REPORT OF

THE

STATE AUDITOR

STATE OF COLORADO
DEPARTMENT OF REVENUE
INCOME TAX INITIATIVE PROJECT

PERFORMANCE AUDIT
March 2000

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STATE OF COLORADO

J. DAVID BARBA, C.P.A.
State Auditor

OFFICE OF THE STATE AUDITOR
(303) 866-2051
FAX (303) 866-2060

Legislative Services Building
200 East 14th Avenue
Denver, Colorado 80203-2211

March 29, 2000

Members of the Legislative Audit Committee:

This report contains the results of a performance audit of the Income Tax Initiative Project. The audit was conducted pursuant to Section 2-3-103, C.R.S., which authorizes the State Auditor to conduct audits of all departments, institutions, and agencies of state government. The report presents our findings, conclusions, and recommendations, and the responses of the Department of Revenue.

J. David Barba

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OFFICE OF THE STATE AUDITOR **REPORT SUMMARY**

J. DAVID BARBA, CPA
State Auditor

State of Colorado Department of Revenue
Income Tax Initiative Project
Performance Audit
March 2000

Authority, Purpose, and Scope

This audit was conducted under the authority of Section 2-3-103, C.R.S., which authorizes the Office of the State Auditor to conduct performance audits of all departments, institutions, and agencies of state government. The audit was undertaken to address concerns raised about the failure of the Department of Revenue's $12 million Income Tax Initiative (ITI) project. The audit was conducted in accordance with generally accepted government auditing standards. Our procedures included reviewing documentation, interviewing current and former staff of the Department of Revenue, and analyzing data. Audit work was conducted between October 1999 and March 2000.

The purpose of the audit was to evaluate the Department's management of the ITI project and determine the reasonableness of the costs incurred. We gratefully acknowledge the assistance and cooperation extended by management and staff at the Department of Revenue. The following summary provides highlights of the comments, recommendations, and Department responses contained in the report.

Overview

The Department of Revenue is statutorily responsible for collecting state taxes, including income and sales taxes. In Fiscal Year 1999 the Department recorded about $3.6 billion in income tax revenue. This represents about 68 percent of the total tax revenue collected by the Department on behalf of the State. In 1994 the Department began in-house development of a new computerized tax processing system to replace its antiquated 35-year-old system. During the first two and a half years, the Department worked on identifying basic business requirements for the new system and on systems design. In September 1997, systems development work began. The Department originally planned to complete the project in September 1998, but later realized that a 1998 completion would not be feasible, because development was taking longer than expected. A new completion date of January 1, 1999, was established. However, the Department determined in November 1998 that the project would not be completed by that date and halted the project. In January 1999, an outside consultant determined that "no less than a completely different approach to every aspect of the effort, from design to development to project management must be implemented in the very near term to make the project viable...."

For further information on this report, contact the Office of the State Auditor at (303) 866-2051.

The Failure of the ITI Project Raises Serious Concerns

The failure and termination of the ITI project raises serious concerns about the State's management of complex, costly information systems projects. The ITI project cost the State about $10 million after deducting salvage value. This represents a significant expenditure, resulting in minimal benefits to taxpaying citizens. In retrospect, it is clear that the Department was ill-equipped from either a management or a staffing perspective to undertake a complex initiative like the income tax system overhaul. Weaknesses in management and staffing were compounded by errors made in contracting and design work.

We believe that in the future, the Department should limit its information technology work to smaller projects and systems maintenance. The Department, like other state agencies, is unable to retain and continually train staff with the kind of expertise needed to undertake massive systems projects. Management of large, complex projects should be coordinated with the Governor's new Office of Innovation and Technology, an office that is better equipped to assess requirements of systems and determine the feasibility of implementation.

Inadequate Controls Over Contracts Was Evident

We found that the Department spent $6.4 million on contract resources without requiring any products or deliverables. Over the course of the project, the Department contracted with about 15 firms that provided temporary workers for programming and administrative assistance. Contractor reimbursement was based on hours worked. No written agreement on deadlines, deliverables, or quality of the work were established.

The Department permitted contract workers to supervise state employees, in violation of the contract. Contract managers were allowed to interview, hire, and supervise additional temporary employees from their own firms. Although Department management ultimately approved hiring decisions, we question the apparent conflict of interest presented by this arrangement.

