The expectation is that this position will coordinate the IT needs of state agencies with the DTS strategic plan. In addition, this new oversight is to examine agency IT plans for

duplication of effort and ensure DTS is in compliance with state statute (H.B.109).

Improved Performance Measures and Timetables Are Needed

DTS needs to better track how agencies are working toward implementing the goals of H.B. 109. Developing and reporting key performance measures and requiring timetables on strategic objectives are needed to further optimize state IT. As stated earlier, despite the deficiencies of past planning activities, DTS has recently developed a new strategic planning process that should better address prior problems.

DTS' Use of Performance Measures Is Too Limited

Currently, DTS performance tracking is primarily related to customer service issues that are tied to the service level agreements between user agencies and DTS. Few of these measures have been geared toward improving internal efficiency or aimed at tracking DTS' ability to reduce IT costs. Providing customer service to state agencies is one of DTS' functions, but H.B. 109 is much broader in defining DTS' responsibilities. DTS should develop performance measures that more closely follow the agency's internal cost reduction efforts and generally convey how DTS is bringing value to state government.

Strategic plans lack performance measures that assess progress toward strategic goals.

DTS Needs to Track More Than Customer Service Metrics. There are several performance measures that DTS might consider tracking and publishing that will better demonstrate DTS' level of efficiency and effectiveness. These measures could include items such as:

- Server CPU capacity
- Server memory utilization
- Storage capacity

DTS should work to develop performance measures like those above that more accurately capture internal efficiency and cost savings gained through the optimization of state IT. With this information, DTS can continually track its progress beyond customer service and better communicate with its stakeholders.

Governor's Balanced Scorecard May Be the Appropriate Reporting Mechanism. DTS currently uses the Governor's Balanced Scorecard as the reporting tool for DTS accomplishments. When used appropriately, the Balanced Scorecard is an ongoing analysis/reporting mechanism that both helps organizations stay aligned to strategic objectives and provides a venue to track progress. We believe that DTS should include additional measures in this report that better demonstrate how the agency is bringing value to the state.

Incorporating Deadlines into New IT Plan Will Help Ensure Consolidation Projects Are Completed

Many of the areas that DTS intended to optimize or consolidate have not yet taken hold on a statewide level. We believe that part of the reason some projects have been initiated but not yet completed is the absence of adequate timetables. For example, DTS' work in establishing an antivirus standard or consolidating data centers has the potential to save the state considerable funds. Yet, after four years, many DTS projects are just starting and are incomplete. We believe that DTS should include time lines in its IT plans for its major consolidation and state enterprise objectives.

As an example, for the data center consolidation plan, DTS could increase accountability with deadlines for its future IT consolidation projects. DTS' new strategic plan currently calls for a small number of projects to be completed under specific time lines. The plan itself reflects the 2009-2012 planning cycle. This means that some projects, envisioned in the plan created in 2005 may not actually be completed until 2012. Many of these projects can and should be accelerated by DTS so that the state can benefit from the ongoing cost savings.

In addition to DTS' need for timetables, DTS needs to adequately forewarn user agencies of upcoming IT infrastructure changes. DTS' 2009-2012 strategic plan states:

> Current Legacy applications must be removed from the current mainframe system by 2013.

This type of statement is new to DTS and is an important step in giving agencies notice on how DTS will move away from supporting certain technologies or redundant systems. Establishing project

DTS should include timetables of completion for enterprise initiatives.

timetables gives state agencies affected by the project adequate time to prepare and budget for consolidation. This will reduce sunk costs seen in the most recent data center consolidation. In addition, when reviewing agency IT plans, DTS can determine if agencies are making reasonable progress toward meeting enterprise objectives.

Recommendations

1. We recommend that the new IT operational plans provide an actionable road map for fulfilling the expectations in H.B. 109 of reducing redundancy and duplication.

2. We recommend that DTS require state agency plans to fulfill all code requirements and that DTS review agency IT plans to increase interagency collaboration.

