State Auditor's Office

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A Report on

Analysis of Quality Assurance Team Projects

February 2014
Report No. 14-020

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Overall Conclusion

The State Auditor's Office analyzed eight major information system development projects at six state agencies. At the request of the State's Quality Assurance Team (QAT), those eight projects were selected because the agencies had reported the projects were complete, were nearing completion, or were identified as high-risk projects.

It is important to note that the agencies self-reported the information in this report, and the State Auditor's Office did not independently verify that information.

At the time of the State Auditor's Office's analysis, four of the eight projects were complete, three were in process, and one was closed early without completing the full project scope. The eight projects were:

> The Department of Aging and Disability Services' (DADS) Single Service Authorization System project.

> The Department of State Health Services' (DSHS) Women Infants and Children Information System project.

> The Texas Department of Transportation's (TxDOT) Environmental Compliance Oversight System project.

> TxDOT's Mainframe Application Modernization Roadmap project.

> The Health and Human Services Commission's (HHSC) Enterprise Security Improvement project.

> HHSC's High Availability Medical Application project.

> The Office of the Attorney General's (OAG) Crime Victims Claims Legacy Workflow System project.

> The Texas Education Agency's (TEA) Public Education Information Management System Redesign 3 project.

Background Information

In 1993, the 73rd Legislature established the State's Quality Assurance Team (QAT).

The QAT comprises representatives from the Legislative Budget Board, the State Auditor's Office, and the Department of Information Resources.

The QAT approves and reviews major information system development projects.

The State Auditor's Office has delegated its voting authority to the Legislative Budget Board on any QAT decisions to approve or not approve the expenditure of appropriated funds for major information resources projects.

Source: QAT Web site at http://qat.state.tx.us/.

As Table 1 below and Table 2 on the next page show:

➢ One project was over budget and was closed early before completing the full project scope (the DADS Single Service Authorization System project).

➢ One project was projected to be over budget and will not be completed on time (the DSHS Women Infants and Children Information System project).

➢ One project was over budget and completed on time (the TxDOT Environmental Compliance Oversight System project).

➢ Three projects were under budget and were not completed or will not be completed on time (the TxDOT Mainframe Application Modernization Roadmap project, the HHSC High Availability Medical Application project, and the TEA Public Education Information Management System Redesign 3 project).

➢ Two projects were under budget and completed on time (the HHSC Enterprise Security Improvement project and the OAG Crime Victims Claims Legacy Workflow System project).

Table 1

Summary of Project Budgeted and Actual Expenditures [a]					
Agency and Project	**Original Budget**	**Revised Budget**	**Total Expended**	**Expenditures Under/(Over) Original Budget**	**Percent Complete**
DADS Single Service Authorization System [b]	$8,524,479	$14,282,347	$14,716,237	$(6,191,758)	69% [b]
DSHS Women Infants and Children Information System	$24,899,000 [c]	$75,515,804 [d]	$12,146,997	$12,752,003 [d]	20%
TxDOT Environmental Compliance Oversight System	$1,580,735	$1,762,212	$1,924,579 [e]	$(343,844)	100%
TxDOT Mainframe Application Modernization Roadmap	$4,052,000	Not applicable	$2,513,000	$1,539,000	100%
HHSC Enterprise Security Improvement	$7,868,927 [f]	Not applicable	$5,644,007 [f]	$2,224,920	100% [f]
HHSC High Availability Medical Application	$5,670,000	$4,541,482	$878,565	$4,791,435	68%
OAG Crime Victims Claims Legacy Workflow System	$6,446,623	$3,910,054	$2,459,914	$3,986,709	100%
TEA Public Education Information Management System Redesign 3	$3,852,000	$4,005,742	$3,719,042	$132,958	96%

[a] Details on agency-reported amounts are in the individual chapters of this report. The amounts do not include ongoing system maintenance costs.

[b] The project was closed early because of significant issues in system design. The project implemented only one of three planned project releases.

[c] The original budgeted amount did not include DSHS staff salaries and wages.

[d] The original plan was to use a modified, off-the-shelf system. A 2011 revision to the budget added DSHS staff salaries and wages and reflected the change to a custom system. However, DSHS is changing the project back to implementing a modified, off-the-shelf system. The project is expected to exceed its original budget by $50,616,804.

[e] The amount includes an additional $183,000 in information technology staff costs that TxDOT did not include in its monitoring reports.

[f] The original budgeted costs in HHSC's *Business Case* did not match the initial project costs in HHSC's monitoring reports. While HHSC has completed all milestones for the project, the system has not achieved all functionality as described in the project framework planning documents. Total expenditures include $560,153 in staff costs that HHSC did not report.

Source: Agency-provided information.

Table 2

Summary of Project Completion Dates				
Agency and Project	Original Completion Date	Revised Completion Date	Actual Completion Date	Actual or Projected Months Past (Ahead of) Original Completion Date [a]
DADS Single Service Authorization System	August 31, 2013	August 31, 2014	September 3, 2013 [b]	Not Applicable [b]
DSHS Women Infants and Children Information System	June 30, 2010	March 31, 2016	Not applicable	69
TxDOT Environmental Compliance Oversight System	August 31, 2013	Not applicable	September 12, 2013	0
TxDOT Mainframe Application Modernization Roadmap	July 31, 2012	September 28, 2012	November 16, 2012	4
HHSC Enterprise Security Improvement	January 31, 2014	Not applicable	August 31, 2013	(5)
HHSC High Availability Medical Application	August 31, 2013	December 31, 2014	Not applicable	16
OAG Crime Victims Claims Legacy Workflow System	January 31, 2013	Not applicable	February 4, 2013	0
TEA Public Education Information Management System Redesign 3	August 31, 2013	December 31, 2013	Not applicable	4

[a] Projects were considered completed on time if they were deployed within a month of the original completion date.

[b] Project was closed without completing the full project scope.

Source: Agency-provided information.

The OAG completed the Crime Victims Claims Legacy Workflow System project under budget and on time. That project has received three awards. According to the OAG, that project was successful because:

➢ The project scope was clear and did not expand.

➢ The project had strong executive sponsorship.

➢ The project identified and included the correct subject matter experts.

In analyzing the eight projects, auditors also noted the following:

➢ Agencies did not always report project costs in accordance with the cost-reporting requirements in the Department of Information Resources' Texas Project Delivery Framework.

➢ Some agencies incorrectly reported the estimated percentage of project completion based on total project budget expended, rather than estimated work completed.

➢ Some agencies based estimated project completion time lines on project funding dates, rather than actual anticipated project completion dates.

➢ Agencies did not always submit required reports to the QAT in a timely manner.

Summary of Objective, Scope, and Methodology

The objective of this project was to assist the QAT in its monitoring activities for major information resources projects.

The project scope covered eight information resources development projects at six state agencies. The State Auditor's Office analyzed those eight projects at the request of the QAT, which selected those projects because they were reported as complete, were nearing completion, or were identified as high-risk projects.

