State Auditor's Office

John Keel, CPA
State Auditor

A Report on

Analysis of Quality Assurance Team Projects

March 2013
Report No. 13-028

A Report on

Analysis of Quality Assurance Team Projects

Overall Conclusion

The State Auditor's Office analyzed 13 major information system development projects at 8 state agencies. At the request of the State's Quality Assurance Team (QAT) those 13 projects were selected for analysis because those projects had been reported as complete, were nearing completion, or were identified as high-risk projects.[1]

At the time of the analysis, seven of the projects were complete and the systems had been implemented, two projects were significantly complete, two projects were scheduled to be completed in fiscal year 2013, one project was scheduled to be completed in fiscal year 2014, and one project was canceled after five years of work.

Quality Assurance Team (QAT)

In 1993, the 73rd Legislature enacted Article V, Section 133, of the General Appropriations Act, which established the Quality Assurance Team (QAT). The QAT comprises representatives from the Legislative Budget Office (LBB), the State Auditor's Office (SAO), and the Department of Information Resources (DIR) to approve and review major information system development projects. The SAO has delegated its voting authority to the LBB on any QAT decisions to approve or not approve the expenditure of appropriated funds for major information resources projects.

Source: Quality Assurance Team Web Site at http://qat.state.tx.us/.

Observations from the analysis included the following:

- Nine of the 13 projects were completed late or were projected to be completed late, and 1 project was canceled after spending $7,631,139 over five years. The average delay for all 13 projects was 9 months, or a 40 percent increase from the original projected end dates. The project with the shortest completion time took eight months. The project with the longest completion time took almost seven years; that project exceeded its planned completion time by 2.7 years. The agencies cited the following reasons for project delays:

  - Vendor negotiations and bidding process delays.

  - Federal and legislative requirements and standards changed during development of the system.

  - Turnover in project management.

---

[1] It is important to note that the agencies self-reported the system development information presented in this report. The State Auditor's Office did not independently verify the accuracy of that information. This report summarizes observations the State Auditor's Office made based on an analysis of the self-reported information.

- Scope and time lines were underestimated.

- Decisions agencies made related to changes in funding, requirements, or design.

▪ Improvements may be needed in developing initial project cost estimates. Eight of the 13 projects exceeded their budgets by an average of $1,841,551 or 57 percent. Two projects exceeded their budgets by 334 percent and 162 percent. Two projects came in under budget by 3.2 percent and 2.4 percent.

▪ Agencies that used a commercial off-the-shelf (COTS) solution exceeded their budgets by a smaller amount and took less time to complete their projects than agencies that did not use a COTS solution (see text box for additional details). Although they used COTS solutions, the agencies still needed to modify the software to fit their needs and incurred development costs associated with their projects.

Seven of the 13 projects used COTS solutions. Those seven projects exceeded their planned completion times by an average of 4 months or 27 percent, and they exceeded their budgets by an average of $1,679,590 or 23 percent. It took an average of 2.0 years to complete those projects.

In comparison, the remaining 6 projects that did not use a COTS solution exceeded their planned completion times by an average of 14 months or 55 percent and exceeded their planned budgets by an average of $2,030,505 or 97 percent. It took an average of 3.7 years to complete those projects.

> **Commercial Off-the-shelf (COTS) Solutions**
>
> COTS solutions are commercially available specialized software designed for specific applications.
>
> COTS may be selected for several reasons:
>
> ▪ Development time can be faster.
>
> ▪ The software can provide more user functionality than custom software and may be flexible enough to accommodate multiple hardware and operating environments.
>
> ▪ Help desk support can be purchased with the commercial license, which can help reduce software maintenance costs.
>
> Sources: *GAO Cost Estimating and Assessment Guide Best Practices for Developing and Managing Capital Program Costs*, Report No. GAO -09-3SP, Governmental Accountability Office, March 2009; and http://www.businessdictionary.com/definition/commercial-off-the-shelf-COTS-software.html.

▪ Agencies understated the costs of their projects by not including the costs related to state employees who worked on the projects. For 8 of the 13 projects, agencies did not always include costs associated with the salary and benefits for state employees in the project documentation they submitted to the QAT.

▪ For one project that is complete and has been in production for more than six months, the agency has not submitted its *Post-implementation Review of Business Outcomes* report to the QAT as required.

For specific details on each of the projects analyzed, please see the Detailed Results section of this report.

Summary of Project Scope and Methodology

The State Auditor's Office performed this project at the request of the QAT. The project scope covered 13 major information system development projects at 8 state agencies. QAT selected those projects for analysis because the projects were reported as complete, were nearing completion, or were identified as high-risk projects.

From December 2012 through February 2013, auditors and QAT members reviewed the QAT documentation available for 13 major information system development projects. That documentation included the business case, business case workbook, statewide impact analysis, project plans, *Post-implementation Review of Business Outcomes*, and monitoring reports. Auditors also conducted interviews with key personnel involved in the projects and observed demonstrations of the systems (if available).

The information in this report was not subjected to all the tests and confirmations that would be performed in an audit. The agencies self-reported the system 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

Appendix

Detailed Results

Department of Aging and Disability Services

Preadmission Screening and Resident Review Redesign Project

The Department of Aging and Disability Services (Department) initiated a project prior to receiving approval from the Quality Assurance Team (QAT). That project was to make changes to an existing system—the Medicaid Management Information System—so that it could include the federally required Preadmission Screening and Resident Reviews (PASRR). The Department's goal for the project is to help it conform with federal rules to ensure that nursing facility placements are appropriate to meet the needs of any individuals with a mental illness, intellectual disability, or developmental disabilities. The changes include:

- Adding new forms to increase review requirements for the PASRR process.

- Developing an automated process to ensure that all eligible residents are screened and evaluated in accordance with federal PASRR regulations.

- Adding new reports and monitoring features to notify local health authorities of events requiring their review.

The Department began the project in March 2012. Required project documents were completed and approved by Department management in November 2012. The QAT approved the project in December 2012, nine months after the Department began the project.

The Department's original project plan divided the work into two releases to be implemented in May 2013 and August 2013. Based on the output of the functional design phase, the Department updated the plan to divide the first release into two releases and push out the final release. The current plan's implementation dates are May 2013 for release 1 and July 2014 for project completion. That equates to an extension of 11 months.

The contracted costs for the original plan were estimated at $2,299,633; the revised plan increased the contracted costs by $3,715,112 to a total of $6,014,745. The Department did not include state staff costs and benefits in its cost estimates. As of February 7, 2013, state staff costs with benefits were estimated to be $285,753. Current expenditures, which include state staff costs and benefits, to date were $1,047,032.

Project Overview

The Department is responsible for monitoring local authorities' compliance with federal PASRR rules. Determining a patient's eligibility for Medicaid-funded nursing facility services occurs as a result of PASRR evaluations. In December 2009, the U. S. Centers for Medicare and Medicaid Services (CMS) reported to the Department that the Department's current pre-admission process did not comply with federal regulations.

To meet those requirements, the changes to the Medicaid Management Information System include:

- Creation of two forms:

   - PASRR Level I evaluation, which will be screening and evaluation forms that will provide electronic information regarding functional eligibility for the nursing facility program for service authorization.

   - PASRR Level II evaluation, which will be forms used by local mental health and intellectual disability authorities for the nursing facilities to review the eligibility status for Medicaid-funded nursing facility services and whether specialized services are necessary.

- Methods for holding nursing facilities accountable for assessing eligibility for all patients, including:

   - A method for monitoring the admission of patients eligible for federal funding who are not assessed by the nursing facility and, as a result, do not receive federally funded services when they could have.

   - A method for pending the authorization for payment to a nursing facility until the PASRR regulations have been met for an eligible individual.

   - A method for collecting information and generating reports with admission and assessment data to identify changes in statuses and create monitoring tools that communicate changes in statuses to local authorities.

The Department began the project in March 2012. Required project documents were completed and approved by Department management in November 2012. The QAT approved the project in December 2012, nine months after the Department began the project.

The Department completed the functional design for the changes in November 2012. Due to additional work identified in the functional design process, the project required additional funding and time.

Project Schedule

In the original business case, the Department divided the changes into two releases. The first release included the forms and method for holding nursing facilities accountable and had an implementation date of May 2013. The second release included the reporting and monitoring functions and had an implementation date of August 2013.

The Department reworked the budget and time line during January 2013, and the Department received approval for additional funding from CMS to complete the project and extend the project time line. The project extension had the following effect on the project schedule:

Release 1 was divided into two phases (release 1 and release 2):

- Release 1 will be implemented in time for the May 2013 mandate and will include the two new forms.