3. We recommend that DTS develop performance measures to better track infrastructure efficiencies.

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Chapter IV
Accountability and Oversight over DTS Could Be Enhanced

Department of Technology Services (DTS) management has made customer service its first priority. DTS, following this priority, as an internal service fund, has few incentives to reduce costs and minimize the service charges to state agencies. As a result, we believe additional clarity from the Legislature is needed to better direct DTS in fulfilling the intent of H.B. 109.

Legislative oversight of DTS has diminished over the last few years, compounding the problem of DTS' interpretation of H.B. 109. Prior to the 2007 Legislative Session, DTS reported to various oversight bodies, including the Utah Technology Commission. Currently, DTS reports to an interim committee and receives limited input from an advisory board. Increased legislative oversight is needed to improve DTS' accountability.

Business Focus and Structure of DTS Is Problematic

DTS' focus on customer service has made it difficult for the organization to take advantage of opportunities to consolidate and optimize services that could result in cost savings for the state as a whole. Cost reduction measures for DTS have been a lower priority because of DTS' structure as an internal service fund. If user agencies are satisfied with the status quo, there is little incentive for either agencies or DTS to change spending or service levels. We believe that DTS needs to balance these conflicting needs in order to work toward reducing IT costs while still providing adequate service to the agencies.

Customer Service Has Been the Top Priority for DTS

Throughout the audit, senior DTS officials have maintained that they believe their mission is to provide more service for the same cost. From our observations, it is clear that service has been the primary

focus of DTS leadership. To identify customer satisfaction, DTS uses an automated customer survey form to track service level performance, which agencies complete after a service issue is remediated. Since the inception of the customer surveys, DTS has seen its average customer satisfaction rate increase from 4.2 to 4.6 out of a possible score of 5.

When DTS was formed, *Utah Code* gave the executive director/CIO discretion on how best to carry out the intention of H.B. 109. The CIO chose between two options: (1) DTS could lower costs by cutting marginal services, or (2) DTS could provide more or better service for the same costs. The CIO stated that DTS has been working toward providing the best service to state agencies while attempting to reduce costs. We believe that DTS' customer-focused approach does not encourage the reduction of duplication and can be contrary to creating a more efficient and cost effective operation.

DTS Does Not Have Appropriate Direction or Incentives to Reduce Costs

In the current environment, DTS has little incentive to reduce costs.

Given that all state agencies are required by the Utah Technology Governance Act to exclusively use DTS for IT services, we believe that a strict business model is not appropriate. From an agency's perspective, DTS is the sole source provider for all information technology services, so there are no competitive market forces driving rates down or calling for service improvements. In light of this lack of competition, we believe it may be inappropriate for DTS to focus primarily on customer service for state agencies. Instead, we believe that DTS should better balance customer service with IT cost control.

The CIO sees this "program-balancing" problem, citing that agencies have few incentives to share IT resources. Many agencies are more concerned with maintaining control of their individual IT assets than creating efficiencies through centralization with other agencies. According to *Utah Code*, DTS is tasked with increasing the sharing of IT resources, yet our review found little indication that DTS has been successful in doing so.

Internal Service Fund Structure
Creates Conflicting Goals

DTS' status as an internal service fund reduces the department's incentive to lower IT costs. Any reduction in user agency cost is a direct loss of revenue for DTS, which explains why improving customer service at the same cost has been the department's goal. We concur with DTS management that compelling agencies to follow standards and share IT resources has been extremely challenging for DTS, and has been made more difficult by DTS' dependence on agencies' expending revenues on IT services.

Although we recognize that it is important for DTS to be a good provider of services, being the sole source provider of these services calls DTS' customer-first approach into question. We believe that the Legislature should clarify their intent by determining whether DTS should either shift their focus toward accelerating the consolidation and reducing the cost of state IT or if they should continue their current practice of maximizing customer service. Clearly, the concepts of customer service and cost reduction are not mutually exclusive in competitive business models.