From August 2013 through December 2013, auditors and QAT members reviewed the QAT documentation available for eight major information resources development projects. That documentation included *Business Cases*, *Business Case Workbooks*, *Statewide Impact Analyses*, project plans, *Post-implementation Reviews of Business Outcomes* (if available), and monitoring reports. Auditors also conducted interviews with key personnel involved in the projects and observed demonstrations of the systems (if available).

The agencies self-reported the development information presented in this report to the QAT. The State Auditor's Office did not independently verify the accuracy of the information that the agencies reported or perform any data reliability work.

Contents

Detailed Results

The Department of Aging and Disability Services' Single Service Authorization System Project

Project History/Overview

Project Summary

Original:
- End date: August 31, 2013
- Budget: $8,524,479

Current:
- End date: September 3, 2013
- Actual: $14,716,237

Status: Closed.

The Department of Aging and Disability Services (DADS) operates both the Service Authorization System (SAS) and the Client Assignment and Registration (CARE) system to provide authorization services for claims payments and to enroll consumers for Long-Term Care.

DADS initiated the Single Service Authorization System (SSAS) project to consolidate the service authorization and claims payment functionality of the SAS and CARE systems into a single system so that edits, business processes, and reporting capabilities across multiple programs could be standardized and for improved management of the programs. The SSAS project affects the following programs:

- Guardianship.

- Intermediate Care Facility for Individuals with Intellectual Disabilities (ICF/IID).

- Home and Community-based Services.

- Texas Home Living.

- Community Living Assistance and Support Services.

- Deaf Blind with Multiple Disabilities.

- Nursing Facility.

The SSAS project involved both system revisions and process re-engineering surrounding the provision of services for various Long Term Care Single Service programs that DADS manages.

The goals and objectives of the SSAS project were to:

- Consolidate the entry and levels of care, assessments (enrollments), individual plans of care, and client movements.

- Migrate program service authorizations into DADS's SAS system.

- Migrate the entry and maintenance of provider contract information to the Long-Term Care Provider System.

- Provide a single system for all LTCSS providers.

- Increase the accuracy and timeliness of consumer assessment processing.

- Advance the Medicaid Information Technology Architecture maturity levels in the Medicaid enterprise.

Project Status

DADS has completed one of three planned releases in the SSAS project scope. As of September 3, 2013, Health and Human Services Commission management and DADS management decided to close the SSAS project and not complete remaining releases because of problems identified during user acceptance testing that would interfere with claims processing. Among those problems were the high volume of software defects for both Texas Medicaid and Healthcare Partnership (TMHP) applications and DADS applications, incorrect software application data interchange, and flaws and omissions in DADS's business solution and business requirements.

Release 1 of the SSAS project was completed in May 2013 and, according to DADS management, is functioning as intended. DADS management asserted that Release 1 successfully implemented claims entry and processing for the Guardianship program, migrated level of care and client movement functionality from the CARE application to the SSAS and TMHP Long Term Care (LTC) Online Portal, and implemented functionality allowing level of care and client movement data to be interchanged from the new systems back to the CARE application for reporting purposes.

Release 2 was intended to automate provider forms and claims submissions and had a planned implementation date of August 31, 2013. On July 26, 2013, the release was halted and, as discussed above, the SSAS project was closed.

Release 3 was intended to automate form submission and supporting functionality (including security, search, and letter creation functions) for programs in SSAS through the TMHP LTC Online Portal. That release was not implemented and further work has been stopped.

DADS management intends to include Releases 2 and 3 from the SSAS project in a future Medicaid Management Information System (MMIS) procurement. DADS estimates that $9.5 million of the costs from the SSAS project may be recoverable in the MMIS procurement.

Project Costs

In its monitoring report for September 2013, DADS reported its initial budgeted project costs and current budgeted project costs based on appropriated funds, instead of based on its estimates of the project costs calculated in its *Business Case*. Table 3 summarizes budgeted and actual expenditures for the SSAS project.

Table 3

Budgeted and Actual Expenditures for the SSAS Project As of August 31, 2013			
Original Budget: $8,524,479 [a]			
Budget Category	Original Budget [a]	Revised Budget [b]	Total Expended	Expenditures Under/(Over) Original Budget
Agency Personnel Costs [c]	$ 8,524,479	$ 543,752	$ 619,307	$ 7,905,172
Contract/Consultant Services	0	13,738,595 [d]	14,096,930 [e]	(14,096,930)
Total Project Costs	$ 8,524,479	$ 14,282,347	$ 14,716,237	$ (6,191,758)

[a] Amount is from DADS's *Business Case Workbook* dated April 16, 2010. In its *Business Case Workbook* dated April 16, 2010, DADS erroneously reported all project costs as agency personnel services; however, its *Project Plan* indicated that DADS planned to contract with a deliverables-based information technology services contractor and the TMHP Project Team as early as June 2010. Additionally, the initial budget did not include agency personnel fringe benefits.

[b] Amount is from DADS's *Business Case Workbook* dated June 1, 2013.

[c] According to DADS management, state agency personnel costs and fringe benefits are not paid out of the appropriations for the SSAS project; instead, those costs are paid from annual organizational budgets.

[d] Amount includes only estimated costs associated with the development and implementation of the SSAS system and excludes maintenance and other post-implementation costs included in DADS's *Business Case Workbook.*

[e] Amount includes $389,529 in implementation costs for TMHP fourth quarter billings that have not yet been paid. DADS has not received the TMHP fourth quarter billing. Amounts for fourth quarter billings are based on the billing schedule included in the contract amendment COR 87, Appendix A.

Source: Information DADS provided.

DADS management indicated that the significant project cost increases resulted from (1) increases reflected in the updated *Implementation Planning Document* approved in October 2012 and (2) increases reflected in significant amendments related to changes in business requirements made to its contract with TMHP in January 2013.

Project Benefits

In its analysis of project benefits, DADS reported several benefits of completing the SSAS project, including:

▪ Standardization of business/system edits, business processes, and reporting capabilities.

- More timely service delivery to consumers and payment processing for providers.

- Alignment of systems with more and/or standardized technologies.

- Improved efficiency of infrastructure and staff resources.

- Reduction in staff costs on manual processes.

DADS management asserted that the project also would continue DADS's initiative to migrate to Web-based technology by migrating the CARE service authorization functionality off the IBM mainframe. The project also would advance the Medicaid Information Technology Architecture (MITA) maturity levels in the Medicaid enterprise and enhance federal funding.

Because DADS did not complete subsequent releases of the SSAS project, it did not realize benefits for the following programs that were included in the initial scope of the project:

- Home and Community-based Services.

- Texas Home Living.

- Community Living Assistance and Support Services.

- Deaf Blind with Multiple Disabilities.

- Nursing Facility.

Project Demonstration

A demonstration of Release 1 of the SSAS project indicated that the functionality associated with (1) the long-term care portal and claims systems for the ICF/IID program and (2) the Guardianship program is operating as intended in production.

During the demonstration, auditors observed functionalities of the long-term care portal, including portal form entry, search capabilities, and form and letter system modules for the ICF/IID program. The long-term care portal has workflow functionality built into the system. Functionality is reported to have electronic approval and business-specific rules governing the approval requirements. Auditors also observed functionalities of the claims system, including changes made to TexMedConnect for the Guardianship program, functions to suspend payments to providers when payments are not due, and federal reporting changes to address program reporting.