We found that Department personnel did not review contractor timesheets before paying invoices. In 19 out of about 100 timesheets sampled, we found that contract project managers approved the hours worked by contract staff without subsequent review by Department personnel. Also, project dollars were spent to train contractor staff. The Department was able to provide documentation that about $175,000 was expended on formal training for both state employees and contractors, but was unable to provide the amount incurred for training contractor staff only. Further, the Department could not document its costs for providing on-the-job training for contract employees.

Controls Over Project Costs Were Lacking

As part of our audit, we reviewed project expenditures of about $12 million. Of that amount about $10 million was spent on internal and external staffing, and approximately $1.5 million was used to purchase computer hardware and software. The remainder was spent on operating expenses such as training and registration fees, travel expenses, and office supplies. An in-depth review of ITI project invoices led us to believe that not all expenditures associated with the ITI project were captured in an accurate and timely manner. In fact, as late as March 2000, the Department continued to identify additional expenditures that should have been reported as ITI project costs.

Further, the Department could not provide an accurate amount for internal staff costs. The Department estimated that $3.7 million was spent on internal state staff costs. This estimate originated from one set of internal budget documents. Another cost report showed that $2.4 million in internal state staff costs was charged to the project, but these figures excluded the time spent on the project by several employees. We could not determine the appropriate amount that should be reported for internal state staff costs. In addition, other costs were not adequately supported or appeared excessive. We found about $15,000 was unsubstantiated and we questioned the benefits obtained from another $350,000 expended on the project. For example, we were unable to determine the benefit of a $20,000 expenditure for personal productivity training.

Ethics Requirements Should Be Clearly Communicated

The Department does not adequately communicate ethical responsibilities to its employees. Starting in March 1989, the Department began requiring newly-hired employees to sign a statement indicating they have read and understand the State’s ethics rules and statutes. We selected a sample of 25 employees. Eight of the 15 employees hired after March 1989, and 9 of the 10 employees hired before March 1989 did not have a signed statement in their personnel files. We believe that all employees should be aware of their ethical responsibilities. Enforcing current requirements and extending the requirements to all employees is a good way to ensure that this occurs.

We recommended that the Department (1) review its systems and procedures governing the recording and reporting of future project costs, (2) ensure that there is adequate oversight of contracts, and (3) ensure that all employees are aware of ethics laws and regulations.

Summary of Department of Revenue Responses to the Recommendations

The Department agrees with our recommendations.

RECOMMENDATION LOCATOR

Rec. No.	Page No.	Recommendation Summary	Agency Addressed	Agency Response	Implementation Date
1	21	The Department should review its systems and procedures governing the recording and reporting of future project costs to ensure that: a. Costs are properly recorded. b. Costs are compared to budget on an ongoing basis. c. Adequate monitoring of expenditures is performed. d. Accurate and timely information on expenditures is provided to decision-makers.	Department of Revenue	Agree	April 1, 2000
2	23	The Department should ensure that: a. Contracts for large-scale projects contain clear performance requirements. b. Contract terms and conditions are adhered to. c. Contractor invoices are reviewed and approved by Department staff.	Department of Revenue	Agree	April 1, 2000
3	25	The Department should ensure that all employees are aware of policies, procedures, laws, and regulations regarding ethics.	Department of Revenue	Agree	July 1, 2000

Description of the Income Tax Initiative Project

Chapter 1

Overview

The Department of Revenue is statutorily responsible for collecting state taxes, including income and sales taxes. In Fiscal Year 1999 the Department recorded about $3.6 billion in income tax revenue. This represents 68 percent of the total tax revenue collected by the Department on behalf of the State.

In 1994 the Department began working on the Income Tax Initiative (ITI) Project. The goal was to completely automate antiquated tax collection systems. As part of the Project, the Department planned to reevaluate the methods for filing tax returns, internal procedures for processing those returns, and methods for capturing and storing taxpayer data. The intent of the ITI project was to develop a system that would improve customer service, make operations more efficient, and simplify integration of tax laws and other legislative changes. The new income tax system was to account for individual, corporate, and fiduciary income taxes. The project was never completed, and the Department is now evaluating alternatives.

The existing 35 year-old income tax system was developed at a time when information technology was in its infancy. As a result, the system has several significant deficiencies. The system is fragmented into a patchwork of smaller applications. Over the years, five different programming languages have been used to generate about 1,000 programs. Even the simplest changes to the system are difficult. According to the Department, each new line added to the income tax form requires between 700 and 900 hours of programming and testing. The primary system is unable to access a complete set of taxpayer data, since interfaces do not exist between all applications. Functions and data are duplicated. Also, the processing of tax returns is very labor intensive. Data are manually input which increases the risk of errors.