- Release 2 is expected in July 2014, when the project is scheduled to be completed.

Project Costs

Table 1 presents project costs based on information the Department provided on February 7, 2013.

Table 1

Budgeted and Actual Expenditures for PASRR Redesign Project				
Original Budget $2,299,633				
Budget Category	Original Budgeted Amount	Total Expenditures	Current Budget Amount	Budget Increase
Contract/Consultant Services	$ 2,299,633	$ 947,019	$ 6,014,745	$ 3,715,112
Salaries and Benefits	0	100,013	285,753	285,753
Totals	$ 2,299,633	$ 1,047,032	$6,300,498	$4,000,865

The Department reported that, after the project is completed, state staff assigned to the PASRR Redesign Project will be reassigned to manage and monitor the PASRR process and perform other job duties.

Project Issues

The estimated project costs increased and the project schedule was extended when the Department completed the project's functional design phase. The Department began the project prior to obtaining required approvals from the QAT.

Texas Unified Nutrition Programs System

The Department of Agriculture (Department) has implemented the Texas Unified Nutrition Programs System (TxUNPS), all project milestones have been completed, and TxUNPS delivered all planned functionality and is operating as intended.

The Department implemented TxUNPS to consolidate and administer the following U.S. Department of Agriculture (USDA) grant programs: National School Lunch Program, School Breakfast Program, Fresh Fruit and Vegetable Program, Seamless Summer Option, Afterschool Care Program, Special Milk Program, Child and Adult Care Food Program, Summer Food Service Program, and USDA Donated Foods Program, which includes the USDA Food Distribution Program.

The project began in September 2009 and was completed in April 2012. The cost of the project was $4,557,992, which was less than the project's original budget. However, the project exceeded its original deadline by seven months.

The Department asserts that TxUNPS provides accurate payment of claims and advances, increases accessibility of data, provides online acceptance of applications for the various food and nutrition programs, and improves service and satisfaction. The Department estimates that the implementation of TxUNPS will save the State $5,886,674 during the next 10 years and that the estimated break-even point will occur during year six. As of January 2013, two of the three legacy systems have been retired. The third legacy system is scheduled to be retired in the summer of 2013.

The final monitoring report was completed May 4, 2012; however, it was never amended to include state staff salaries and benefits to meet the Information Technology Detail instructions.

The Department's *Post-implementation Review of Business Outcomes* (PIRBO) was due in October 2012; however, as of January 2013, the Department had not filed its PIRBO. The Department asserted that its PIRBO would be available in early 2013.

Project Demonstration

A demonstration of TxUNPS, which is Web-based, indicated that it appears to be functioning as intended. The demonstration provided an overview of the various financial modules within TxUNPS. The implementation of TxUNPS provides a universal, central system that users can access for most federal nutrition programs.

Project Overview

The Department administers all federal nutrition programs except for the Texas Women, Infants and Children program and the Supplemental Nutrition Assistance Program. In 2008, the Department took over additional federal nutrition programs. Three legacy systems and paper application processes had formerly been used to administer those programs. Two of the three legacy systems have been retired now that TxUNPS is complete and operating as intended. The third legacy system, the Texas Commodities System, is still running in read-only mode because that was the last module to be completed; however, it is scheduled to be retired in the summer of 2013.

The project began in September 2009 and was completed in three phases based on modules. School Nutrition Programs comprised phase 1, which was completed in March 2011. The Summer Food Service Program, Child and Adult Care Food Program, and compliance regarding those programs comprised phase 2, which was completed in August 2011. The USDA Food Distribution Program (also known as commodities) comprised phase 3 and was completed in April 2012.

Project Benefits

According to the Department, TxUNPS achieves the expected business goals of simplifying administration of food and nutrition programs by increasing the availability of automated functions. TxUNPS provides accurate payment of claims and advances, increased accessibility of data, online acceptance of applications for the various food and nutrition programs, and improved service and satisfaction. Both Department staff and external users of TxUNPS can obtain support more easily, and they also can obtain more consolidated accounting and audit information. In addition, TXUNPS requires less training time. Another benefit for the Department is a reduction in the amount of hardware and maintenance overhead.

Project Costs

Table 2 presents project cost information.

Table 2

Budgeted and Actual Expenditures for TxUNPS			
Original Budget: $4,668,750			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$ 2,652,321	$2,416,497	$ 235,824
Salaries and Benefits	2,016,429	2,141,495	(125,066)
Total Project Costs	$4,668,750	$4,557,992	$110,758

Based on information the Department provided, the project was completed under budget.

Project Issues

No issues have been identified with TxUNPS; however, as of January 2013, the Department had not submitted a PIRBO, which was due in October 2012. The Department asserted that its PIRBO would be available in early 2013.

Chapter 3-A
Statewide Enterprise Resource Planning Project – Financials (ERP)

The Office of the Comptroller of Public Accounts (Comptroller's Office) managed the development and implementation of the financial portion of the Statewide Enterprise Resource Planning (ERP) application. This application is the Centralized Accounting and Payroll/Personnel System (CAPPS). The Comptroller's Office originally planned to implement CAPPS at the Department of Information Resources (DIR) and the Texas Department of Transportation (TxDOT). However, the scope was subsequently reduced to include only the Central Texas Turnpike System (CTTS), in addition to DIR. That scope change was due to the complexity of the modifications required to meet TxDOT's financial needs. TxDOT will be scheduled in a later phase of CAPPS implementation projects.

CAPPS was successfully implemented at DIR and CTTS on August 31, 2011, and the project was monitored for two months and completed on October 31, 2011. CTTS, however, is not fully using the functionalities that CAPPS provides. CTTS will continue to use its in-house accounting system until TxDOT implements the CAPPS financials solution.

This project is the first phase of ProjectONE, which was charged with implementing ERP for the State. ProjectONE will result in a single set of books for the State and a single source of information for all state agencies, which will improve accuracy and efficiency. CAPPS is a Web-based system that enables agencies to have real-time access to financial information and provides enhanced reporting capabilities.

The overall goal of this project was to move DIR and CTTS from their legacy systems to CAPPS. The Comptroller's Office asserts that the implementation of CAPPS will allow for a single set of books for the State of Texas. The full CAPPS implementation includes a shared CAPPS central system maintained by the Comptroller's Office. In an update provided to QAT in July 2012, the Comptroller's Office indicated that some distributed implementations (called CAPPS hubs) maintained by larger, more complex agencies will share data with the Comptroller's Office for the single set of books. The Uniform Statewide Accounting System (USAS) will remain the system of record until all agencies have implemented CAPPS.

This project began on August 7, 2009, and the implementation of CAPPS at DIR and CTTS was completed on schedule on August 31, 2011, at a cost of $29,389,367. That exceeded the original budget of $18,029,645 for the original scope by $11,359,722. The original budget for the project did not include salaries and benefits for the agencies' staff participating in the implementation; however, on the Comptroller's Office's *Post-implementation*

Review of Business Outcomes, salaries and benefits were included in the project's final costs. A break-even point or positive return on investment was not calculated because the project was intended to be the foundation for remaining agencies to join the shared system (CAPPS).

Product Demonstration

A demonstration of CAPPS indicated that it appears to be working as intended based upon the reduced scope. The demonstration provided an overview of the various financial modules within CAPPS and how they are integrated. The implementation of CAPPS at DIR and CTTS provides a platform to implement CAPPS for all state agencies.

Project Overview

The implementation of CAPPS at DIR and CTTS is the first phase of ProjectONE, which was charged with implementing ERP for the State during the next several years. The intent of ProjectONE is to create a single set of books for the State and a single source of information for all state agencies after all agencies are migrated into CAPPS, which could improve accuracy and efficiency. However, USAS will remain the system of record until all agencies have implemented CAPPS. CAPPS is a Web-based system that will enable agencies to have real-time access to financial information and provide enhanced reporting capabilities.

Project Benefits

Successful implementation of CAPPS at DIR and CTTS completes the first phase of ProjectONE, which sets the foundation for the State achieving its overall goal of implementing ERP and creating a single set of books for the State. The Comptroller's Office asserts that having a single source of information for all state agencies will improve accuracy and efficiency.

The implementation of CAPPS is designed to eliminate obsolete business processes (including manual processing), duplicate data entry, paper processing, and manual reconciliation. It eliminates redundant databases and increases security while maintaining transparency. CAPPS improves response time to inquiries from the Legislature, state agencies, higher education institutions, and oversight agencies by using real-time processes and integrated databases. It establishes a common data language, which provides for consistent reporting and better analysis of how the State spends funds.

Project Costs

Table 3 presents project cost information.