Enhanced Oversight Can Improve
DTS Operations

Legislative oversight of state IT has been diminished over the last six years. This reduction means that the only legislative oversight and critique of DTS' strategic plan is very abbreviated. More direction from the Legislature could strengthen DTS' authority over state agencies to reduce statewide IT redundancies.

Oversight of DTS Has Been
Diminished

During the 1994 Legislative Session, the Legislature created the Information Technology Commission (ITC) to study Utah's present and future IT needs and make recommendations regarding the coordination and governance of the IT needs for all three branches of government. The ITC became the primary oversight of state IT. The ITC's success in providing oversight for both coordinating state IT operations and guiding future state development was at least partially

Legislative oversight over DTS has been reduced through the years.

due to the makeup of their commission. The 21 members consisted of representatives from all three branches of state government, local government, the education community, private citizens, and providers of IT.

The ITC's makeup was changed during the 2003 Legislative Session. The organization was renamed the Utah Technology Commission (UTC) and its membership was reduced to 13, all of which were either legislative representatives or appointed by an elected official. The UTC was short lived and was repealed two years later, with its functions being passed on to the Public Utilities and Technology Interim Committee. The remaining outside influence with authoritative power over state IT is the Technology Advisory Board (TAB), which was created by H.B. 109.

Unfortunately, little oversight concerning fulfillment of H.B. 109 or direction given to DTS has been provided by either the TAB or the Public Utilities and Technology Interim Committee. Minutes we reviewed from the past three TAB meetings demonstrate that the committee only acts as an advisor to DTS' CIO. The interim committee has been less active and has not provided direction or input regarding DTS' activities, but does receive a copy of DTS' annual report. Since the inception of DTS, the only interactions with the interim committee consisted of brief presentations in November 2007 and in June 2009.

Additional Committees Scrutinize Specific Areas. DTS is accountable to other committees and offices, but the influence of these entities over DTS is limited. The various oversight bodies and their areas of emphasis include:

- Rate Committee – Approves all rate changes each year
- Governor's Office- Receives DTS' annual report, approves rates, budgets, FTEs and capital authorization
- Capitol Facilities & Government Operations Appropriations Subcommittee- Also approves rates, budgets, FTEs and capital authorization for DTS

DTS has not been held accountable to any overseeing body that ensures their compliance with H.B. 109. As discussed throughout the audit, adequate checks and balances were not found internally within

DTS or externally from the various advisory boards, commissions, or committees. Stronger oversight will improve DTS and ensure that they fulfill all requirements in *Utah Code*. Some oversight measures could include:

- Strengthening legislative oversight by appointing a study committee to monitor how consolidation efforts have progressed and ensure that DTS fulfills the intent of H.B. 109

- Requiring a detailed audit follow-up by the Legislature in 2011

In addition to strengthening oversight of DTS, clarifying DTS' authority could optimize coordination between agencies and reinforce agency compliance with DTS' direction.

Strengthening of DTS' Authority
Could Expedite Consolidation Efforts

Throughout the audit, DTS officials told us they were hesitant to force agencies to follow their direction regarding consolidation efforts or the sharing of IT resources. DTS-developed standards, administrative rules, or directives may not always benefit every agency; occasionally, some changes will increase costs for an individual agency but, overall, should decrease costs for the state as a whole.

The value of DTS is dependent upon what they are able to accomplish in curbing IT costs while providing adequate service to user agencies and security for the state. *Utah Code* needs to clarify specifically what authority DTS should have so agencies will comply with DTS' standards and direction. The adoption and enforcement of standards, created through sound cost-benefit analyses, are ways that DTS can make IT more efficient.

Utah Code **could be clarified to define DTS' authority over state IT.**

Additional support of IT optimization should come from the executive branch. For example, when the State of Michigan created their Department of Information Technology, their governor issued an executive order outlining the duties and authority of the newly created department. Contained within the order was the following language:

The State of Michigan issued an executive order for state agencies to fully cooperate with their Department of Information Technology.

The Department shall have the full cooperation of executive branch departments and agencies in developing and implementing the sharing of data and information throughout the executive branch.