The ITI project was meant to address the shortfalls in the existing system, specifically through:

- **Improved system flexibility and maintenance.** The interfacing of applications would reduce the duplication of data and time needed to make programming changes. Improved system interfaces would allow for easier data entry, simplified data verification, and faster access to more complete taxpayer information in response to taxpayers' inquiries.

- **Improved capabilities.** These included improved ability to track the status of individual tax returns, late notices, and audits; optional direct deposit of taxpayer refunds; electronic capture of various income tax-related data from employers and the IRS; and electronic filing options. Improvements were aimed at reducing the time spent processing paper returns and eliminating errors that occurred during data entry.

Project Oversight

Oversight of the ITI project was primarily a joint venture between the Department's Information Technology Division and the Taxation Group. The Information Technology Division coordinates and maintains the Department's information technology systems. The Taxation Group is responsible for the collection, administration, and enforcement of income taxes. Two teams, the stakeholder's group and the core team, provided periodic project oversight. These teams consisted of employees from various divisions within the Department. Day-to-day operations were overseen by the Executive Director and various project managers.

Timeline of the Income Tax Initiative Project

The Department began planning the ITI project in 1994. In June 1995 the project was officially divided into four phases (explained below), to be completed in September 1998.

Requirements Phase

Starting in mid-1995, the Department set out to identify the basic business requirements of the new system. The Requirements Document, finalized in August 1996, classified these requirements into six areas: accounting, administration, compliance, finance, production management, and public relations. Some improvements to the current system that were proposed in this document included the electronic deposit of taxpayer refunds, centralized tracking of tax returns, and new taxpayer filing options, such as Telefile and Netfile. Taxpayers could file their tax returns over the phone (Telefile) or through the internet (Netfile). File-4-Me, a component of Netfile, would allow the Department to calculate a tax return at the request of a taxpayer.

Design Phase

During the design phase, the core team produced a document called the User Design Document. Issued in August 1997, the document outlined and prioritized the processes and procedures needed to meet each of the six business requirements identified above. The Department decided on hardware and programming language. The document did not, however, address the technical design aspects needed to build the system. Instead, the technical design was prepared later during system development.

Development Phase

Development began in September 1997. Work to be completed during this phase included programming and installing system hardware and software. The Department originally planned to complete the project in September 1998, but later realized that a 1998 completion would not be feasible because development was taking longer than expected. The Department moved the completion date to January 1, 1999.

Implementation Phase

System testing and implementation was scheduled to occur during this phase. However, only limited testing was performed, since much of the programming was never completed. In November 1998, the ITI project was halted. The Department focused its efforts on completing Netfile, Telefile, and File-4-Me on its old computer system by January 1999.

At the end of 1998 the Department hired an outside consultant to review the status of the project and make recommendations on how to best complete the project. The consultant determined that "no less than a completely different approach to every aspect of the effort, from design to development to project management must be implemented in the very near term to make the project viable...."

Project Management

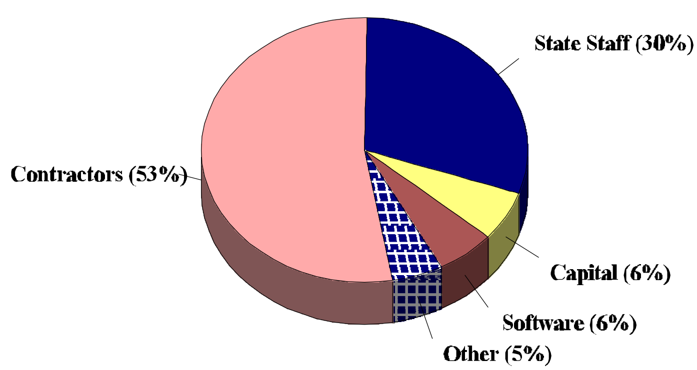
Chapter 2

Background

Over a five-year period, the Department focused its efforts on replacing its antiquated 35 year-old income tax system. The Department decided to design, develop, and construct the ITI project in-house. The following chart shows the types of expenditures incurred:

Department of Revenue

ITI Expenditures by Category



Source: Department of Revenue data.