Table 3

Budgeted and Actual Expenditures for the Implementation of Statewide ERP			
Original Budget: $18,029,645			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Consulting Services	$10,766,067	$23,803,854	$(13,037,787)
Salaries and Benefits	0	4,985,505	(4,985,505)
Other Expenses	7,263,578	600,008	6,663,570
Total Project Costs	$18,029,645	$29,389,367	$(11,359,722)

The project exceeded the original budget for the original scope by $11,359,722. The original budget did not include salaries and benefits for the state agencies' staff participating in the implementation. The scope was also reduced when TxDOT was removed from this phase of CAPPS implementation.

Project Issues

The project's scope was modified due to time and cost requirements to modify the system to fit TxDOT's needs. It was determined that approximately 89,000 hours would be required to customize the code with functionality required by TxDOT. Project funding was based upon an anticipated 30,000 hours for customization.

Comptroller of Public Accounts (CPA)/Texas Department of Insurance (TDI) Implementation on CAPPS (CTIC)

The Office of the Comptroller of Public Accounts (Comptroller's Office) managed the implementation of the Centralized Accounting and Payroll/Personnel System (CAPPS) at the Comptroller's Office and the Department of Insurance (Department). All project milestones have been completed and CAPPS is functioning as intended at those two agencies.

This project is the second phase of ProjectONE, which was charged with implementing Enterprise Resource Planning (ERP) for the State during the next several years. ProjectONE will result in a single set of books for the State and a single source of information for all state agencies, which could improve accuracy and efficiency. CAPPS is a Web-based system that enables agencies to have real-time access to financial information and provides enhanced reporting capabilities.

The overall goal of this project was to move the Comptroller's Office and the Department from the legacy system (the Integrated Statewide Accounting System, or ISAS) to CAPPS. The Comptroller's Office was supporting two PeopleSoft financial systems (ISAS and CAPPS), which was not efficient or cost-effective. The implementation of CAPPS will require the Comptroller's Office to support only one financial system. The Uniform Statewide Accounting System (USAS) will remain the system of record until all agencies have implemented CAPPS.

The project to implement CAPPS at the Comptroller's Office and the Department began on November 1, 2011, and was completed successfully on July 1, 2012, at a cost of $2,876,152. The project was delivered ahead of schedule and under budget. It is estimated that the implementation of CAPPS at the Comptroller's Office and the Department will save the State $14,981,087 during the next 9 years. The estimated break-even point will occur at 1.88 years.

Product Demonstration

A demonstration of CAPPS indicated that it appears to be functioning as intended. The demonstration provided an overview of the various financial modules within CAPPS and how they are integrated. The implementation of CAPPS at the Comptroller's Office and the Department provides a strong platform to implement CAPPS at all state agencies.

Project Overview

This project is the second phase of ProjectONE, which was charged with implementing ERP for the State during the next several years. ProjectONE will result in a single set of books for the State and a single source of information for all state agencies, which will improve accuracy and efficiency. CAPPS is a Web-based system that will enable agencies to have real-time access to financial information and provide enhanced reporting capabilities. The first stage of ProjectONE implemented CAPPS at the Department of Information Resources and the Department of Transportation's Central Texas Turnpike System.

Project Benefits

Successful implementation of CAPPS at the Comptroller's Office and the Department completes the second phase of ProjectONE, which brings the State closer to the overall goal of implementing ERP and creating a single set of books for the State. Having a single source of information for all state agencies will improve accuracy and efficiency.

The implementation of CAPPS is designed to eliminate obsolete business processes (including manual processing), duplicate data entry, paper processing, and manual reconciliation. It eliminates redundant databases and increases security while maintaining transparency. CAPPS improves response time to inquiries from the Legislature, state agencies, higher education institutions, and oversight agencies by using real-time processes and integrated databases. It establishes a common data language, which provides for consistent reporting and better analysis of how the State spends funds.

It is estimated that the implementation of CAPPS at the Comptroller's Office and the Department will save the State $14,981,087 during the next 9 years. The estimated break-even point occurs at 1.88 years.

Current Status

CAPPS was successfully completed at the Comptroller's Office and the Department on July 1, 2012. No further changes or enhancements were noted.

Project Costs

Table 4 presents project cost information.

Table 4

Budgeted and Actual Expenditures for Implementation of CTIC			
Original Budget: $2,897,260			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$2,579,200	$2,591,450	$(12,250)
Salaries and Benefits	318,060	284,702	33,358
Total Project Costs	**$2,897,260**	**$2,876,152**	**$21,108**

The project was completed under budget.

Project Issues

No project issues were noted.

Chapter 4-A
State Board for Educator Certification Online Rewrite Project

The Texas Education Agency's (Agency) in-house project to rewrite the online system for the State Board for Educator Certification (SBEC) was reported as canceled on August 31, 2011, after spending $7,631,139 and with no project deliverables completed. However, the Agency continues development of the system.

The Educator Certification System (also known as EdCert or SBEC Online Rewrite) was supposed to update the automated business processes for educator certification and standards, which include fingerprinting, credentialing, investigations, accountability systems, and financial accounting. The update was to replace multiple outdated existing systems that depended on obsolete technology with an integrated, Web-based application based on current technology.

The initial proposal was for a two-year project beginning in 2006. However, because of Senate Bill 9 (80th Legislature), which required fingerprinting and Federal Bureau of Investigation (FBI) background checks for all educators, the Agency diverted project resources and temporarily suspended the project. No capital expense was budgeted in fiscal years 2008 and 2009, although work continued using budgets for maintenance and FTEs' salaries and benefits.

In fiscal year 2010, capital funding resumed on the project with a projected end date of August 31, 2011. However, in March 2011, it became apparent that the project would not be completed by the end of the fiscal year. The Agency's chief information officer requested an analysis of the project status. The analysis concluded that the project was 23 percent complete. At that time the Agency decided to cancel the project.

The Agency issued the project *Post-implementation Review of Business Outcomes* (PIRBO) to the Quality Assurance Team (QAT) in October 2012 in response to a status update request. The initial estimated budget for this project was $1,759,802 without staff salaries and benefits, and the total project expenditures from 2006 until the end of fiscal year 2011 were $7,631,139 (including state salaries and benefits).

However, since the cancellation of the project, the Agency has continued to develop the SBEC legacy application as a maintenance project through application change requests. Costs for the continued development of the legacy system total $1,202,547. The Agency did not report this continued development to the QAT.

Project Overview

The SBEC Online Rewrite project was proposed to replace the legacy client-server application based on the "PowerBuilder" integrated development environment and Sybase database with a Web application based on IBM's WebSphere middleware software and Oracle database. In addition, the new system would use Java technology in the Microsoft.NET framework. The Agency asserted that the latter technology had a number of advantages over the former, including:

- Better performance.

- Ease of maintenance.

- Greater vendor support.

- Integration with other Agency applications.

The SBEC Online Rewrite project was a continuation of a comprehensive redesign of the legacy SBEC application (EdCert) to develop a Web-based application:

- For K-12 educators to apply for certification.

- For recommendations from Texas educators' preparation programs.

- For school districts to access and verify educator credentials.

- To bring the application into alignment with current Agency architecture standards and technologies.

Phase 2 was to provide:

- Seventeen redesigned business processes.

- New interfaces to:

  - Educational Testing Services (ETS).

  - The electronic payment (ePayment) system.

  - The Agency's Identify Access Manager (IAM, now called TEAL) to address security recommendations made in *An Audit Report on the Texas Education Agency's Oversight of Alternative Teacher Certification Programs* (State Auditor's Office Report No. 08-037, June 2008).

By March 2011, the project scope had been reduced to nine business processes.

Project Benefits

Hardware and software purchased for the project have been used in the development of the legacy EdCert system or other projects. In particular, the Tivoli access management (single sign-on software, renamed "TEAL") has been implemented in the legacy system.

Current Status

The Agency officially canceled the project on August 31, 2011. At that time, an analysis determined that the project was 23 percent complete and the funding had expired. However, because the need for updating the SBEC legacy application "EdCert" remains, development has continued in a "maintenance" mode.

Project Costs

Table 5 presents project cost information.

Table 5

Budgeted and Actual Expenditures for the SBEC Online Rewrite Project			
Original Budget $1,759,802			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$ 1,759,802	$ 3,940,149	$ (2,180,347)
Salaries and Benefits	0	3,690,990	(3,690,990)
Total Project Costs	$ 1,759,802	$ 7,631,139	$(5,871,337)

Project Issues

The Agency officially canceled the project on August 31, 2011. The Agency has continued to develop the SBEC legacy application as a maintenance project through application change requests. An Agency internal audit concluded the following:

- The system complexity, scope, and time lines were underestimated in developing and gathering business requirements for a major enterprise system.