DTS has the potential to reform Utah's IT for the better. With proper support from the Legislature, executive branch, and agencies, DTS will bring about the changes outlined in H.B. 109.

Recommendations

1. We recommend that the Legislature strengthen the oversight and accountability of DTS by either appointing a legislative study committee or requiring a future follow-up audit.

2. We recommend that the Legislature clarify DTS' authority over state IT.

Appendix

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Appendix A

Utah Code 63F-1-104

The department shall:

(1) lead state executive branch agency efforts to reengineer the state's information technology architecture with the goal of coordinating central and individual agency information technology in a manner that:

(a) ensures compliance with the executive branch agency strategic plan; and

(b) ensures that cost-effective, efficient information and communication systems and resources are being used by agencies to:

(i) reduce data, hardware, and software redundancy;

(ii) improve system interoperability and data accessibility between agencies; and

(iii) meet the agency's and user's business and service needs;

(2) (a) coordinate an executive branch strategic plan for all agencies;

(b) identify best practices from agencies and other public and private sector entities; and

(c) develop and implement processes to replicate information technology best practices and standards throughout the executive branch;

(3) oversee the expanded use and implementation of project and contract management principles as they relate to information technology projects within the executive branch;

(4) serve as general contractor between the state's information technology users and private sector providers of information technology products and services;

(5) work toward building stronger partnering relationships with providers;

(6) develop service level agreements with executive branch departments and agencies to ensure quality products and services are delivered on schedule and within budget;

(7) develop standards for application development including a standard methodology and cost-benefit analysis that all agencies shall utilize for application development activities;

(8) determine and implement statewide efforts to standardize data elements and determine data ownership assignments among executive branch agencies;

(9) develop systems and methodologies to review, evaluate, and prioritize existing information technology projects within the executive branch and report to the governor and the commission on a semiannual basis regarding the status of information technology projects; and

(10) assist the Governor's Office of Planning and Budget with the development of information technology budgets for agencies.

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Appendix B

List of Terms

<u>IT Strategic Plan</u> – Interchange of information related to information technology between executive branch agencies

<u>Data center</u> – A centralized repository for the storage, management, and dissemination of data

<u>Information technology</u> – All computerized and auxiliary automated information handling, including:
   (a) Systems design and analysis
   (b) Acquisition, storage, and conversion of data
   (c) Computer programming
   (d) Information storage and retrieval
   (e) Voice, radio, video, and data communications
   (f) Requisite systems controls
   (g) Simulation
   (h) All related interactions between people and machines

<u>State information architecture</u> – A logically consistent set of principles, policies, and standards that guide the engineering of state government's information technology and infrastructure in a way that ensures alignment with state government's business and service needs

<u>Interoperability</u> – The ability of diverse systems and organizations to work together

<u>Operating System</u> – Is the interface (software program) between computer hardware and a user

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Agency Response

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STATE OF UTAH
*Department of
Technology Services*

**J. STEPHEN
FLETCHER**
*CIO
Executive Director*

**JON M.
HUNTSMAN, JR.**
Governor

**GARY R.
HERBERT**
Lieutenant Governor

July 22, 2009

John M. Schaff, CIA
Auditor General
Office of the Legislative Auditor General
W315 Utah State Capitol Complex
Salt Lake City, UT 84114

Dear Mr. Schaff,

The Department of Technology Services (DTS) appreciates the opportunity to review a draft of *A Performance Audit of the Department of Technology Services*. We appreciate the professionalism and cordial manner in which you and your staff conducted the analysis, and welcome the review of the agency. Thank you for examining the progress of the Department of Technology Services from the inception to the current date. We agree with the recommendations of your office, which will allow us to continue to strengthen our processes.

As noted in the Audit report, DTS was officially established by Governor Jon M. Huntsman, Jr. and the State Legislature in 2005 with the passage of the Utah Technology Governance Act (H.B.109), which called for a major restructuring of the State's Information Technology (IT) services. Since that time, DTS has embarked upon an unprecedented transition to consolidate all IT resources and services for the State of Utah's executive branch. This singular department operates with the mission to ***bring value and innovation to Utah through service and technology***.