Over $12 Million in Project Costs Was Incurred

The following table shows how the money was spent as reported by the Department:

Department of Revenue
Income Tax Initiative Expenditures

	Through 6/30/95	Fiscal Year 1996	Fiscal Year 1997	Fiscal Year 1998	Fiscal Year 1999	TOTAL
Contractors	$189,500	$726,452	$620,219	$2,982,809	$1,895,789	$6,414,769
State Staff *	151,833	521,693	177,285	1,697,629	1,122,255	3,670,695
Other Professional Fees	-	19,350	-	20,000	-	39,350
PERSONAL SERVICES - Subtotal	**341,333**	**1,267,495**	**797,504**	**4,700,438**	**3,018,044**	**10,124,814**
Software	-	-	47,947	536,362	183,202	767,511
Other	-	7,545	26,341	60,611	193,222	287,719
Training	-	3,099	32,119	117,805	21,856	174,879
GGCC	-	-	7,237	2,873	65,208	75,318
Travel	-	770	1,723	3,314	5,276	11,083
OPERATING - Subtotal	**-**	**11,414**	**115,367**	**720,965**	**468,764**	**1,316,510**
ADP Equipment	-	2,218	24,823	160,080	456,281	643,402
Non-capitalized	-	3,495	1,201	15,223	42,745	62,664
Other Capital	-	-	-	1,260	4,425	5,685
CAPITAL - Subtotal	**-**	**5,713**	**26,024**	**176,563**	**503,451**	**711,751**
TOTAL COSTS	**$341,333**	**$1,284,622**	**$938,895**	**$5,597,966**	**$3,990,259**	**$12,153,075**

Source: Information provided by the Department in March 2000.
Note: See Appendix A for a description of the expenditure categories. The expenditures above are based on actual costs, with the exception of state staff costs which are estimated.
* Represents original estimated amounts provided by the Department in September 1999.

In the past two months, the Department has had to recreate project cost accounting reports and locate documentation, requiring significant time on the part of the Department staff.

In September 1999 the Department reported that the project cost $12,000,826. Between October 1999 and March 2000, the Department made several revisions to its total cost. These changes were the result of auditors' inquiries and further analyses of the costs by Department personnel. The schedule above reflects these changes except for the amounts reported for state staff costs. The Department believes that $2.4 million better represents the amount of state staff costs rather than the $3.7 million as originally reported. However, the Department agrees that the $2.4 million does not include all staff costs. Therefore, the schedule above reflects the original estimate of $3.7 million. This issue is discussed in more detail later in the report.

Project Funding

The following table shows a summary of the funding sources for the ITI project.

Department of Revenue
Income Tax Initiative Funding Sources
By Fiscal Year

	Through Fiscal Year 1995	Fiscal Year 1996	Fiscal Year 1997	Fiscal Year 1998	Fiscal Year 1999	Total
Decision Items	$ -	$782,000	$967,034	$2,587,372	$1,720,185	$6,056,591
Base FTE Expense	151,833	521,693	177,285	1,697,629	978,976	3,527,416
Reinvestment Reserve	163,989	36,691	-	1,006,170	1,062,989	2,269,839
Supplementals	-	-	-	579,481	247,238	826,719
Total	**$315,822**	**$1,340,384**	**$1,144,319**	**$5,870,652**	**$4,009,388**	**$12,680,565**

Source: Department of Revenue budgetary information.

As the table shows, the majority of the funding came from decision items. Decision items are requests for funding above base levels. Base FTE expense represents the portion of the Department's Long Bill appropriation for personal services assigned to the ITI project. Reinvestment Reserve represents cost savings from other areas in the Department that were reallocated to the ITI project. Reinvestment Reserve amounts are estimates made by the Department on the basis of available information. As a result, funding does not equal actual expenditures.

From Fiscal Year 1989 through 1999, the Department has operated under a Memorandum of Understanding (MOU) with the Joint Budget Committee (JBC). The MOU was renewed annually and allowed the Department to use lump sum budgeting. Lump sum budgeting was intended to give the Department the flexibility to pursue initiatives to improve efficiency or customer satisfaction. When the Department identified cost savings, it was allowed to transfer these savings to other appropriated line items, contingent upon JBC approval. In many cases, the cost savings identified were due to the Department not filling its allotted FTE. These cost savings, known as the Reinvestment Reserve, provided 18 percent of the project's funding.