- Turnover in both the project management team and the business owners affected continuity on the project.

- After a year into the SBEC Online Rewrite project, work was halted due to new legislation, Senate Bill 9 (80th Legislature), which required technical resources to develop a module in the legacy system to process

fingerprinting and background checks for educator and other school workers.

- Early in the project, the Agency decided to invest in technology to build a new ITS infrastructure (WebSphere tools). The Agency's vision was to eventually replace existing technology with service-oriented architecture by building an infrastructure for Web services, user interface, and business logic to work together. However, the project management team was not familiar with the new tools and the WebSphere technology was complex and did not work as intended.

- The SBEC Online Rewrite project was not managed using traditional project management practices with ongoing project schedules; work assignments; and time lines that included testing, user acceptance, and technical training pertaining to the different audiences. Instead, the project became deadline-driven.

- The project management team's morale was affected by the lack of solid direction, lack of progress, and the amount of rework on the SBEC Online Rewrite project.

Foundation School Program Rewrite - Phase 2 Project

The implementation of the Foundation School Program (FSP) Rewrite - Phase 2 system at the Texas Education Agency (Agency) is complete. However, the Agency did not complete two milestones included in the project's original scope.

The Agency reprioritized the project's milestones to focus on core business needs and removed the rewrites of the Active Server Pages (ASP) Pupil Projection and Transportation subsystems from the project's scope. The Agency completed the remaining milestones. A demonstration of the FSP system indicated that the modules completed appear to be functioning as intended.

This project was a continuation of the FSP Rewrite Phase 1 project, which was a comprehensive software development effort to update and enhance modules of the FSP system. Phase 2 of the project resulted in the migration of 11 years of mainframe FSP data to an Oracle database and the migration of calculation programs into a UNIX environment.

The Agency developed the FSP system in-house. Phase 2 was started in September 2009 and ended December 31, 2011. The project was originally scheduled to end on August 31, 2011, but the Agency extended the project to complete a module. According to the *Post-implementation Review of Business Outcomes* (PIRBO) the final cost was $5,631,729 (including salaries and benefits costs), which was $1,112,844 over the original budget presented in the Agency's business case workbook.

Some benefits of the rewrite include fulfillment of a statutory mandate, the ability to administer annual funding to districts and charter schools in a timely manner, better application security, and reduced information technology (IT) costs. There were also hardware savings from retiring a mainframe server in June 2010. In its PIRBO report, the Agency identified $295,220 in quantified savings related to Phase 2.

Product Demonstration

A demonstration of the FSP system indicated that the modules completed appear to be functioning as intended. The demonstration provided an overview of modules that were rewritten in Phase 2 and showcased the improved integration among the different modules within the FSP system. The new FSP system provides a more up-to-date system for internal and external users.

Project Overview

This project was a continuation of the FSP Rewrite Phase 1, a comprehensive software development effort to update and enhance modules of the FSP

system. Phase 2 of the project included migrating programs and data files to a UNIX environment; rewriting existing programs; implementing statutory changes; developing a new subsystem for state funding administration; and collaborating with the Municipal Advisory Council to electronically automate the exchange of bond data.

The main goals of Phase 2 were to develop a fully integrated system that administers all of the FSP and to reduce the cost of maintaining three FSP systems by combining functions into a comprehensive system.

Project Benefits

The FSP Rewrite - Phase 2 provided several benefits to internal and external users. The most important benefit was the fulfillment of Agency statutory responsibilities related to the administration of state and federal funding.

The FSP system has a user interface that is consistent across applications and improved audit controls. Additionally, the FSP system has enabled reductions in staff time spent on various processes.

Current Status

The implementation of the FSP Rewrite - Phase 2 was completed on December 31, 2011. The Agency plans to continue work on the project to complete the original scope. The rewrite of the Transportation subsystem is planned as fiscal year 2013 maintenance work and is scheduled to be completed by May 30, 2013. The rewrite of the Pupil Projection subsystem is planned as maintenance work for fiscal year 2014.

Project Costs

Table 6 presents project cost information.

Table 6

Budgeted and Actual Expenditures for the FSP Rewrite - Phase 2			
Original Budget: $4,518,885 [a]			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$ 3,875,528	$ 3,611,682	$ 263,846
Salaries and Benefits	643,357	2,020,047	(1,376,690)
Total Project Costs	$4,518,885	$5,631,729	$(1,112,844)
[a] Based on the financial information presented in the Agency's business case workbook for this project.			

The project was completed over budget.

Project Issues

Two project milestones included in the original project scope— the rewrites of the ASP Pupil Projection and Transportation subsystems—were not completed.

Chapter 5-A
Texas Emissions Reduction Program Data Management System

The Texas Emissions Reduction Program Data Management System project, referred to as TERP DMS, at the Commission on Environmental Quality (Commission) is not complete. Implementation of phase 1 of TERP DMS has been completed and is functioning as intended. Development of phase 2 was completed in April 2012; however, it is not fully functional. As of January 2013, the Commission expected to complete phase 2 functionality and phase 3 by February 28, 2013.[2]

The TERP DMS project was initiated to provide a data depository in Oracle that would allow entry, recording, and extraction of data for the Commission's Texas Emissions Reduction Program (TERP). The original scope of TERP DMS, referred to as phase 1, included replicating the data view and data entry interfaces from the previous access database, monitoring reduction of emissions by grantees, ensuring that money was used for its intended purpose, and interfacing with the Commission's contract document management system. Phase 2 arose during the development of phase 1 and consists of creating an automated interface from TERP DMS with the financial system, which is called the Budget and Monitoring System (BAMS). Phase 3 was added to the project to fulfill the requirements of the Senate Bill 385 (82nd Legislature, Regular Session), which added natural gas fueling facilities to the items funded by TERP. Phase 3 will add an online submittal interface for information related to funding those natural gas facilities.

The initial planning for the project began in September 2009, and TERP DMS phase 1 was completed and placed into production on December 31, 2011, three months later than originally planned (September 2011). The scope of the original project was expanded with two additional phases. Phase 2 began in December 2010, when the Commission implemented BAMS and wanted to create an automatic interface between that system and TERP DMS. Phase 3 began in September 2011 to develop an online submittal interface for information related to funding natural gas fueling facilities.

According to the Commission, both phase 2 and 3 are expected to be fully completed in February 2013. The project expenditures for all 3 phases as of February 20, 2013 were $1,774,870, which was more than the original budget of $1,404,831 for all 3 phases. The current budget is at $1,903,187. The Commission expects to complete the *Post-implementation Review of Business Outcomes* (PIRBO) six months after the completion of phases 2 and 3.

---

[2] On March 7, 2013, the Commission notified the Quality Assurance Team that the project had been completed on February 28, 2013.

Product Demonstration

A demonstration of phase 1 of TERP DMS indicated that it appears to be functioning as intended. The demonstration provided an overview of the various functions within the system related to grants, applications, and usage reports. The Commission asserts that TERP DMS creates a more secure and efficient grant application and tracking system.

Project Overview

Prior to the implementation of the TERP DMS project, the Commission was using an Access database to manage its data related to TERP-funded grants and applications. Using an Access database had several limitations that prevented the Commission from fully supporting the TERP business process. The Commission believed that a data management system would improve the security and reliability of the data related to grants and usage of the funds. The new system would also provide additional functionality to support the TERP business process and improve efficiency.

The TERP DMS project was introduced in September 2009 to address the issues associated with the outdated Access database. The above-mentioned objectives of the project were included in the original business case and were part of phase 1. Phase 1 was completed in December 2011. Additional phases were added to the TERP DMS project after development of phase 1 was underway.

Phase 2 arose when the Commission implemented BAMS and wanted to create an automatic interface between that system and TERP DMS. The development of phase 2 was completed in April 2012; however, it was not fully functional because it did not automatically transmit data to BAMS due to limitations in BAMS. As of January 2013, the Commission manually transferred the information to BAMS and expected to fully functionalize phase 2 by February 28, 2013.

Phase 3 was included in the TERP DMS project to address the requirements of Senate Bill 385 (82nd Legislature, Regular Session). That bill added natural gas fueling facilities to the items funded by TERP; therefore, phase 3's objective is to develop an online submittal interface for information related to funding those natural gas facilities. As of January 2013, the Commission expected to complete phase 3 by February 28, 2013.

Project Benefits

The successful implementation of phase 1 of TERP DMS has provided various benefits including efficiency of the TERP business process and reliability of the data obtained for grant applications.