Some of the functionalities associated with Release 2 were demonstrated in the test environment; however, that release was not fully implemented and has been discontinued.

Additional Information

The SSAS project began June 1, 2010, and was originally estimated to be completed on August 31, 2013. The estimated end date was later delayed to March 31, 2014, and delayed again to August 31, 2014. The project first fell behind by three months during the business analysis phase, which delayed the start of the implementation phase. In July 2013, project management identified significant issues in the system design for Release 2, and upon executive management review, the decision was made to close the project.

DADS experienced turnover in its project management team. Only two members (40 percent) of the original five-member project management team remained at the end of the 19-month reporting period. The project's current project manager replaced the previous project manager in May 2013.

Project completion percentages initially reported in monitoring reports were tied to funding, not actual milestone progress. Beginning with DADS's May 2013 monitoring report, project completion metrics were adjusted to detail the progress of each release based on examination of the effort remaining toward completion of given tasks. The September 2013 monitoring report specified that the SSAS project was 69 percent complete when the project was closed. Management asserted that percentage represented the total project completion for the entire scope of the original plan (in other words, planned versus actual effort expended).

Executive management of DADS and the Health and Human Services Commission identified several factors that contributed to the problems with the SSAS project:

- **Flaws and omissions in business requirements.** DADS management stated that it did not assign the appropriate resources to help define system requirements well at the beginning of the project, which resulted in omitted business requirements that were identified later in the project. DADS management also stated that there was a significant gap between the involvement of business users in the initial requirements gathering and in user testing at the end, when users identified significant missing requirements. Additionally, the project had numerous amendments to its vendor contracts, primarily resulting in requirements that were not identified during the analysis phase.

- **Project size and complexity.** Project management underestimated the size and complexity of the project and acknowledged that the volume of

business requirements should have been an indicator of the project's size and complexity.

- **Project management weaknesses.** Four individuals managed different areas of the project and multiple vendors. Each of the project managers managed specific responsibilities on the project and provided status updates as required; however, the project did not have a lead project manager to evaluate the collaborative efforts of all parties and better manage the status of the project as a whole.

- **Scheduling issues.** During the project, subject matter experts were removed from the SSAS project to complete work on another project of higher priority. DADS management used funding to drive the schedule of the SSAS project and other projects. Instead of analyzing the amount of time it would take to complete the project, DADS used the federal funding deadlines to set the end dates and prioritize the implementation of projects.

- **Technical issues.** Software development methodologies did not align well. DADS performed a thorough review of the business analyses from both the deliverables-based information technology services contracts and the TMHP contractor; however, it did those reviews separately and did not ensure that data mapping for each contractor was compatible.

The Department of State Health Services' Women Infants and Children Information System Project

Project History/Overview

The Department of State Health Services (DSHS) administers the Women, Infants and Children (WIC) program, which helps pregnant women, new mothers, and young children eat well, learn about nutrition, and stay healthy. The WIC program also provides nutrition education and counseling, nutritious foods, and help accessing health care to low-income women, infants, and children. The WIC program is overseen by the U.S. Department of Agriculture (USDA) Food and Nutrition Service.

The WIC program operates a statewide information services system called the Texas WIC Information Network (TX WIN). The TX WIN system was implemented statewide in 1995 and operates in 75 local contractor agencies that operate nearly 600 clinics. The current caseload serves more than 1 million participants per month, and contractors need time-saving and streamlining measures with enhanced functionality to continue to meet the caseload growth and improve client services. According to DSHS, the WIC Information System project would automate key processes for managing, tracking, and reporting of WIC benefits and participants.

The scope of the WIC Information System project was to replace the obsolete TX WIN system with the Texas Integrated Network (TXIN) system and to make modifications to include needed functionality. DSHS's approach to achieving that objective has changed, which has resulted in delays and changes in budgets and schedules.

The project direction has changed twice since the project began in 2006. Originally, DSHS planned to implement a modified commercial off-the-shelf state agency model (SAM) system. At that time, the SAM system was under development by the USDA. However, due to significant delays in development, DSHS changed the direction of the project and hired a vendor to design, develop, and implement a WIC management information system in 2010. In 2013, DSHS decided to revert back to its original plan to implement the commercial off-the-shelf SAM system, which had been developed and was then operational in other states.

Project Status

The WIC Information System project began on July 13, 2006, and it was originally planned to be completed by June 30, 2010. Due to changes in the project direction, the project was extended and now is planned to be completed by March 31, 2016. Because DSHS changed the development

approach in 2013, as discussed above, DSHS anticipates the project budget and schedule may change.

DSHS is developing new project documents, including an updated *Business Case*, to outline the decision to use the SAM system. Those documents will include an updated project budget and time line. As a result, the project budget and time line in this report reflect DSHS's previous plan to design, develop, and implement a WIC management information system. Project changes could result in changes to the amounts and dates.

Project Costs

Table 4 summarizes budgeted and actual expenditures for the WIC Information System project.

Table 4

Budgeted and Actual Expenditures for the WIC Information System Project As of November 30, 2013				
Original Budget: $24,899,000				
Budget Category	Original Budget	Total Expended	Revised Budget	Expenditures Under/(Over) Original Budget
Contract/Consultant Services	$ 24,899,000	$ 10,049,483	$ 67,788,275	$ 14,849,517
Agency Personnel Costs	0	2,097,514	7,727,529	(2,097,514)
Total Project Costs	$24,899,000 ª	$12,146,997	$75,515,804 ª ᵇ	$12,752,003
ª Current budget amounts are as reported in monitoring reports less maintenance costs. The original budget did not include internal staff salaries and wages. A revision to the budget in 2011 added internal staff salaries and wages. ᵇ The current budget amount is based on DSHS's plan to build a custom WIC management information system from the ground up. Due to the change in the project direction, DSHS anticipates that the budget will change.				

Source: Information DSHS provided.

The project is 100 percent funded by the federal government. Funding is provided by the American Recovery and Reinvestment Act, a WIC Operational Grant, and a TXIN Management Information System Grant. According to DSHS, there are no plans to use state funds for this project.

Project Benefits

According to DSHS, the WIC Information System project will automate several key processes, including certification of WIC applicants, food benefit issuance (EBT), food benefit redemption, nutrition education, health surveillance, clinic scheduling, system administration, financial management, caseload management, operations management, and vendor management.

DSHS asserts that automating processes will improve customer service, maximize new technologies to improve functionality, strengthen controls and

accountability of information to enhance reporting, improve timeliness of data for key management decisions, minimize the potential for fraud and abuse, decrease training and technical assistance time, and increase clinic efficiencies.

Project Demonstration

There was no workable product at the time of this review for DSHS to demonstrate to auditors.

Additional Information

Because of changes in the project direction, delays have extended the project schedule. Initially, the project was planned to be completed in 2010, but the completion date was later extended to 2016. With the new direction of the project in 2013, DSHS considered whether to continue with the project or start a new project. It decided to continue with the same project because the scope has not changed. Changes to the budget and schedule are anticipated.