Only $1.9 Million in Salvageable Costs Was Identified

Of the reported $12 million spent on the project, the Department originally reported $2.3 million in salvageable costs. Upon our review, the amount was subsequently revised to $1.9 million, as shown in the following table.

Department of Revenue ITI Salvageable Costs	
Programming *	$673,773
Hardware	643,402
Software	618,927
Total	**$1,936,102**
Source: Department of Revenue. * Amount estimated by the Department.	

Salvageable hardware includes desktop personal computers and servers, storage units, and hardware relating to the ITI project, including Telefile and Netfile (of which File-4-Me is a component). This represents all of the hardware costs charged to the ITI project. Department management reported that the hardware is currently in use at three of the Department's offices, including those at Pierce Street for Telefile operations, Kipling Street for Netfile operations, and in the Department's main offices in the Capitol Annex which coordinates all departmental activity. Salvageable software includes database and system management software, such as software relating to Telefile and Netfile, and represents 81 percent of the total software costs charged to the ITI project.

All coding performed during the project, except coding for Netfile and Telefile, cannot be used in the development of another system. According to Department management, this is due to: (1) inadequate documentation of coding work done, (2) a decision made by the vendor to discontinue support of the primary programming language, and (3) the exclusion of the core accounting module from initial project development. Additionally, because of the speed and frequency of advancements in computer technologies, the coding work done to date, except for the coding pertaining to Netfile and Telefile, is already considered outdated.

The Failure of the ITI Project Raises Serious Concerns

The failure and termination of the ITI project raises serious concerns about the State's management of complex, costly information systems projects. The ITI project cost the State about $10 million after deducting salvage value. This represents a significant expenditure, resulting in minimal benefits to taxpaying citizens.

The failure of the ITI project has been analyzed from a number of perspectives. The Department contracted with KPMG, an outside consultant, from November 1998 to January 1999 to review the project. In addition, the former executive director has provided input on the outcome of the project, and the current executive director has reviewed the process to determine where the project failed.

Independent Evaluation of the Project

After the project was abandoned, KPMG was hired to review the project's status to date and provide recommendations on how best to move the project forward. KPMG focused on four key areas: the reasonableness of the estimated hours to complete the project, the adequacy of the project goals, additional programming resources needed to complete the project, and additional recommendations to ensure project success. In a report presented to the Department in January 1999, KPMG identified significant deficiencies in planning and managing the existing project. The following are highlights of deficiencies identified in the report.

- **Lack of formal project management methodology.** The project was impeded by not adopting and institutionalizing a strict and formal project management methodology, including status meetings, code reviews, and issue tracking. KPMG stated that a project management method should have been defined and institutionalized, and specific and measurable benchmarks should have been defined for every module.

- **Insufficient flow of information between developers, users, testers, and project management.** Weaknesses in communication between users, developers, testers, and project management hindered joint understanding of user requirements and concurrent development of modules.

- **Development of the estimated hours for completion was not based on a sound methodology.** The Department's planning process lacked a formal hours estimating methodology. Rather, "best guesses" were used as baselines for estimating the percent of project completed. Programmers did not universally support the estimates. KPMG recommended that a sound estimating methodology should be employed and maintained, using analysis tools, to document assumptions and rationale, and improve credibility of project end-date estimations and resource requirements.

- **Poor design detail resulted in extensive review of requirements.** Design work was never sufficiently detailed to support the coding effort, and design often occurred "on the fly" while development was in progress. Both factors contributed to the inability of the Department to assess the effort required to complete the project accurately. Actual coding should have begun only after detailed technical design was complete and validated by stakeholders and project managers.

- **No defined critical path and lack of programming and documentation standards.** No defined critical path existed by which to manage system development. Module coding was done independently, with each developer completely isolated from other modules, resulting in an inconsistent development effort, non-uniform look and feel and poor adherence to coding standards.

Other Project Assessments

Former Management. In a letter dated November 18, 1999, to the Governor's Chief of Staff, the Department's former Executive Director offered his perspective on lessons to be learned from the project:

- **Contracts for services should condition payment upon the completion of deliverables.** The former Director noted that a large part of the work on the project was done by contract programmers who were paid for hours worked. In retrospect, the State should not purchase any services without an agreed-upon deliverable. Lack of agreed-upon deliverables is a common theme in analyses of the failure. Performance-based contracting is essential.

- **The State should invest in hiring, training, and paying for project management expertise.** The former Director noted that both state and contract personnel lacked critical expertise, especially in estimating hours and in making sure that programmers were adhering to the project.