According to the Commission, phase 1 has improved on the security of the previous database because it requires a unique user ID and password for each

employee. TERP DMS allows users to review all grants, applications, and usage reports in one system. This helps the Commission closely monitor emission reduction resulting from the grants awarded and ensure the funds are being used for their intended purpose. FileNet, a portion of the system where documents are maintained, allows automatic upload of scanned documents to the contract management system, which saves employees time because it reduces sharing of hard-copy documents among various teams.

The Commission has not calculated the monetary benefits of the implementation of TERP DMS. Also, phases 2 and 3 have not been fully implemented as of the review date; therefore, no benefits have been identified. The PIRBO is expected to be completed in August 2013.

Current Status

Phase 1 of TERP DMS was implemented in December 2012. As of January 2013, the Commission expected to complete phases 2 and 3 in February 2013. The final documentation related to the project is expected to be submitted by the end of August 2013. Phase 1 is functioning as intended; however, a few user interface issues need to be addressed. No further significant changes or enhancements are noted.

Project Costs

Table 7 presents project cost information.

Table 7

Budgeted and Actual Expenditures for TERP DMS				
Original Budget: $1,404,831 [a]				
Budget Category	Original Budgeted Amount [b]	Total Expenditures	Current Budget Amount	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$ 1,107,325	$ 1,167,733	$ 1,301,264	$ (60,408)
Salaries and Benefits	297,506	607,137	601,923 [c]	(309,631)
Total Project Costs	$ 1,404,831	$ 1,774,870	$ 1,903,187	$(370,039)

[a] The original budget excludes an additional $250,000 of appropriations for phases 2 and 3.

[b] Per the business case workbook.

[c] The current budget amount related to salaries and benefits does not include the phase 3 costs. Those costs are expected to be included in the monitoring report due March 15, 2013, which will result in a higher budget amount.

The project is currently over budget by $370,039. The current estimated project costs to completion are $1,903,187.

Project Issues

The Commission reported a budget of $1.0 million in the monitoring reports it provided to the Quality Assurance Team (QAT), but its business case workbook indicated the estimated project costs were $1,404,831. According to the Commission's Air Quality Division, the $1.0 million represented the appropriations amount obtained for the project. However, the Commission expected the project to cost $1.5 million over three years. Approximately $1.2 million of the total project costs are related to direct project costs and maintenance costs, and the remaining $300,000 relate to staff costs. When phases 2 and 3 were added to the project, an additional $250,000 was added to the budget. Appropriations funded $1.25 million of the project. The remaining costs were covered through other funds the Commission had. The Commission is working on estimating the phase 3 salaries and benefits that need to be added to the budget and expected to have a final amount by the time its monitoring report was due on March 15, 2013.

Permit and Registration Information System

Development and implementation of the Permit and Registration Information System (PARIS) at the Commission on Environmental Quality (Commission) is underway. Work on phase 1 of PARIS began in October 2009 and was completed in February 2012. Phase 2 work began in September 2011 and is expected to be completed in August 2013; this is on schedule with the original plan.

PARIS is a system developed to maintain the registration, permit, and billing data for three regulatory programs at the Commission. The Commission currently uses the Texas Regulatory Activities and Compliance System (TRACS) to maintain that information; however that system has been in place since 1992, is outdated, and does not allow for integration with systems developed in more current technologies. The Commission contracted with a vendor to develop PARIS and address those issues.

Phase 1 was originally scheduled to be completed in August 2011 but was delayed due to "a large number of high category bugs, technical challenges, and staff availability for user testing/regression testing." According to the Commission, it also expanded the scope of the project. The cost of phase 1 was $5,228,164, which exceeded the original budget of $3,394,124. Phase 2 was originally budgeted at $4,320,009 and is now expected to cost $5,229,665 to implement. Of that amount, $2,295,658 had been expended as of the review date. After the expected completion of phase 2 in August 2013, TRACS will be decommissioned, and the *Post-implementation Review of Business Outcomes* (PIRBO) for phase 2 is anticipated in late February 2014. The PIRBO for phase 1 was approved and submitted in August 2012.

Product Demonstration

A demonstration of PARIS was not conducted because of scheduling conflicts. As a result, auditors were unable to determine whether the system was operating as intended for phase 1. Phase 2 of the system is expected to be completed in August 2013.

Project Overview

Since 1992, the Commission has been using TRACS to maintain the registration, permit, and billing data for three regulatory programs: Industrial and Hazardous Waste (IHW), Water Quality (WQ), and Petroleum Storage Tanks (PST). The technology of TRACS is outdated and does not meet the needs of the Commission, such as the need to integrate with systems that use more current technologies and data management. For example, the Commission uses several supplemental spreadsheets and databases to manage the WQ program, which results in data management inefficiencies.

The Commission created PARIS to replace TRACS and "provide improved data access and offer opportunities for increased process automation, improve permit processing times and more complete analysis and reporting of site specific environmental conditions."

Phase 1 began in October 2009 and was completed in February 2012, six months after the original planned completion date (August 2011). Phase 1 included the development and implementation of the IHW program and, according to the Commission, is functioning as intended. Phase 2 began in September 2011 and is expected to be completed in August 2013. Phase 2 will implement the WQ and PST programs and minimize the need for peripheral databases and spreadsheets to manage WQ data.

For both phases, the Commission prepared contract amendments and change order approval forms to increase the contract amounts to meet the project scope. In phase 1, the contract amount was increased by $312,000 and the project scope was amended to include pre-implementation work to elicit and document requirements for the WQ program. In phase 2, the contract amount was increased by $800,000 to cover the estimated contractor costs. Additional Environmental Protection Agency (EPA) grants of $656,000 were awarded to meet those needs. Both phases were primarily funded through legislative appropriations and EPA grants.

Project Benefits

While phase 2 of the PARIS project is in progress, phase 1 was completed in February 2012 and, according to the Commission, is meeting the original objectives and functions as intended. The Commission has not quantified or formally recognized the benefits of phase 2 of the project and will not do so until completion in August 2013 and the release of the PIRBO in late February 2014. The PIRBO for phase 1 was approved and submitted in August 2012.

The Commission has realized the benefits of the implementation of phase 1, which replaced TRACS for the IHW program. According to the Commission, phase 1 provides all of the functionality of TRACS and meets the needs previously met by various additional databases and spreadsheets. For example, a mail log and more billing options are available in the new system. Phase 1 is also integrated with the Commission's Central Registry database, which eliminates the need for duplicate data entry of core data and the monthly migration of data from TRACS to the Central Registry. Phase 1 is also integrated with various other systems at the Commission including billing, the State of Texas Environmental Electronic Reporting System, Integrated Web Reporting, and the Financial Administration's Accounts Receivable system. This results in improved data efficiency and real-time processing of electronically submitted data.

Current Status

The project is in development. Phase 1 was completed in February 2012 and phase 2 will be completed in August 2013. The PIRBO is anticipated in late February 2014.

Project Costs

Project cost data was obtained from the monitoring reports, business case workbooks, and inquiry of the project manager at the Commission. Phase 2 is not complete and additional costs will be expended until completion in August 2013. The original phase 1 budget did not include an allocation for salaries and benefits of Commission employees; however, subsequent monitoring reports were updated to include those costs.

Table 8 presents project cost information for Phase 1.

Table 8

Budgeted and Actual Expenditures for PARIS Phase 1			
Original Budget: Phase 1: $3,394,124			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$ 3,394,124	$ 3,915,858	$ (521,734)
Salaries and Benefits	Not included in original budget	1,312,306	(1,312,306)
Phase 1 Project Costs	**$ 3,394,124**	**$ 5,228,164**	**$ (1,834,040)**

Phase 1 was completed over budget by $1,834,040.

Table 9 presents project cost information for Phase 1.

Table 9

Budgeted and Actual Expenditures for PARIS Phase 2				
Original Budget: Phase 2: $4,320,009				
Budget Category	Original Budgeted Amount	Total Expenditures	Current Budget Amount	Budget Increase
Hardware, Systems, and Other Costs	$ 3,443,810	$ 1,919,020	$ 4,256,000	$ 812,190
Salaries and Benefits	876,199	376,638	973,665	97,466
Phase 2 Project Costs	**$ 4,320,009**	**$ 2,295,658**	**$5,229,665**	**$ 909,656**

Project Issues

No project issues were noted.

Chapter 6-A
Medicaid Eligibility and Health Information System

The implementation of the Medicaid Eligibility and Health Information (EHI) system at the Health and Human Services Commission (Commission) is complete and all project milestones have been completed. However, health history information is currently blocked from the client and provider portals due to legal/confidentiality issues. The Commission is evaluating options for tagging and filtering health history information requiring specific client consent and other potentially restricted data.