The project completion percentages initially reported in the project monitoring reports were calculated as a percent of total project estimated cost expended to date. However, that methodology is not appropriate because it is based on the budget instead of milestones completed (level of effort). Beginning in its November 2013 monitoring report, project completion metrics were adjusted to measure the progress based on the effort remaining toward completion of project milestones.

The Texas Department of Transportation's Environmental Compliance Oversight System Project

Project History/Overview

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Project Summary

Original:
- End Date: August 31, 2013
- Budget: $1,580,735

Current:
- End Date: September 12, 2013
- Actual: $1,924,579

Status: Completed.

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The objective of the Texas Department of Transportation's (TxDOT) Environmental Compliance Oversight System (ECOS) project was to enhance the already functioning ECOS application. The project addressed existing core module enhancements and the addition of new Environmental Affairs Division (ENV) program areas. ECOS includes modules for storm water, air quality, noise, indirect and cumulative impacts, and environmental justice and community impacts. The ECOS project also includes integration with TxDOT's enterprise systems and email system. Further enhancements include integration of existing Access databases and other ancillary reporting tools.

ECOS implemented environmental reporting modules required by the National Environmental Policy Act, memoranda of understanding, programmatic agreements with federal and Texas state agencies, and other environmental laws and regulations. Federal and state mandates require TxDOT to capture additional data and provide reports to audit environmental impacts, assets, and mitigation efforts. New legislative mandates include Federal Highway Administration rules to manage assets for highway noise barriers and mitigation sites; new time lines specified in TxDOT's sunset bill (Senate Bill 1420, 82nd Legislature, Regular Session); and schedule tracking for environmental coordination with local governments, including the provisions in Texas Transportation Code, Section 201.759.

ENV has a business need to integrate with TxDOT enterprise systems, including project management and transportation project tracking applications. Lack of integration with other TxDOT systems limits tracking, reporting, and metrics for environmental issues. A Web interface also was integrated with TxDOT's enterprise systems and added comprehensive functionality for TxDOT's human environment program area.

TxDOT's Information Resource Council (later renamed the Technology Steering Committee) approved the ECOS project in August 2011. Project funding was subsequently identified, and approval was obtained from the Legislative Budget Board in the amount of $1,759,774. TxDOT began the project in September 2011.

Project Status

The ECOS project was delivered as two major releases. Version 2.0 was to be developed during fiscal year 2012 and released on August 31, 2012. Version

3.0 was to be developed during fiscal year 2013 and released on August 31, 2013.

The project began September 1, 2011, and the completion of version 2.0 was delayed two weeks due to the resolution of issues identified during testing cycles. The implementation of version 3.0 was scheduled for completion on August 31, 2013. The project was completed on September 12, 2013.

TxDOT's final monitoring report was due in October 2013, and TxDOT asserted that report would include adjustments to information technology staff costs and other costs that it previously misreported. As of the date of this report, the monitoring report due in October 2013 had not been received by the Quality Assurance Team (QAT). It is anticipated that TxDOT will submit a *Post-implementation Review of Business Outcomes* for the project in February 2014.

Project Costs

Table 5 summarizes budgeted and actual expenditures for the ECOS project.

Table 5

Budgeted and Actual Expenditures for the ECOS Project As of September 30, 2013				
Original Budget: $1,580,735				
Budget Category	Original Budget	Total Expended	Revised Budget	Expenditures Under/(Over) Original Budget
Contract/Consultant Services	$ 1,374,390	$1,554,487 [a]	$ 1,547,226	$ (180,097)
Agency Personnel Costs	131,072 [b]	370,092 [a c]	131,072 [b]	(239,020)
Contingency	75,273	0	83,914	$75,273
Total Project Costs	$1,580,735	$1,924,579	$1,762,212	$(343,844)

[a] TxDOT incurred salary and wage costs of $56,020 and contractor costs of $7,261 and included those costs in the contingency budget. Auditors removed those amounts from the Total Expended amount in the Contingency row of this table and added those amounts to the appropriate rows in the Total Expended column of this table.

[b] Auditors removed $179,040 from the budgeted amounts because TxDOT had included post-implementation maintenance costs, which should not have been included. The TxDOT project manager asserted that the adjusted and accurate budgeted amounts will be updated in its final monitoring report.

[c] Amount includes additional information technology TxDOT staff costs of $183,000 that TxDOT did not report. TxDOT asserted it will report those costs in its final monitoring report.

Source: Information TxDOT provided.

The project has exceeded its budget by $343,844, and that amount will increase after all information technology staff time is included in the total project expenditures in accordance with QAT reporting requirements.

Project Benefits

According to TxDOT, the project will improve the ECOS application architecture and framework. Transactional functionality is needed to provide system maintenance notifications; provide application status information; provide administrative functions such as login, roles, and permissions requests; and facilitate formal communication between internal and external customers. TxDOT also asserts that ECOS will provide environmental data for resource and regulatory agencies including the Parks and Wildlife Department, the U.S. Fish and Wildlife Service, the Commission on Environmental Quality, and metropolitan planning organizations. Further enhancements include integration with existing Access databases and other ancillary reporting tools.

Project Demonstration

A demonstration indicated that ECOS appears to be functioning as intended. The demonstration provided an overview of the various functionalities of ECOS and a user's ability to access ECOs externally.

Additional Information

Three challenges were identified during the ECOS project, including:

- A delay in and inaccessibility to the ECOS servers for project information system development staff.

- An increase in internal project management reporting activities for the Technology Steering Committee members and the various sections within TxDOT's information technology division due to the reorganization/outsourcing initiative at TxDOT.

- An increase in internal stakeholder management and business analysis activities due to an internal TxDOT review of ENV business issues.

The Texas Department of Transportation's Mainframe Application Modernization Roadmap Project

Project History/Overview

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Project Summary

Original:
- End Date: July 31, 2012
- Budget: $4,052,000

Current:
- End Date: November 16, 2012
- Actual: $2,513,000

Status: Completed.

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Enterprise Architecture

Enterprise architecture is a comprehensive framework used to manage and align an organization's information technology assets, people, operations, and projects with its operational characteristics.

In other words, the enterprise architecture defines how information and technology will support the business operations and provide benefit for the business.

It illustrates the organization's core mission, each component critical to performing that mission, and how each of those components is interrelated. Those components include:

- Guiding principles.
- Organization structure.
- Business processes.
- People or stakeholders.
- Applications, data, and infrastructure.
- Technologies upon which networks, applications, and systems are built.

Source: National Institutes of Health.

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The Mainframe Application Modernization Roadmap project at the Texas Department of Transportation (TxDOT) is one of multiple projects at TxDOT to update technology and address the legacy applications that reside on TxDOT's mainframe. The project focused on defining the plan, including an enterprise architecture (see text box) needed to address aging legacy applications on the mainframe.