- **The State should invest in the hiring, training, and paying of its own IT staff capable of developing and maintaining new systems.** The Department had to rely principally on contractors to provide computer programming. An alternative for the Department is to hire more experienced staff, or invest in training its own workforce in current technologies and paying a competitive wage for these skills. Even with increased salaries, state IT professionals would be more cost effective than contractors.

Current Management. In an internal memo dated November 8, 1999, the current Executive Director also provided some analysis of the project and causes of its failure, citing five main reasons:

- **Inadequate Project Management.** Many of the individuals on the project management team did not have experience in managing large information technology projects.

- **Lack of Consensus.** Several Department division heads were not confident of a successful outcome for the project and recommended against proceeding as early as 1997. KPMG confirmed that while the initial user design requirements definition phase of the project was well-conceived and documented, the detailed design process seems to have faltered.

- **Reluctance to Outsource.** Other states developed tax processing systems with the assistance of a system integrator. In many cases, a consultant or software development firm was hired to create the system architecture and integrate the modules. Although a consultant was used in the conceptual design phase of the project, the development team made up of state and contract programmers subsequently proceeded on its own.

- **Questionable System Design.** Other states designed their systems around a central accounting and database core, using existing off-the-shelf products. Instead of using an existing package, the Department attempted to develop accounting modules from scratch. Use of an existing accounting package could reduce development expenses considerably and increase standardization and vendor support.

- **Schedule Pressure.** An implementation deadline of January 1, 1999, was established (revised from the 1998 deadline) in order to avoid Y2K remediation of the old income tax system.

Summary

The perspectives of the above three parties can be useful to decision-makers in evaluating approaches to future large-scale IT projects. In retrospect, it is clear that the Department was ill-equipped from either a management or a staffing perspective to undertake a complex initiative like the income tax system overhaul. Weaknesses in management and staffing were compounded by errors made in contracting and design work.

In the future, the Department should limit its information technology work to smaller projects and systems maintenance. The Department, like other state agencies, is unable to retain and continually train staff with the kind of expertise needed to undertake massive systems projects. Management of large, complex projects should be coordinated with the Governor’s new Office of Innovation and Technology. That office is better equipped to assess requirements of systems, determine the feasibility of implementation, and has the expertise to partner with qualified private third-party vendors.

Project Cost Accounting

Chapter 3

Project Expenditures Are Difficult to Ascertain

Our review found that the Department did not properly utilize existing controls over project costs and accounting procedures. We found that controls over contract expenditures were lacking. The Department does not adequately communicate ethical responsibilities to its employees.

An in-depth review of ITI project invoices led us to believe that not all ITI expenditures had been included in the dollar figures provided by the Department. Additionally, we discovered charges made to the ITI project that were either not ITI-related or appeared excessive. Specific findings include the following:

We could not determine whether all project costs were captured. Many of the project costs were posted to specific ITI appropriation codes. However, some costs charged to other cost centers were deemed to be ITI-related. The $12 million of reported costs takes these factors into account. As late as March 2000, the Department was still making adjustments to its cost figures for the ITI project. We could not determine the extent of the costs that were omitted. Given the thousands of transactions recorded by the Department and conflicting internal department records, we found it difficult to determine the reliability of the data and ascertain whether all appropriate costs were included.

The Department could not provide an accurate amount for state staff costs. The $3.7 million reported for state staff costs originated from one set of internal budget documents. The Department subsequently generated a cost report that showed only $2.4 million was actually charged to the ITI project. However, we found that some personnel involved in the project charged their time to other cost centers. This includes the time spent by the Executive Director, Deputy Executive Director, certain project managers, and other management and staff. Internal documents were contradictory or did not specify which staff worked on the project, the hours spent, and the nature of the worked performed. Therefore, we could not determine the appropriate amount that should be reported for state staff costs.

Midstream changes were costly. $325,000 was spent on a new database management system. This replaced another database system that was purchased for the project costing $127,000. This change was made five months before the scheduled project completion date and further delayed project completion.

Other costs were not adequately supported or appeared excessive. Of the remaining project costs of $8.4 million, we reviewed the detail for $7.7 million, or 92 percent, of these costs. While most costs appeared reasonable and were adequately documented, we noted the following exceptions:

- We were unable to determine the benefit obtained from $20,000 spent on Effective Personal Productivity training. According to Department staff, this training was provided for about 20 project personnel. The invoice did not state the number of attendees or the dates of the training.