Prior to the implementation of the EHI system, on a monthly basis, the Commission processed and mailed paper-based medical identification cards to approximately 2.7 million eligible recipients, the large majority of whom were the same recipients from the previous month. The annual cost of printing and delivering those cards was approximately $12.6 million. The creation of the cards also included many manual processes and did not easily support the incorporation of automated business processes. The Commission recognized the need to replace this inefficient processing with a new, more effective permanent card solution. The Commission selected a vendor to develop and maintain the EHI system.

The project was originally scheduled to begin on October 1, 2007, the contract with the vendor was signed on September 1, 2010 and the project was completed successfully on November 30, 2012, at a cost of $20,498,387. The project completion date was 27 months after the original scheduled end date. Delays in the project time line occurred because of delays in vendor evaluation and selection; delays in contract negotiations; delays in finalization of the contract package; a switch to a phased approach to add functionality; a Medicaid and Children's Health Insurance Program (CHIP) managed care organization (MCO) expansion rollout, which required reissuance of 3.7 million cards; changes required for the Women's Health Program; and the evaluation of options for tagging and filtering sensitive health history data. The project finished under budget.

The benefits of the EHI system, as identified by the Commission, include replacing the paper Medicaid identification cards, which are issued monthly, with a permanent plastic card; providing automated Medicaid eligibility verification; establishing an electronic health information system with health history for all Medicaid clients; establishing an infrastructure for future health information exchange; and establishing a call center for Medicaid clients and providers. Those benefits have not been quantified, but the *Post implementation Review of Business Outcomes* (PIRBO) is anticipated in May 2013.

Product Demonstration

A demonstration of the EHI system indicated that it is functioning as intended. The demonstration provided an overview of the functionality of the client and provider portals. However, health history information is currently blocked due to legal issues. The Commission is evaluating options for tagging and filtering health history information requiring specific client consent and other potentially restricted data. The options are undergoing internal Commission legal review.

Project Overview

Prior to the implementation of the EHI system, on a monthly basis, the Commission processed and mailed paper-based medical identification cards to approximately 2.7 million eligible recipients, the large majority of whom were the same recipients from the previous month. The annual cost of printing and delivering those cards was approximately $12.6 million. The creation of the cards also included many manual processes and did not easily support the incorporation of automated business processes. For example, client identification number entry, eligibility verification, and medical history research and retrieval all require manual processing. The Commission recognized the need to replace this inefficient processing with a new, more effective permanent card solution. Realization of these objectives and benefits will lead to substantial program cost reductions and improved delivery of services.

The EHI project was originally scheduled to begin on October 1, 2007. The Commission selected a vendor to develop and maintain the EHI system, and the contract with this vendor was executed on September 1, 2010.

Project Benefits

The EHI system:

- Replaces the monthly issued paper Medicaid identification card with a permanent plastic card.

- Provides automated Medicaid eligibility verification.

- Establishes an electronic health information system with health history for all Medicaid clients.

- Establishes an infrastructure for future health information exchange.

- Establishes a call center (help desk and interactive voice response).

Client benefits include:

- New plastic card issued once.

- Access to program information.

- Reminders for Texas Health Steps appointments.

- Single phone number to access multiple services.

- Links to program related phone numbers.

- Links to helpful information.

- Order and print replacement cards from Web site.

- Receive better continuity of service.

- Reduced duplication of services.

- Opt-out of sharing health information option.

Provider benefits include:

- Instant eligibility verification.

- At no cost, providers are able to access client information through the Web site.

- At no cost, providers are able to access self-service information through the interactive voice response or access live operator support.

- Ability to integrate Medicaid ID system portlets into providers' existing practice management or electronic medical records systems.

- A provider can choose to purchase a card reader that automatically reads a patient's Medicaid number via card swipe for error-free data entry into the provider's Web site.

Current Status

The project was successfully completed on November 30, 2012. However, health history information is currently blocked from the client and provider portals due to legal issues. The Commission is evaluating options for tagging and filtering health history information requiring specific client consent and other potentially restricted data.

Future releases include:

- Release 3.2 – Change requests (tentatively scheduled for May 2013).

- Release 3.3 – Enable health history access to all Medicaid providers (scheduled for July 2013).

- Release 3.4 – Enable health history access for Medicaid clients (implementation not yet scheduled).

Project Costs

Table 10 presents project cost information.

Table 10

Budgeted and Actual Expenditures for Implementation on EHI Project		
Original Budgeted Amount	Total Expended As of December 31, 2012	Expenditures Under/(Over) Original Budget
$21,177,143	$20,498,387	$678,757

The project was funded by the U. S. Centers for Medicare and Medicaid Services (CMS), a management transformation grant, funds from the *Frew v. Hawkins* lawsuit, and General Revenue:

Table 11 presents information on sources of funds.

Table 11

Sources of Funds for Implementation on EHI Project		
Source of Funds	Amount	Type of Cost
U. S. Centers for Medicare and Medicaid Services	$16,326,569	Implementation costs
Management transformation grant	727,270	Amendment 1
General Revenue and Frew lawsuit funds	3,444,548	State staff costs
Total	$20,498,387	

Project Issues

The project was completed 27 months after the original scheduled end date. Delays in the project time line occurred because of delays in vendor evaluation and selection; delays in contract negotiations; delays in finalization of the contract package; a switch to a phased approach to add functionality; a Medicaid and CHIP managed care organization (MCO) expansion rollout, which required reissuance of 3.7 million cards; changes required for the Women's Health Program, and the evaluation of options for tagging and filtering sensitive health history data.

The Commission is evaluating options for tagging and filtering claims records with sexual assault and other sensitive data. This information requires additional client approval before it can be shared. EHI is blocking access to

the health history functionality until appropriate tagging and filtering is implemented.

Human Resources and Payroll Upgrade Project

The Health and Human Services Commission (Commission) has implemented an upgrade to its Human Resources and Payroll System (System). The Commission implemented the System to upgrade the previous Human Resources and Payroll System, which would no longer be supported by the vender after 2012. In addition, the Commission worked with the Office of the Comptroller of Public Accounts to develop the System to act as a baseline configuration for the human resources and payroll portion of the statewide Central Accounting Payroll and Personnel System (CAPPS). The System will be hosted at the Office of the Comptroller of Public Accounts' data center and disaster recovery locations.

The Commission has completed all milestones. The System is operating as intended; however, the Commission was not able to eliminate the need for two of three third-party software packages when the System was implemented. The Commission was not able to determine how that would affect the costs or cost savings for the project.

The project began in January 2011 with a go-live date of November 2012. The current completion schedule is seven months later than initially planned. The original estimated project costs were $13,684,401. The project costs to date are $11,913,744. The Commission estimates the final project costs will be $13,849,560.

The Commission has submitted monitoring reports for work performed through December 2012. Based on a completion date of February 2013, the *Post-implementation Review of Business Outcomes* (PIRBO) is anticipated in August 2013.

Product Demonstration

A demonstration of the System, which has a Web-based interface, indicated that it appears to be functioning as intended. The demonstration provided an overview of the various human resources and payroll modules.

Project Overview

The purpose of the project was to update the hardware and software for the System from PeopleSoft 8.3 to PeopleSoft 9.1 for five health and human services agencies: the Department of Aging and Disability Services (DADS), the Department of Assistive and Rehabilitative Services (DARS), the Department of Family and Protective Services (DFPS), the Department of State Health Services (DSHS), and the Commission. Version 8.3 of PeopleSoft had a support lifetime that ended during 2012; therefore, in 2013 and beyond it would not have been supported by the vendor and necessary payroll tax data would no longer be provided. In addition, the database

(Oracle) will end its service life in July 2013. The project includes upgrading to a newer version of Oracle, and upgrading the System would allow the Commission to eliminate the need for third-party add-on modules it used prior to the upgrade.

The project will be a baseline enterprise resource planning human resources and payroll system for future statewide modification and deployment for other agencies. According to the Commission, because the five health and human services agencies have a large employee base with diverse scheduling and payroll requirements such as medical and emergency workers, subsequent implementations should require fewer modifications for scaling and scheduling diversity. The System will be hosted at the Office of the Comptroller of Public Accounts' data center and disaster recovery locations.

The System decreases reliance on manual approvals of common human resources and payroll processes; decreases the time needed to process payrolls; and allows employees and managers to track key human resources and payroll information such as work time, leave balances, and training requirements. The System also allows employees and former employees to opt to receive key documentation on-line in lieu of the Commission printing and mailing out required documents.

Project Schedule

The project was planned to begin January 2011, take 15 months to go live in April 2012, and have 3 months of transition support completed in July 2012. The project began in January 2011 and took 22 months to go live in November 2012. The Project is currently in its three months of transition support, which will be completed in February 2013. The estimated completion date is seven months later than planned. Based on the completion date, the PIRBO is anticipated in August 2013.