TxDOT has identified approximately 30 non-enterprise resource planning (ERP) applications and some ERP-related applications on the mainframe that are up to 30 years old. While some of the ERP-related applications will be replaced in another project, others will need to be addressed through other efforts. TxDOT was aware that some of the applications were 20 to 30 years old and were likely not sustainable into the future. For example, issues surrounding the current environment include the following:

- Ability to support future business changes is constrained by the current technology.

- Potential problems with integrating the new agency ERP solution into the existing technology.

- Potential difficulties in leveraging current technologies to provide information to TxDOT stakeholders.

- Risk that current staff will retire and the outdated technologies will be left without support.

After identifying the issues above, TxDOT began the Mainframe Application Modernization Roadmap project in October 2011 as part of an overall effort at modernization that was estimated to cost approximately $62.5 million. The project goal was to identify a plan of action to address the issues that TxDOT had identified surrounding its technology environment.

TxDOT retained an enterprise architecture consultant to help identify opportunities to improve its information technology environment. TxDOT information technology and business staff initially identified 800 to 900 applications that supported TxDOT operations and later refined that number to approximately 360. The reduction was attributed to including application

supporting modules and programs that were identified by business staff as separate systems but that were actually part of one overall system. TxDOT then reviewed and documented the underlying technology that supported those applications. TxDOT also identified data and the underlying database technologies that were common to TxDOT and unique to the various programs. Contractors then delivered plans to update the technology, security, and applications, as well as time lines and resources needed to complete the updates. Soon after the completion of that portion of the project, TxDOT outsourced application maintenance, development, and security of the systems (see additional information below).

Project Status

The Mainframe Application Modernization Roadmap project had an original completion date of July 31, 2012, and it was completed on November 16, 2012. The project began on October 3, 2011, according to project monitoring reports. A contractor and TxDOT are finalizing the *Post-implementation Review of Business Outcomes* (PIRBO), in which TxDOT will conclude whether the project solved the business problem by achieving the stated business goals and objectives. TxDOT is working with a vendor to modernize the applications.

Project Costs

Table 6 summarizes budgeted and actual expenditures for the Mainframe Application Modernization Roadmap project.

Table 6

Budgeted and Actual Expenditures for the Mainframe Application Modernization Roadmap Project As of March 30, 2013			
Original Budget: $4,052,000			
Budget Category	Original Budget	Total Expended	Expenditures Under/(Over) Original Budget
Contract/Consultant Services	$ 2,300,000	$ 1,472,000	$ 828,000
Agency Personnel Costs	1,752,000	1,041,000	711,000
Total Project Costs	$ 4,052,000	$ 2,513,000	$ 1,539,000

Source: Information TxDOT provided.

The project is under budget by approximately $1.54 million, including both a reduction in the amount paid to contractors and savings from a reduction in TxDOT staff necessary to complete the project.

Project Benefits

The completion of the Mainframe Application Modernization Roadmap project has helped to provide information that TxDOT will use to modernize ERP and non-ERP applications. The analysis and documentation of the applications and underlying technology will help TxDOT proceed with upgrading its information technology environment to more current technology.

Project Demonstration

This project did not produce a system that TxDOT could demonstrate to auditors.

Additional Information

TxDOT outsourced a large portion of its information technology resources to a vendor in June 2013. That arrangement included the development and maintenance of TxDOT applications. TxDOT provided the documentation from the Mainframe Application Modernization Roadmap project to the vendor to continue with the modernization efforts (those efforts were included in the outsourcing arrangement). According to TxDOT, the vendor is working with TxDOT to consolidate, remediate, and replace applications that were identified through the Mainframe Application Modernization Roadmap project.

The Health and Human Services Commission's Enterprise Security Improvement Project

Project History/Overview

Project Summary
Original:
▪ End Date: January 31, 2014
▪ Budget: $7,868,927
Current:
▪ End Date: August 31, 2013
▪ Actual: $5,644,007
Status: Completed.

In February 2009, the Department of Information Resources began monitoring the networks of the State's health and human services agencies for potential security incidents. Those agencies are the primary administrators of health and human services for the State.

The Department of Information Resources identified an increase in unauthorized attempts from outsiders to access the confidential data on those agencies' networks. A breach of that data could result in fines, penalties, and loss of federal funding.

The Enterprise Security Improvement project included implementing two-factor identification to access the confidential data housed within agency-level virtual private networks at all five of the State's health and human services agencies.[1] As part of the project, the Health and Human Services Commission (HHSC) also (1) used off-the-shelf software to implement a governance, risk, and compliance application designed to monitor access to confidential data and (2) created criteria for classifying data based on data sensitivity.

The Enterprise Security Improvement Project is an intermediate step toward HHSC's ultimate goal to implement an enterprise-level virtual private network. After the Commission activates that network, it plans to move all the agencies' data within that network. Users will be required to access confidential data through two-factor authentication, and data will be monitored by the off-the-shelf governance, risk, and compliance application.

HHSC will need to perform additional work to fully secure the data. For example, it will need to (1) identify and classify all data within the perimeter network and (2) identify and integrate all assets within the virtual private network that allow access to that data.

Project Status

The project began in September 2011 with an estimated completion date of January 31, 2014. It was completed in August 2013. Key development steps included installation of a two-factor authentication product in February 2013;

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[1] The five agencies are the Health and Human Services Commission, the Department of Aging and Disability Services, the Department of State Health Services, the Department of Assistive and Rehabilitative Services, and the Department of Family and Protective Services.

installation and configuration of an off-the-shelf governance, risk, and compliance application in May 2013; and deployment of network security tools in August 2013.

In its March 2013 and June 2013 monitoring reports, HHSC reported that the project experienced delays. The June 2013 report specified that those delays lasted 90 days. One delay occurred while HHSC staff waited for another non-HHS state agency to install the new servers necessary for the project and to connect power to those the servers.

HHSC asserted that it had always planned to implement the project for all of the health and human services agencies, but it included only three of those agencies in the scope of its planning documents. Existing virtual private network contractual commitments were one factor that slowed complete implementation. HHSC plans to move data to the enterprise-wide virtual private networks as those contracts expire.

HHSC has completed all project milestones for the project; however, the project's framework planning documents indicated that the project did not achieve complete functionality.

Project Costs

Table 7 summarizes budgeted and actual expenditures for the project.

Table 7

Budgeted and Actual Expenditures for the Enterprise Security Improvement Project As of August 31, 2013			
Budget Category	Original Budgeted Amount [a]	Total Expended	Expenditures Under/(Over) Original Budget
Agency Personnel Costs [b]	$ 0	$ 560,153	$ (560,153)
Contract/Consultant Implementation	3,177,000	1,432,379	1,744,621
Hardware and Software	3,457,216	3,651,475	(194,259)
Software Maintenance	800,000	0	800,000
Other Costs	60,000	0	60,000
Contingency	374,711	0	374,711
Total Project Costs	**$7,868,927**	**$5,644,007**	**$2,224,920**

[a] The project costs in the *Business Case* workbook did not match the initial project costs of $5,524,711 in HHSC's monitoring reports.

[b] Personnel costs and personnel fringe benefits were calculated based on data HHSC submitted in its framework documents. Those expenditures were not included in the costs HHSC reported in its monitoring reports.

Source: Information HHSC provided.