- Invoices could not be provided for all costs. Eleven documents totaling $14,706 could not be located by the Department.

- We question the value of the expenditure of $4,500 to a Denver hotel to host a day-long ITI project "kick-off" meeting for about 100 Department and contractor staff.

Not all costs reported as ITI expenditures were project-related. We reviewed supporting documentation for the ITI costs reported by the Department. We found eight invoices, totaling about $10,000, that were not ITI-related. These costs were for purchases of hardware and software for other offices within the Department, but were included as part of the $12 million in ITI costs.

Adequate Controls Over Project Costs Are Important

Our review indicates that the Department did not properly utilize existing controls over project costs and accounting procedures. The Department needs to apply consistently clear standards and requirements for monitoring costs for all future projects, whether those projects are information technology-related or not. The Department should be able to provide accurate and timely information on project-related expenditures. Providing such information will increase accountability and enhance internal and external decision-making.

Recommendation No. 1:

The Department should review its systems and procedures governing the recording and reporting of future project costs to ensure that:

a. Costs are properly recorded.

b. Costs are compared to budget on an ongoing basis.

c. Adequate monitoring of expenditures is performed.

d. Accurate and timely information on expenditures is provided to decision-makers.

Department of Revenue Response:

a. Agree. The new Executive Director and new Director of Information Technology are committed to identifying and controlling costs for all future information technology projects undertaken at the Department. Cost accounting systems and tools are currently in place. Establishing the discipline to use those systems will be important as we proceed with new projects.

b. Agree.

c. Agree.

d. Agree.

Controls Over Contract Expenditures Were Lacking

We also identified serious problems with the Department's oversight of contractors on the ITI project, including:

The Department spent $6.4 million on contract resources without requiring any products or deliverables or transferring any risk. The Department chose to complete the ITI project in-house using both its own staff and contract staff. Over the course of the project, the Department contracted with about 15 firms who provided temporary workers. Two firms accounted for $4.8 million, or 75 percent, of the contract-related project costs. These contracts were executed in compliance with state procurement rules. Contractor reimbursement was based on hours worked. No written agreements on deadlines, deliverables, or quality of the work product were established. The contracts contained little, if anything, in the way of terms and conditions related to contract performance.

The Department paid a premium price for contract staff. During Fiscal Year 1997, contract staff cost the State between $40 and $90 an hour. In contrast, state-salaried programmers doing the same work were paid between $15 and $38 per hour, less than half the amount. In short, the Department entered into nothing more than high-priced staffing contracts.

The Department permitted contract workers to supervise state employees, in violation of the contract. Two contract managers had significant project management responsibilities, including supervising state staff, between January 1997 and November 1998. Contract managers were allowed to interview and hire additional temporary employees from their own firms. Although Department management ultimately approved hiring decisions, we question the practice and the apparent conflict of interest.

Department personnel did not review contractor timesheets before paying invoices. Out of about 100 timesheets sampled, we identified 19 where contract project managers approved the hours worked by contract staff. Further, we found that the Department paid vacation, sick leave, and holiday pay (totaling $3,200) for one contracted staff. We have asked the Department to review all contractor timesheets to ensure no additional overpayments have occurred.

The Department spent project dollars to train contractor staff. The Department paid a premium price for contracted staff, and then found it had to train them at the State's expense. Some staff were not familiar with the programming language. The Department could not provide the amount incurred for training contractor staff. Department records show that $174,879 was expended on formal training for both state employees and contractors. This does not include additional time spent for on-the-job training.

As noted earlier, in late fall 1998 the Department hired KPMG to conduct an evaluation of the history of the project and the prospects for completion. KPMG also raised concerns about contracts and contract oversight. Some of the areas specifically identified were (1) contracts were not performance-based; they did not define deliverables and time frames, (2) contractors were not interviewed prior to employment to ensure appropriate skill levels, (3) no formal and rigorous knowledge sharing took place between contractor and Department personnel; and (4) contractors were given overall responsibility for project delivery.

The shortfalls in contract administration identified in our audit and in the review done by KPMG raise serious concerns about the Department's oversight of the project, as discussed in Chapter 2.

Recommendation No. 2:

The Department should ensure that:

a. Contracts for large-scale projects contain clear performance requirements.

b. Contract terms and conditions are adhered to.

c. Contractor invoices are reviewed and approved by Department staff.