Since that time, the department has made significant progress in the consolidation and optimization of IT efforts based on a plan developed three years ago when the agency was formed:

1. Assess and Identify Plan
2. Establish Organization Structure and Build Relationships with Agency Customers
3. Establish Processes and Procedures
4. Performance Metrics and Service Level Agreements
5. Continued Optimization

DTS is currently on Phase 5, Continued Optimization, of the Plan. For the first time, a baseline has been developed to measure success in Information Technology, including standards for cost savings. We have achieved many significant changes and successes throughout the consolidation process, including:

- Transitioned over 900 employees to new organization model, including the reduction of 114 FTEs, which has resulted in cost savings for both DTS and State Agencies of $11.4 million

- Developed rates for all IT services based on cost recovery, as required in *Utah Code*. Enterprise rates have combined services that were previously provided separately in the enterprise and agency-specific areas, enabling DTS to efficiently align services and resources to the business needs of State agencies.
- Offered new services at no additional cost: enterprise security, enterprise infrastructure support, and increased network bandwidth by 650 percent along the Wasatch Front
- Recognized cost efficiencies through economies of scale from enterprise purchasing capabilities, including savings of $1.35 million in FY2008 and $2.8 million in FY2009 in PC purchasing costs
- Established Service Level Agreements between DTS and Agencies to define the relationship between cost and service, providing for the first time in the State a common understanding of services provided and metrics for support

We appreciate the opportunity to respond to the Audit Recommendations and submit these comments on behalf of the Department of Technology Services.

Auditors recommend that DTS accelerate consolidation efforts that focus on reducing redundancy, increasing resource sharing, and improving efficiency.

DTS agrees that consolidation efforts focused on reducing redundancy, increasing resource sharing, and improving efficiency are imperative for the success of the State. DTS has achieved much success through optimization efforts and will continue to seek efficiencies.

As noted in the Audit report, DTS has incurred $15.9 million in unfunded compensation increases through FY2009. However, during the same time period, the agency has seen an overall cost savings of $14.5 million through reductions in FTEs, rate reductions, and renegotiation of communication vendor contracts, and expects future savings in FY2010 of an additional $4 million. DTS has outlined several optimization efforts in the 2009-2012 Strategic Plan that are focused on reducing redundancy, increasing resource sharing, and improving efficiency. DTS is currently working on a Data Center Consolidation project, which will result in a savings to the state of $4 million annually.

The consolidation of IT Resources includes human resources. It was imperative for DTS to consolidate IT employees into the organization before full optimization of IT services could take place. DTS transitioned over 900 IT employees to the new collaborative, responsive and flexible organization model. The organization allows DTS to manage effectively and provide services efficiently on an ongoing basis. DTS has successfully reduced the number of agency FTEs by 114, the majority of which have been realized through managed reduction and attrition, resulting in a cost savings to the state of $11.4 million.

Utah Code directs DTS to focus on providing cost-effective services and meet the agencies' service needs. Early on, it was determined that DTS would be better able to optimize with the organization, processes, and baseline in place first so as not to affect business continuity.

Auditors recommend that DTS continue to create and promulgate IT standards.

DTS has developed, implemented, and documented many IT standards and agrees with the recommendation that this practice continue. A majority of previously established IT standards have

carried over to DTS standards. The early standards have been documented in Technical Bulletins, which are currently located on the DTS Web site dating to 1982. With the introduction of the Architecture Review Board, new DTS standards are presented and approved. All standards are communicated to IT Directors on a monthly basis and are documented on the DTS Web site. At the time of standards implementation, DTS must review incumbent contracts, ensure adequate funding, and develop best practices. DTS must allow for time to transition all agencies to the standard.

Auditors recommend that DTS require a business case analysis for purchases over $50,000 as required in Utah Code.