HHSC did not include internal salary and benefits costs in its initial project budget. Based on information HHSC provided, the project was completed under the original budget amount in the *Business Case*.

The original estimated project cost in HHSC's initial *Business Case* worksheet was $7,868,927. An HHSC monitoring report specified that, as of August 31, 2013, HHSC had incurred $5,115,113 in project-related costs; however, that amount did not include internal staff costs estimated at $560,153. According to HHSC, it completed the project five months early.

Project Benefits

The successful implementation of the project resulted in two-factor identification and monitoring for the confidential data housed on the agency-level virtual private networks. The U.S. Internal Revenue Service requires that certain fields of data be protected by two-factor identification when accessed remotely; therefore, implementing the security programs enables agencies continued access to the data. Protection created through the project will expand as HHSC implements the enterprise-wide virtual private network and moves all data within that network. The project will enable HHSC to profile and monitor potential threats.

The major improvements HHSC anticipates are improved capacity to protect its electronic assets from unauthorized access, disclosure, modification, or destruction, as required by the U.S. Internal Revenue Service, the Health Insurance Portability and Accountability Act, and United States statute.

Project Demonstration

A demonstration of the off-the-shelf application that HHSC purchased to implement the project indicated that it appears to be functioning as intended. The demonstration provided an overview of various functionalities installed during the project including monitoring of network security, protection and classification of data, gathering of data on network users' activities, and identification of threats. In addition, the demonstration showed that two-factor identification was implemented.

Additional Information

The primary project issues were the delays that occurred because HHSC was waiting for the other non-HHS state agency to install and connect power for new servers necessary for the project. According to HHSC, staff turnover also delayed project completion.

The project's framework documents also could have been more clear and accurate. For example, the framework documents did not clearly show the

project as a vehicle to achieve intermediate goals that would advance HHSC's ultimate security objectives.

The Health and Human Services Commission's High Availability Medical Application Project

Project History/Overview

Project Summary
Original:
▪ End Date: August 31, 2013
▪ Budget: $5,670,000
Current:
▪ End Date: December 31, 2014
▪ Budget: $4,541,482
Status: In progress.

The Health and Human Services Commission (HHSC) administers medical applications for state hospitals and state-supported living centers. For example:

▪ The Client Record System is an administrative application that contains demography, billing, order entry, and clinical information.

▪ The WORX application manages pharmacies at facilities; its functions include inventory and the authorization and dispensation of medication.

▪ The MediMAR system records medication disbursements to patients in state hospitals.

In August 2010, HHSC determined that those applications were critical and began to seek a high availability solution to reduce system outages associated with those applications. It then obtained funding for the 2012-2013 biennium. According to HHSC, the High Availability Medical Application project will help to ensure business continuance and availability of the medical applications that state hospitals and state-supported living centers use. HHSC asserts that the project will handle common outages with a system downtime of one hour or less, and that disaster situations should be resolved within six hours (as dictated by contract).

HHSC plans for the project to be physically installed and maintained in the San Angelo Data Center after it is assembled and tested in the Austin Data Center.

Project Status

According to HHSC, procurement for the project is complete and all components have been received. However, the hardware components of the project are not assembled and the software is not installed. In addition, a software vendor and the high availability solution vendor are developing scripts to make the project function as specified. More testing also is planned, including testing for a Client Record System upgrade.

The project began in September 2011 with an original completion date of August 31, 2013. Delays caused HHSC to reassess the project in January 2013. HHSC revised the estimated completion date to December 31, 2014. In

its August 2013 monitoring report that HHSC submitted in October 2013, HHSC estimated that it had completed 68 percent of the project.

Project Costs

Table 8 summarizes budgeted and actual expenditures for the project.

Table 8

Budgeted and Actual Expenditures for the High Availability Medical Application Project As of August 31, 2013				
Original Budget: $5,670,000				
Budget Category	Original Budget	Total Expended	Revised Budget	Expenditures Under/(Over) Original Budget
Agency Personnel Costs	$ 0	$ 99,176	$ 148,764	$ (99,176)
Contract/Consultant Services	1,350,000	703,639	1,086,842	646,361
Hardware/System Costs	4,050,000	75,750	3,089,615	3,974,250
Contingency	270,000	0	216,261	270,000
Total Project Costs	$5,670,000	$878,565	$4,541,482	$4,791,435

Source: Information HHSC provided.

HHSC information indicates the project is not yet complete, but it is projected to be completed under budget. HHSC's June 2013 monitoring report specifies that a new design solution had been obtained for the project. HHSC then adjusted the total cost estimate to $3,562,405 in its August 2013 monitoring report; however, HHSC has since restated the total cost twice (the latest estimate is shown in Table 8). The total cost of the project is anticipated to be less than the initial budget due to a change in vendors. The initial budget reflected cost information provided by the original vendor, but the new vendor delivered a less costly solution using different architecture.

The project's *Business Case* did not include personnel costs. According to HHSC, 0.5 full-time-equivalent (FTE) position (a half-time project manager) worked on the project and other staff also spent small amounts of time on the project. HHSC asserted that it is possible that additional FTEs will work on the project if the project's needs change and that it will use its timekeeping system to more accurately determine personnel costs for the project going forward. HHSC asserted that it provided its best estimate for personnel costs prior to August 31, 2013 (as shown in Table 8), because it has no reasonable method to determine what the project's actual expenditures for personnel costs were.

Project Benefits

The project's current design proposal should lower the risk posed to the health and safety of clients in state hospitals and state-supported living centers by maintaining more constant access to medical applications. In addition, HHSC asserts that fewer and/or shorter outages will equate to less additional work for direct care staff, which should lower operating costs. HHSC noted that it will also have a disaster recovery plan for the medical applications as a result of the project. The project vendors are developing scripts that will copy data from the San Angelo Data Center to the Austin Data Center regularly and activate applications in the Austin Data Center in the event of the failure of the San Angelo Data Center.

Project Demonstration

There was no workable product at the time of this review for HHSC to demonstrate to auditors.

Additional Information

The project has experienced several delays. Causes for those delays include difficulty in communicating with the initial vendor, the need to evaluate other design proposals, and a work stoppage at the San Angelo Data Center for approximately six months when the current project vendor transitioned into the role. As a result of those delays, HHSC did not meet the project's original completion date.

The design proposal the initial vendor provided was not adequate to meet the project's needs. HHSC then evaluated a cloud computing solution, which it rejected because it cost more and was less effective; however, HHSC did not document the reason for the rejection in the project monitoring reports.

The current design solution HHSC approved was not published until June 2013 because HHSC requested that the vendor appoint a new system architect and needed to revise the proposal.

One of the intermediate steps of the project required moving the existing system capabilities to the San Angelo Data Center. HHSC reported that event and the technical risks surrounding it, but it did not document in its monitoring reports the fact that it was performed in a way that minimized the effect on state hospitals and state-supported living centers.