Department of Revenue Response:

a. Agree. The Information Management Commission is establishing guidelines which will aid in this process.

b. Agree.

c. Agree. The Department will ensure that IT division managers perform this function and that there will be an independent review by the new Director of Accounting and Financial Services.

Ethics Requirements Should Be Clearly Communicated

The Department does not adequately communicate ethical responsibilities and duties to its employees. All state employees, especially those in managerial positions, need to be aware of these responsibilities. Ethical issues can arise when the State does business with outside contractors, because such relationships may create the appearance of impropriety.

Starting in March 1989, the Department began requiring newly-hired employees to sign a form indicating that they have read and understand the State's ethics rules and statutes. The form is filed in the employee's personnel file. The Department did not attempt to obtain a signed form from employees hired prior to March 1989. We selected and reviewed the personnel files of 25 Department employees. Of the 25 employees, 15 were hired after March 1989 and 10 were hired before March 1989. We found that:

- Eight of the15 employees hired after March 1989 did not have a signed form on ethics in their personnel file, as required.

- Nine of the ten employees hired before March 1989 did not have a signed form on ethics in their personnel file. Although signed forms were not required at the time, we believe that evidence of the Department's communication of ethics rules to its employees is important.

State employees have a public duty to avoid both the appearance and the fact of impropriety. The Colorado Code of Regulations speaks directly to this issue in 4 CCR 801:

> *R-1-10. The employee is not allowed to accept outside compensation for performance of state duties. This includes acceptance of any fee, compensation, gift, reward, gratuity, expenses, or other thing of monetary value that could result in preferential treatment, impediment of governmental efficiency or economy, loss of complete independence and impartiality, decision making outside official channels, disclosure or use of confidential information acquired through state employment.* ***Incompatibility includes reasonable inference that the above has or may occur or any other adverse effect on the public's confidence in the integrity of state government. (emphasis added)***

Further, Colorado's Code of Ethics states that no employee of the State should engage in an activity which creates a conflict of interest. We found that a project manager created the appearance of a conflict of interest by going on a nonbusiness trip with two contract supervisors during the project. We were informed by Department employees that this project manager subsequently accepted a position with a database management company after leaving state employment. The same database management company had sold the Department a database management system in May 1998. The Department could not give us a clear timeline as to the date of subsequent employment and did not determine whether this was in conflict with statutory guidelines regarding accepting certain employment within six months after leaving state employment. Such actions can create the appearance of a conflict of interest, potentially harming the State. Had ethics responsibilities been adequately communicated, such activities may have been avoided. The Department needs to develop procedures such as annual sign-offs on ethics statements by senior-level managers and key staff to ensure understanding of and compliance with ethics rules. In addition, routine ethics training for all Department employees would be beneficial.

Recommendation No. 3:

The Department should ensure that all employees are aware of policies, procedures, laws, and regulations regarding ethics.

Department of Revenue Response:

Agree.

Appendix A

Descriptions of Income Tax Initiative Project Expenditures

Income Tax Initiative project expenditures are included on a table that was prepared by the Department of Revenue.

Expenditure Category	Description
Contractors	Compensation paid to temporary staffing firms for time worked on the project by their employees.
State Staff	Compensation and benefits paid to individuals employed by the State for work on the project.
Other Professional Fees	Payments to outside firms for professional services. This includes consulting services related to the three taxpayer filing options, Netfile, Telefile, and File-4-Me.
Software	Amounts expended for computer software, including database and development software.
Other Operating	Operating expenses not classified elsewhere, such as software maintenance, communication services, printing and reproduction services, freight costs, and office supplies.
Training	Payments for the purchase of books, periodicals, subscriptions, and registration fees.
GGCC	General Government Computer Center, now known as the Colorado Information Technology Services (CITS). These are payments for data processing services provided to the Department relating to the project.

Expenditure Category	Description
Travel	Expenditures on behalf of, or reimbursements made to, state employees for travel, including travel associated with sending computer programmers to training.
ADP Equipment	Purchases of automated data processing and other computer equipment, such as the servers used for Telefile and Netfile, which meet current capitalization requirements. Current state policy is to capitalize any equipment with a useful life of more than one year and costing more than $5,000, although the Department has discretion to capitalize items costing $5,000 or less.
Non-capitalized	Equipment that does not meet the current capitalization requirements, including some printers and cables used in the project.
Other Capital	All non-computer related capital equipment, including a digital camera.

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