DTS agrees with the recommendation to require a business case analysis for purchases over $50,000 and has strengthened the current process to ensure compliance. While this process has already been instituted, we appreciate the auditor's assessment of DTS' process and discovering the weaknesses in the process. DTS has taken steps to ensure our process is in full compliance with the *Utah Code* and Administrative Rules.

Auditors recommend that DTS work with agencies to tag and track agency IT assets.

DTS is required to authorize the purchase of agency IT assets. It is currently the responsibility of the agencies to tag and track the agency-owned IT assets. DTS currently tags and tracks DTS-owned IT assets, and agrees with the recommendation to work with agencies to tag and track agency IT assets. DTS has a plan in place to implement an inventory tagging and tracking process with the agencies.

Auditors recommend that DTS continue to evaluate rates that fall within the reasonable and less reasonable categories and determine how the related service can be improved.

DTS agrees with the recommendation to evaluate rates and will review all rates annually through an independent study to ensure they remain competitive. As required in *Utah Code*, DTS has developed rates for all IT services based on cost recovery. The majority of DTS rates have not increased in two years. DTS has been able to reduce expenses through efficiencies in the organization. DTS continually reviews all rates in order to improve efficiencies for state agencies.

Auditors recommend that the new IT operational plans provide an actionable road map for fulfilling the expectations in HB 109 of reducing redundancy and duplication.

DTS agrees with the recommendation. The DTS IT operational plans are coordinated with the DTS Strategic Plan and the IT Plans to ensure successful execution of the strategic goals and provide an actionable roadmap to reduce redundancy and duplication. Time frames will be included in IT operational plans, based upon information in the Agency IT Plans.

Auditors recommend that DTS require state agency plans to fulfill all code requirements and that DTS review agency IT plans to increase interagency collaboration.

DTS agrees with the recommendation. As stated in the Audit, DTS has revised the Planning process for FY2010 to be more comprehensive, to include a review, to increase interagency collaboration, and to fulfill all code requirements. DTS' IT Planning Process has improved significantly in order to be more in compliance with *Utah Code* and to also be better incorporated

into the DTS Strategic Plan and the Operational Plans. The DTS Planning Model (Appendix 1) demonstrates the relationship and coordination between the Agency Business Plans, DTS Strategic Plan, Organizational IT Plans, and the DTS Enterprised Plan.

Auditors recommend that DTS develop performance measures to better track infrastructure efficiencies.

DTS agrees with the recommendation and has plans in place to incorporate infrastructure efficiency metrics on the Balanced Scorecard. When additional optimization processes are implemented, DTS performance measurements will be altered to better track infrastructure efficiencies. The measures recommended in the audit will be implemented as planned in conjunction with the completion of the Data Center Consolidation project.

Auditors recommend that the Legislature strengthen the oversight and accountability of DTS by either appointing a legislative study committee or requiring a future follow-up audit.

Auditors recommend that the Legislature clarify DTS' authority over state IT.

DTS welcomes the opportunity to work more closely with Legislators in the future.

Once again, thank you again for the professional manner in which the audit was conducted and the opportunity to respond to the draft report. DTS has already made efforts to implement procedures in accordance with the audit recommendations and intends to improve our processes to continue to reduce redundancy, increase resource sharing, and improve efficiencies for the state of Utah.

Thank you for the report and the continued excellence of your office.