HHSC also determined that the Client Record System needed to be upgraded prior to the project being implemented. As a result, HHSC then had to change project milestones and the total completion calculation methodology. HHSC asserted that upgrade did not represent a change in the project's scope because the timing of the already planned system upgrade changed to coincide with the time frame of the project. HHSC documented progress on installing the older

version of the Client Record System and the planned upgrade in its monitoring reports. However, the project's *Business Case* refers only to the installation of the older version of the Client Record System and did not make allowances for the upgrade.

HHSC asserted that project personnel costs existed as of August 31, 2013. However, it did not allocate any personnel costs to the project in its *Business Case* or report any personnel costs associated with the project as of August 31, 2013. HHSC asserted that it did not report or track personnel costs because those costs were not funded by the capital appropriation for the project.

The Office of Attorney General's Crime Victims Claims Legacy Workflow System Project

Project History/Overview

The primary purpose of the Crime Victim Services Division (CVSD) at the Office of the Attorney General (OAG) is to be the payer of last resort for bills incurred by victims of crime that cannot be paid by other forms of support, such as Medicare/Medicaid, personal insurance policies, and services from the State or a county. To receive those benefits, victims (on their own or through CVSD trained advocates) submit an application; if that application is approved, victims can submit bills for payment. In fiscal year 2011, the OAG received 37,528 crime victim applications and paid $75.2 million to crime victims.

The Crime Victims Claims Legacy Workflow System project replaced the CVSD imaging/workflow system used to process crime victim applications, which was implemented in 1999. The imaging/workflow system had (1) a documentation management system and a workflow system, which existed on a client-server platform, and (2) a bill payment and fund tracking application, which existed on a mainframe. All aspects of that system were no longer supported by vendors. According to the OAG, because of its aging infrastructure, poor architecture, and out-of-date software, that system was close to failure. A software refresh was a critical priority for the OAG to continue meeting the crime victims' services function.

During contract bidding, the OAG decided on an alternative cloud approach. To avoid compromising the system when vendor support ended, the project scope was revised to only replace the legacy system and to wait for a separate project to make changes to the mainframe interface. The OAG entered into a five-year hosting agreement to purchase modified off-the-shelf software, customize the software to meet the OAG's needs, and implement and manage the system.

Project Status

The OAG fully achieved all of the project's intended business goals and objectives, and it completed the project on time and under budget. The new Crime Victims Claims (CVC) system went live on February 4, 2013. The project received initial executive approval on August 30, 2010, and began on December 31, 2011. The initial system implementation date was scheduled for January 31, 2013.

The project was completed two business days after the initial estimated completion date. For the purposes of this report, auditors considered any

project completed within a month of the due date to be completed on time. The OAG decided to complete the project two business days later than the original date so it could extend the product evaluation phase to research and analyze the effect of redefining the production environment to be hosted in a cloud. This extension had no impact on project costs or time lines.

The project involved the implementation of a modified, off-the-shelf system that the OAG customized to fit its business process. By keeping the project within a small, manageable scope and not adding to the scope after the project started, the OAG finished the project on time and under budget. Other factors that led to the success of the project included strong executive leadership and sponsorship and including the correct subject matter experts throughout the process.

The project scope originally included replacing the legacy system and the mainframe interface. Because vendor support of the legacy system was ending in March 2013, OAG management decided to revise the project scope to only replace the legacy system during this project to avoid compromising system support. Integrating with the mainframe and enhancements are being planned as a new project.

Implementing the new system helped to eliminate the risk of failure of the prior system and allowed crime victims' claims to continue to be processed. According to the OAG, the new system lays a foundation that can be built upon for the next 10 to 15 years. The project received the 2013 High Value Business Impact Award from the Texas Association of State Systems for Computing and Communications, the 2013 Global Award for Excellence in Case Management from the Workflow Management Coalition, and the 2013 IBM Innovation Award for the Best Case Management Solution.

Project Costs

The OAG revised the budget to $3,910,054 (a reduction of $2,536,569) when it decided to host the production environment in a vendor-supported cloud environment.

OAG personnel costs were funded by General Revenue and the State Compensation to Victims of Crime fund. Vendor services were funded by a Federal Victims of Crime Act grant.

Table 9 summarizes budgeted and actual expenditures for the Crime Victims Claims Legacy Workflow System project.

Table 9

Budgeted and Actual Expenditures for the Crime Victims Claims Legacy Workflow System Project As of August 31, 2013				
Original Budget: $6,446,623 [a]				
Budget Category	Original Budget [a]	Revised Budget [b]	Total Expended	Expenditures Under/(Over) Original Budget
Personnel [c]	$ 1,548,940	$ 1,548,940	$ 254,060	$ 1,294,880
Contract/Consultant Services [d]	4,897,683	2,361,114	2,205,854	2,691,829
Total Project Costs	$6,446,623	$3,910,054	$2,459,914	$3,986,709

[a] Amount is from the OAG's *Business Case Workbook* dated August 26, 2010.

[b] The revised budget is based on the amount reported in the December 2011, January 2012, and February 2012 monitoring reports and recalculated by auditors to exclude system support costs. The budget was revised due to the OAG's decision to change from a traditional application to a vendor-supported cloud environment.

[c] Amount consists of salary and fringe benefits for OAG staff.

[d] Contract/consultant services include contract/consultant services for system development and implementation and project contingency costs (5 percent of development costs).

Source: Information OAG provided.

Project Benefits

According to the OAG, the new system will result in several benefits. Improved data entry will result in reduced staff time and reduced error rates. Improved operational effectiveness also will result in reduced error rates, improved timeliness, better quality products, increased productivity, expanded capacity or capability, and better management reporting. Additionally, replacing the legacy system results in avoiding the cost of manual processing of data.

Project Demonstration

The new system appears to be functioning as intended and provides improved functionality compared to the prior system. Auditors observed a demonstration of the new system, including screens used to review applications, determine eligibility, and determine award amounts.

As discussed above, the new system replaced the legacy workflow system. A new project will integrate the application and mainframe into one system and

add enhancements to the new system. A customer-facing portal will be developed during an additional project.

Additional Information

The initial and revised budgets in the OAG's monitoring reports incorrectly included system support costs. Auditors recalculated the budgets to remove the system support costs. In addition, the monitoring reports incorrectly omitted fiscal year 2011 OAG personnel costs and some vendor costs for fiscal year 2012. The OAG corrected the final costs and reported the corrected costs to auditors during this project, and the OAG asserted that it will include that information in its *Post-implementation Review of Business Outcomes* (PIRBO). The PIRBO was due in August 2013, six months after the project ended. As of the date of this report, the PIRBO report had not been received by the Quality Assurance Team.

The Texas Education Agency's Public Education Information Management System Redesign 3 Project

Project History/Overview

Project Summary
Original:
▪ End Date: August 31,2013
▪ Budget: $3,852,000
Current:
▪ End Date: December 31, 2013
▪ Budget: $4,005,742
Status: In Progress.

The Public Education Information Management System (PEIMS) encompasses all data the Texas Education Agency (TEA) requests and receives about public education, including student demographic and academic performance data, personnel data, financial data, and organizational information. PEIMS contains only the data necessary for the Legislature and TEA to perform their legally authorized functions in overseeing public education.