Project Costs

The Commission's most recent monitoring report (for December 2012) included state salary and benefit costs. Previous monitoring reports did not include state staff benefit costs.

Table 12 presents project cost information.

Table 12

Budgeted and Actual Expenditures for Human Resources and Payroll Upgrade Project			
Original Budget $13,684,401			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Contract/Consultant Services	$ 9,792,071	$ 10,160,447	$ (368,376)
Salaries and Benefits	3,892,330	1,753,297	2,139,033
Total Project Costs	$13,684,401	$11,913,744	$ 1,770,657

The Commission estimates that the final project cost, including state staff salary and benefit costs, will be $13,849,560, which is $165,159 more than the original budget.

Project Issues

During user acceptance testing, users determined that two of the PeopleSoft 9.1 modules intended to replace two third-party applications would not meet their requirements. As a result, two of the three third-party software packages that were intended to be eliminated were not eliminated. The Commission was not able to determine how that would affect the costs or cost savings for the project.

Pharmacy and Emergency Preparedness Asset Management System

The development and implementation of the Pharmacy and Emergency Preparedness Asset Management System (PEPAMS) at the Department of State Health Services (Department) is approximately 80 percent complete. Several elements of PEPAMS have been successfully tested and are currently in production. Completion of PEPAMS is estimated to be May 31, 2013, with a project close out date of June 28, 2013.

PEPAMS is a commercial, off-the-shelf inventory system that is being tailored by a contractor to enable the Department to have an integrated inventory system that receives, disburses, and tracks inventory level statewide. PEPAMS will replace two inventory systems and automate several manual processes related to human immunodeficiency virus (HIV) and Strategic National Stockpile (SNS) inventories.

The PEPAMS project began on November 2, 2009, and was scheduled for completion on May 6, 2011. The current completion date is May 31, 2013, at a cost of $2,073,164, which is $1,042,871 over the original budget. The final cost also does not incorporate the appropriate state benefit rate. The project has incurred delays of approximately 24 months, resulting in additional project costs due to the following: additional contractor programming changes to PEPAMS to address gaps between the Department's specifications and the contractor's design, replacement of warehouse inventory scanners that were not working properly, and project servers housed in San Angelo were not available for approximately two weeks (which delayed testing and moving PEPAMS into production by approximately six weeks).

The Department asserts that PEPAMS will benefit the Department in many ways, including having an integrated statewide pharmacy inventory system that can track inventories on a statewide basis, providing vendor choice options for the Texas Vaccines for Children program as required by House Bill 448 (81st Legislature, Regular Session), and identifying pharmaceutical assets near expiration for transfer and use before the pharmaceuticals expire and have to be discarded at a loss to the State. The Department anticipates that the project will break even during fiscal year 2014.

According to the Department, approximately $100 million of medical inventory will be received, disbursed, and tracked through PEPAMS annually.

Product Demonstration

A demonstration of PEPAMS indicated that the new pharmacy inventory system is working as intended for the elements of PEPAMS that are in production. The demonstration provided an overview of the various functions and automated inventory processes of PEPAMS including the integration of receiving, disbursing, and tracking pharmacy inventories statewide.

Project Overview

According to the Department, the previous pharmacy inventory system—the Pharmacy Inventory Control System (PICS)—was outdated and could not meet the future needs of current program customers or federal and state requirements for medication accountability. PEPAMS is designed to replace PICS with an integrated statewide inventory system that satisfies the inventory requirements of several Department programs. In addition, PEPAMS will replace functions previously performed by the Texas Inventory Management System (TIMS). TIMS provided very limited support for managing SNS due to inherent software problems and lack of expandability. Because of these limitations, emergency stockpiles of medical inventories were tracked manually via spreadsheets. PEPAMS will result in an integrated inventory management system that will replace PICS, TIMS, and manual processes and provide inventory warehouse functionality for various Department programs.

Project Benefits

The Department anticipates that the successful implementation of PEPAMS will provide an updated, integrated pharmacy inventory system that affects several Department programs, including programs for HIV, vaccines for children, Hansen's disease, tuberculosis, sexually transmitted diseases, SNS, and others. The Department indicated that approximately $100 million of pharmacy inventory will be accounted for through PEPAMS annually. PEPAMS will have the capability to track inventory statewide and transfer inventory as needed to meet demand, as well as to identify inventory that is near the expiration date and reallocate inventory for immediate use.

When PEPAMS is fully implemented, it will replace the previous pharmacy inventory systems and will automate several manual processes previously performed for the HIV and SNS inventories. PEPAMS will automate the receiving, disbursement, and tracking of pharmacy inventory for several Department programs. PEPAMS will provide the capability for a statewide inventory of pharmacy assets, provide accurate reporting of those assets, and provide a system to analyze the State's use of various pharmacy assets.

The Department anticipates that the implementation of PEPAMS will cost $2,073,164. The Department estimates the project break-even will occur in fiscal year 2014. PEPAMS is scheduled for completion on May 31, 2013, with a project close out date of June 28, 2013.

Current Status

Work on PEPAMS began on November 2, 2009. The project is approximately 80 percent complete, with an anticipated project close out date of June 28, 2013. Several functions of PEPAMS have been tested and are currently in production. The remaining activities and functions are being tested, with a scheduled completion date of May 31, 2013.

Project Costs

Table 13 presents project cost information.

Table 13

Budgeted and Actual Expenditures for Implementation on PEPAMS Project			
Original Budget: $1,030,293			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Informational (Staff hours)	$ 45,862	$ 336,930	$ (291,068)
Capital	984,431	1,736,234	(751,803)
Total Project Costs	$1,030,293	$2,073,164	$(1,042,871)

The project is $1,042,871 over the original budget.

Project Issues

The Department determined staff costs for PEPAMS by calculating an overall average hourly rate. The overall average hourly rate was based on an average salary for information technology (IT) staff and included only benefit replacement pay and longevity pay. The Department multiplied the hourly rate by the number of staff hours worked on PEPAMS to calculate staff costs. However, the hourly rate did not include all benefits that staff earned. As a result, the Department may be understating staff costs by not including all benefits. A more accurate staff cost calculation could have been prepared if the Department would have used the recommended benefit percentage provided by the Quality Assurance Team. The recommended percentage includes all benefits.

Texas Railroad Crossing Database (TxRAIL) II

The implementation of the Texas Department of Transportation's (TxDOT) TxRAIL II project is on track to include all functionality originally planned. TxRAIL II developed an application called the Texas Railroad Information Management System (TRIMS), which combines information about railroad crossings in a single database that enables TxDOT to more accurately prioritize maintenance and upgrade projects for railroad crossings. Although development work is still in process, TRIMS modules completed so far are functioning as intended. The project is being completed later than planned; it was originally due July 1, 2010, but is now scheduled for completion February 28, 2013,[3] a difference of approximately 2.7 years. TxDOT estimates that it has spent $1,859,916 of the project's initial budget of $2,424,305 so far, but auditors cannot determine whether completion will be under budget because TxDOT did not track its staff costs until late in the project. TxDOT plans to add a safety hotline and other enhancements over the next year at an estimated cost of $475,000.

TxDOT contracted with two vendors to develop a detailed requirements document. Based on selected requirements that fulfill the project's objectives, TxDOT contracted with an additional vendor to develop TRIMS.

TxDOT expects to complete the *Post-implementation Review of Business Outcomes* (PIRBO) in late August 2013.

Product Demonstration

A demonstration of TRIMS indicated that it appears to be on track to function as intended. The demonstration provided an overview of the various modules within TRIMS, including a detailed demonstration of the main module, CoreTRIMS. CoreTRIMS includes the federally required data from the two previous databases, TxRAIL and the Texas Railroad Crossing Inventory (TRACI), and it displays detailed geospatial information. It also includes a function that automates the prioritization of needed railroad crossing safety projects based on the information in the database.

TxDOT asserted that the WebTRIMS module, which allows district office personnel to access and update data in CoreTRIMS, is functional; however, TxDOT did not have a way to demonstrate that. TxDOT stated that the FieldTRIMS module, which will allow field personnel to access and update CoreTRIMS data from the field (remote locations such as the railroad

---

[3] On March 7, 2013, TxDOT notified the Quality Assurance Team that the project would be deployed on the weekend of March 9, 2013.

crossings), is still being finished, but it should be functional by February 28, 2013.