J. Stephen Fletcher
CIO and Executive Director
Department of Technology Services

Appendix 1

The DTS Planning Model demonstrates the relationship and coordination between the Agency Business Plans, DTS Strategic Plan, Organizational IT Plans, and the DTS Enterprised Plan. The Business Enterprise Group will review enterprise business opportunities that will contribute to the Plans.
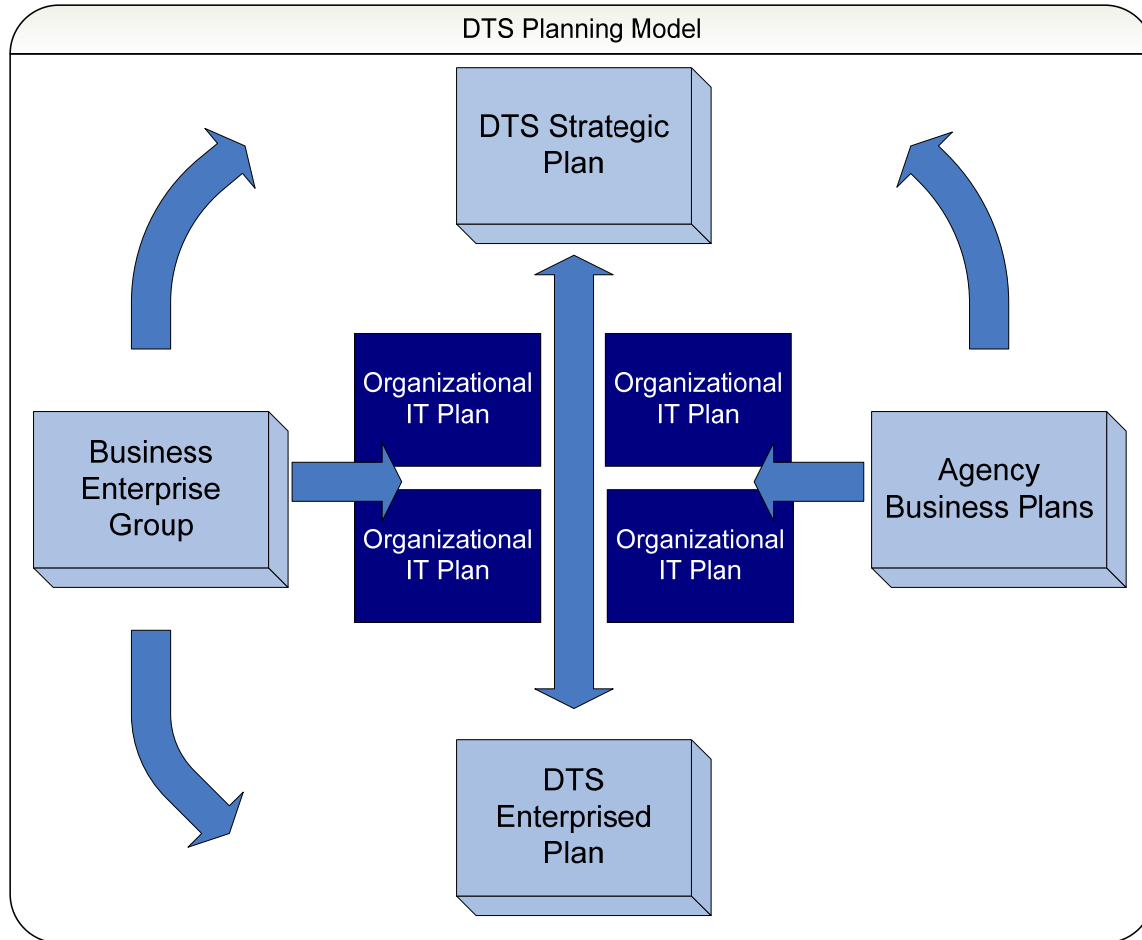
DTS Planning Model

	DTS Planning Model
AGENCY BUSINESS PLANS	• Individual Agencies provide Annual Business Plans with IT requirements based on budget and legislation
DTS STRATEGIC PLAN	• Establish and maintain a clear alignment of the State's IT resources to its business needs • Define long term IT direction and initiatives
ORGANIZATIONAL IT PLANS	• Identify IT requirements that directly address the business needs of customers • Proactively collaborate with customers on the delivery of IT strategies and solutions to meet these needs
BUSINESS ENTERPRISE GROUP	• Comprised of representatives from GOPB, DTS, DAS, and DHRM • Provide direction for DTS on Enterprise initiatives
DTS ENTERPRISED PLAN	• Identify similar Agency needs and integrate an Enterprise plan when possible • Provide DTS internal initiatives to meet multi-agency or Statewide needs