The original plan for the PEIMS Redesign 3 project was to redesign and enhance the functionality of the existing PEIMS system, instead of the entire infrastructure. The plan was to develop an electronic data warehouse (EDW) in house to store PEIMS data. However, during the course of the project, the Texas Student Data System (TSDS) also was being developed. TEA decided that it would be more beneficial to change the scope of the PEIMS Redesign 3 project because TSDS would include the needed PEIMS functionality. The PEIMS Redesign 3 project then became a support project for TSDS.

The PEIMS Redesign 3 project will implement data storage, data transmission, and unique ID functionality within TSDS. TSDS will allow local education agencies to use unique ID numbers to upload their data. Each student and staff member will have a single unique identifier for his or her entire career within the Texas educational system.

Project Status

TEA reported that the project began on September 1, 2011, and it was originally planned to be completed by August 31, 2013. Due to changes in the project direction, TEA extended the project and planned to complete it by December 31, 2013. TEA reported that the project was 96 percent complete as of August 31, 2013.

Project Costs

Table 10 summarizes budgeted and actual expenditures for the PEIMS Redesign 3 project.

Table 10

Budgeted and Actual Expenditures for the PEIMS Redesign 3 Project As of August 31, 2013				
Original Budget: $3,852,000				
Budget Category	Original Budget	Revised Budget	Total Expended	Expenditures Under/(Over) Original Budget
Hardware (Fiscal Years 2012 and 2013)	$ 518,828	$ 814,828	$ 631,413	$(112,585)
Software and Licenses (Fiscal Years 2012 and 2013)	559,781	1,177,772	1,382,454	(822,673)
Contract/Consultant Services (Fiscal Years 2012 and 2013)	2,773,391	1,859,400	1,551,433	1,221,958
Agency Personnel Costs (Fiscal Years 2012 and 2013)	0	153,742	153,742	(153,742)
Total Project Costs	$3,852,000	$4,005,742	$3,719,042	$132,958

Source: Information TEA provided.

It is important to note that the project costs in Table 10 do not reflect all project costs. Table 10 includes only those costs related to fiscal years 2012 and 2013.

TEA increased the original estimated project cost of $3,852,000 to $4,005,742 to include full-time equivalent costs that it did not include in the initial budget.

Project Benefits

TSDS will become the common data collection platform for TEA to reduce the data collection burden on local education agencies. The PEIMS Redesign 3 project will provide the housing of data and data tracking for TSDS. According to TEA, the PEIMS Redesign 3 project will allow for significantly lower costs for the housing and tracking of data. It will allow for data collection to be open from the beginning of the school year; allow for a partial data load; and allow for data collections by education service center, by local education agency, or by campus. The new system retains critical features of the prior system and will allow users to schedule automated data loads.

Project Demonstration

Auditors observed the data upload process. The process begins with logging into a TEA system that prevents unauthorized access. The user is then granted access to an application that allows local education agencies to upload their data. That application gives notifications of the types of data that are due to be

uploaded. The data is uploaded using a data transmission utility. The process includes several validations that the uploaded data must pass.

Auditors also observed an application that aggregates data from operation data store in a form that is useful to the end user. Teachers, principals, and superintendents can access campus and district data according to their level of access. Data includes data on student attendance, demographics, contact information, standardized test scores, and class grades at the campus and district levels. Additionally, employee data will be present in the system so that it can be queried.

Additional Information

TEA expressed concern that it may not be able to retain the number of staff with the skills necessary to build and maintain operation data store.

In addition, TEA correspondence shows some confusion about how to track and report project costs. Management appeared to understand that costs were to be reported only by funding source and that any funding source that was from an outside source (such as a foundation) did not have to be reported along with all other project costs. However, management tracked costs only by their funding source, rather than tracking costs by the specific project.

Project scheduling issues also exist. TEA tracks the project based on a fiscal-year-end basis instead of by the actual project start and completion dates. Project management did not record the actual start and completion dates of the project in the project documentation.

As noted in TEA's monitoring reports, some school districts' data file sizes are too large for transfer and processing. TEA is working to resolve that issue.

Appendix

Objective, Scope, and Methodology

Objective

The objective of this project was to assist the Quality Assurance Team (QAT) in its monitoring activities for major information resources projects.

Scope

The project scope covered eight major information resources development projects at six state agencies. The State Auditor's Office analyzed those eight projects at the request of the QAT, which selected those projects because they were reported as complete, were nearing completion, or were identified as high-risk projects.

Methodology

From August 2013 through December 2013, auditors and QAT members reviewed the QAT documentation available for the eight major information resources development projects. That documentation included *Business Cases*, *Business Case Workbooks*, *Statewide Impact Analyses*, project plans, *Post-implementation Reviews of Business Outcomes* (if available), and monitoring reports. Auditors also conducted interviews with key personnel involved in the projects and observed demonstrations of systems (if available).

The agencies self-reported the development information presented in this report to the QAT. The State Auditor's Office did not independently verify the accuracy of the information that the agencies reported or perform any data reliability work.

Criteria used included the following:

- Texas Government Code, Chapter 2054.

- Department of Information Resources project delivery framework requirements.

- General Appropriations Act (82nd Legislature).

Project Information

Fieldwork was conducted from August 2013 through December 2013. This project was a non-audit service; therefore, the information in this report was not subjected to all the tests and confirmations that would be performed in an audit. However, the information in this report was subject to certain quality control procedures to help ensure accuracy.

The following members of the State Auditor's staff conducted this project:

- Michael O. Clayton, CPA, CISA, CFE, CIDA (Project Manager)

- Jennifer Ranea Robinson, CPA, MBA (Assistant Project Manager)

- Gregory Scott Adams, CPA, MPA, CGFM

- Nathan Beavers

- Ryan Marshall Belcik

- Jeffrey D. Criminger

- Rachel Lynne Goldman, CPA

- Arnton W. Gray

- Laura Nienkerk, MAcy, CIA

- Michael Yokie, CISA

- Michelle Ann Duncan Feller, CPA, CIA (Quality Control Reviewer)

- Ralph O. McClendon, CISSP, CCP, CISA (Audit Manager)

Copies of this report have been distributed to the following:

Legislative Audit Committee
The Honorable David Dewhurst, Lieutenant Governor, Joint Chair
The Honorable Joe Straus III, Speaker of the House, Joint Chair
The Honorable Jim Pitts, House Appropriations Committee
The Honorable Harvey Hilderbran, House Ways and Means Committee

Office of the Governor
The Honorable Rick Perry, Governor

Department of Aging and Disability Services
Mr. Jon Weizenbaum, Commissioner

Department of Information Resources
Ms. Karen Robinson, Executive Director and State Chief Information Officer

Department of State Health Services
Dr. David L. Lakey, Commissioner

Health and Human Services Commission
Dr. Kyle L. Janek, Executive Commissioner

Legislative Budget Board
Ms. Ursula Parks, Director

Office of the Attorney General
The Honorable Greg Abbott, Attorney General

Texas Department of Transportation
Mr. James Bass, Interim Executive Director and Chief Financial Officer

Texas Education Agency
Mr. Michael L. Williams, Commissioner