Project Overview

TRIMS replaces Access-based previous databases of railroad crossing data called TxRAIL and TRACI, which had led to errors in planning safety projects and were not able to retain the volume of data required for federal reporting. The previous databases are accessible only at TxDOT's central office; the district offices emailed updates to the central office, which entered the updates manually. TRIMS is intended to provide a single database that will provide accurate railroad crossing data, have adequate capacity, and automatically prioritize needed safety projects. TRIMS is expected to be accessible from district offices and the field.

Project Benefits

TxDOT has not quantified the benefits of TRIMS. TRIMS is expected to prioritize railroad crossing maintenance and upgrade projects more accurately, providing safety benefits. TxDOT expects that there will also be associated cost savings from avoiding unneeded work that was being scheduled as a result of using the earlier databases. An additional time savings should occur because district and field personnel will have direct access to TRIMS, whereas the old databases could be accessed only through TxDOT's central office in Austin.

The Quality Assurance Team had not received the PIRBO for this project from TxDOT. TxDOT stated that it expected to submit the PIRBO in late August 2013, based on the expected project completion date of February 28, 2013.

Current Status

TRIMS is expected to have all functionality required based on the business case and project plan when it is completed on February 28, 2013. However, TxDOT plans to add a safety hotline and other enhancements during the period from March 2013 through February 2014. TxDOT stated that those enhancements will require vendor fees estimated at $475,000, but the enhancements will be funded out of the original budget.

Project Costs

Table 14 presents project cost information.

Table 14

Budgeted and Actual Expenditures for TxRAIL II Project			
Original Budget: $2,424,305			
Budget Category	Original Budgeted Amount	Total Expenditures	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$2,146,250	$1,850,454	$295,796
Salary and Benefits	235,769	Undetermined	Undetermined
Hardware/Software	6,500	9,462	(2,962)
Contingency	35,786	0	35,786
Total Project Costs	$2,424,305	$1,859,916[a]	Undetermined

[a] TxDOT did not track the salaries and benefits of its staff until late in the project.

It is unclear whether the project is being completed under budget because TxDOT did not quantify staffing costs until late in the project. However, contractors performed the bulk of the work, payments to contractors are under budget, and TxDOT states that the staff portion of the work was small.

Project Issues

No issues were identified during the project or upon completion.

Information Technology Service Management System

Implementation of the information technology service management system, referred to as TxDOTNow, at TxDOT has been completed, all project milestones have been achieved, and TxDOTNow is functioning as intended.

TxDOTNow is a cloud-based system that provides TxDOT's Information Technology (IT) group with standardized processes for various IT-related services. The previous system did not have the functionality TxDOT needed. TxDOT contracted with a vendor to purchase its off-the-shelf software, implement it, and customize it to TxDOT's needs. According to TxDOT, TxDOTNow provides more efficient and reliable services to the customer through the following services: Incident Management, Problem Management, Service Desk, Employee-Self Service (ESS), Knowledge Base, and Configuration Management Lite.

The initial planning for the project began in July 2011 and the implementation of TxDOTNow was completed successfully in August 2012 as planned. The project cost as of January 23, 2013, was $1,425,880, which was less than the original budget of $1,949,444. Final travel costs are still pending approval but are estimated at $16,000. The *Post-implementation Review of Business Outcomes* is anticipated in early March 2013.

Product Demonstration

A demonstration of TxDOTNow indicated that it appears to be functioning as intended. The demonstration provided an overview of the various IT service modules within the system and how end-users and the IT service desk use them. TxDOTNow creates a more efficient and standardized process for the services TxDOT's IT group offers.

Project Overview

TxDOT purchased the original system, called iET Workcenter, 10 years ago. TxDOT modified that system several times over the years to meet its needs; however that system still did not provide the tools TxDOT needed. As a result, TxDOTNow was created to replace the original system with a new system that could handle the functionality necessary to provide efficient and reliable services to customers. TxDOT contracted with a vendor to purchase its off-the-shelf software, implement it, and customize a cloud-based system that provides services that meet TxDOT's needs. TxDOTNow provides Incident Management, Problem Management, Service Desk, ESS, Knowledge Base, and Configuration Management Lite services that result in a more standardized process and workflow.

The project was approved for funding under the Mainframe Application Modernization (MAM) project in April 2012, and TxDOT selected the vendor later that month. The only change to the project arose from the transfer of

services originally to be provided by the external consultants to TxDOT employees and the vendor. Consultants began services at a later date than was originally planned; therefore, to prevent a change to the scope and time line of the project, TxDOT temporarily assigned those services to its own employees and the vendor. The implementation was completed in September 2012 under the initial estimated project cost (pending the open travel voucher estimated at $16,000).

Project Benefits

The successful implementation of TxDOTNow at TxDOT has provided various benefits including efficiency and reliability of the IT group's services to end-users. It has also enabled the standardization of IT services, which allows consistency across the various TxDOT IT units across the state. TxDOTNow is accessible via the Internet, which allows users to access the system outside of TxDOT offices.

TxDOTNow allows TxDOT to track IT service desk delivery and responsiveness to help improve processes as needed. Incidents are tracked by configuration items, which allow tracking of other related incidents that would result in a quicker response from the IT service desk for a major issue. With TxDOTNow, TxDOT can focus on meeting the efficiency needs of an end-user instead of regularly modifying the old system to meet the basic needs of the user.

TxDOT has not calculated the monetary benefits of the implementation of TxDOTNow. The *Post-implementation Review of Business Outcomes* is anticipated in early March 2013.

Current Status

TxDOTNow was successfully implemented in August 2012, and the final documentation related to the project is expected to be submitted by the end of January 2013. The system is functioning as intended. No further changes or enhancements are noted.

Project Costs

Table 15 presents project cost information.

Table 15

Budgeted and Actual Expenditures for TxDOTNow			
Original Budget: $1,949,444			
Budget Category	Original Budgeted Amount	Total Expenditures [a]	Expenditures Under/(Over) Original Budget
Professional Fees and Services	$ 1,655,911	$1,079,932	$ 575,979
Salaries and Benefits	293,533	345,948	(52,415)
Total Project Costs	$1,949,444	$1,425,880	$523,564

[a] An outstanding travel voucher is pending approval by TxDOT. That voucher is estimated to be $16,000, which would still be within the original budget.

The project was completed under budget.

Project Issues

TxDOT changed the services provided by external consultants during the project because the consultants were unable to commence services at the expected date. To ensure the project time line and scope were not affected, TxDOT had its own employees and the vendor provide those services. As TxDOT intended, that change had no effect on the time line or scope of the project. No other issues were identified during the project or upon its completion.

Appendix

Project Scope and Methodology

Scope

The project scope covered 13 major information system development projects at 8 state agencies. The State Auditor's Office analyzed those 13 projects at the request of the Quality Assurance Team (QAT), which selected those projects because they were reported as complete, were nearing completion, or were identified as high-risk projects.

Methodology

From December 2012 through February 2013, auditors and QAT members reviewed the QAT documentation available for 13 major information system development projects. That documentation included the business case, business case workbook, statewide impact analysis, project plans, *Post-implementation Review of Business Outcomes*, and monitoring reports. Auditors also conducted interviews with key personnel involved in the projects and observed demonstrations of the systems (if available).

The information in this report was not subjected to all the tests and confirmations that would be performed in an audit. The agencies self-reported the system 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.

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

- Rebecca Franklin, CFE, CGAP, CICA, CISA (Project Manager)

- Joe Curtis, CPA (Project Manager)

- Michelle Lea DeFrance, CPA (Assistant Project Manager)

- Rachel Lynne Goldman, CPA

- Michael Karnes, MBA

- Joseph Kozak, CPA, CISA

- Darcy Melton, MAcy

- Laura Nienkerk, MAcy, CIA

- Bansari Patel, CPA

- Mario Perez

- Steven M. Summers, CPA, CISA, CFE

- Barrett Sundberg, CPA, CIA

- Charles P. Dunlap, Jr., CPA (Quality Control Reviewer)

- Ralph 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 Thomas "Tommy" Williams, Senate Finance Committee
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

Commission on Environmental Quality
Members of the Commission on Environmental Quality
  Dr. Bryan W. Shaw, Chair
  Mr. Carlos Rubinstein
  Mr. Toby Baker
Mr. Zak Covar, Executive Director

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

Department of Agriculture
The Honorable Todd Staples, Commissioner

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

Department of Transportation
Members of the Texas Transportation Commission
  Mr. Ted Houghton, Chair
  Mr. Fred Underwood
  Mr. Jeff Austin, III
  Mr. Jeff Moseley
  Mr. William Meadows
Mr. Phil Wilson, Executive Director

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

Office of the Comptroller of Public Accounts
The Honorable Susan Combs, Comptroller of Public Accounts