A Report on

Analysis of Quality Assurance Team Projects

May 2016
Report No. 16-026

Overall Conclusion

At the request of the State's Quality Assurance Team (QAT), the State Auditor's Office assisted QAT by performing an analysis of six major information resources projects at five agencies. The QAT selected those six projects because it identified the projects as high-risk.

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 analysis, one of the six projects was complete, two were nearing completion, and three were in progress. The six projects were:

> The Department of Aging and Disability Servic**es' (DADS) State Supported** Living Center (SSLC) Electronic Health Record/Electronic Life Record (EHR/ELR) project.

> **The Department of Family and Protective Services' (DFPS) Information** Management Protecting Adults and Children in Texas (IMPACT) System Modernization project.

> **The Texas Department of Motor Vehicles' (TxDMV) Registration and Titling** System (RTS) Refactoring project.

> **The Department of State Health Services' (DSHS) Integrated Business** Information System (IBIS) project.

> The Health and Hum**an Services Commission's (HHSC) Balancing Incentive** Program—No Wrong Door (BIP-NWD) project.

> **The Health and Human Services Commission's (HHSC) Enterprise Data** Warehouse (EDW) project.

As Table 1 and Table 2 on the next pages show:

> One project was completed under budget and one month later than originally anticipated (HHSC**'s** BIP-NWD project).

> Two projects were nearing completion:

This project was conducted in accordance with Texas Government Code, Sections 2054.1181 and 2054.158.

For more information regarding this report, please contact Michael Clayton, Audit Manager, or Lisa Collier, First Assistant State Auditor, at (512) 936-9500.

- One project exceeded its original budget and was later than originally planned (DSHS's IBIS project).

- One project exceeded its original budget; however, it is expected to be completed on time (TxDMV's RTS Refactoring project).

➢ Three projects were in progress:

- One project is within its budget; however, it extended the project's time line (DADS's SSLC EHR/ELR project).

- One p**roject's budget was revised to increase funding and extend the** project**'s** time line (HHSC**'s** EDW project).

- **One project's budget and time** line remain unchanged (DFPS's IMPACT project).

Table 1

Summary of Project Budgeted and Actual Expenditures as of February 29, 2016						
Agency	Project	Original Budget [a]	Revised Budget [b]	Total Expended and Encumbered [c]	Original Budget Increase/ (Decrease)	Percent Complete [d]
Department of Aging and Disability Services	State Supported Living Center Electronic Health Record/Electronic Life Record	$19,954,387	Not Revised	$18,803,406	Not Revised	64%
Department of Family and Protective Services	Information Management Protecting Adults and Children in Texas System Modernization	$44,597,469	Not Revised	$27,101,318	Not Revised	39%
Texas Department of Motor Vehicles	Registration and Titling System Refactoring	$28,222,300	$71,610,340	$62,193,993	$43,388,040	78%
Department of State Health Services	Integrated Business Information System	$3,660,000	$8,483,464	$8,357,238	$4,823,464	96%
Health and Human Services Commission	Balancing Incentive Program— No Wrong Door	$33,800,000	$33,704,826	$22,615,355	$(95,174)	100%
Health and Human Services Commission	Enterprise Data Warehouse	$100,002,963	$129,851,871	$40,199,862	$29,848,908	9%

[a] This column lists the original project budget the agency submitted to the QAT in its *Business Case Workbook* for the project.

[b] This column lists the revised project budget amount as of February 29, 2016, that was reported to auditors or in the updated *Business Case Workbook* that the agency submitted to the QAT for the project.

[c] This column lists the project's total expenditures (paid) and encumbrances (authorized purchase orders) for the project as of February 29, 2016, that the agency reported to auditors.

[d] This column lists the project's percentage completion as of February 29, 2016, that the agency reported to auditors.

Sources: The QAT and information the agencies provided.

Table 2

Summary of Project Completion Dates as of February 29, 2016				
Agency	Project	Original Scheduled Start Date [a]	Original Scheduled Completion Date [b]	Revised Scheduled Completion Date [c]
Department of Aging and Disability Services	State Supported Living Center Electronic Health Record/Electronic Life Record	November 21, 2013	August 31, 2015	August 31, 2016
Department of Family and Protective Services	Information Management Protecting Adults and Children in Texas System Modernization	September 1, 2013	February 28, 2018	February 28, 2018
Texas Department of Motor Vehicles	Registration and Titling System Refactoring	May 31, 2012	December 31, 2018	December 31, 2018
Department of State Health Services	Integrated Business Information System	June 1, 2012	August 29, 2014	June 1, 2016
Health and Human Services Commission	Balancing Incentive Program—No Wrong Door	November 15, 2013	July 30, 2015	August 31, 2015
Health and Human Services Commission	Enterprise Data Warehouse	April 1, 2008	April 30, 2017	April 30, 2019
[a] This column lists the project start date that the agency reported in its last monitoring report to the QAT.				
[b] This column lists the estimated project completion date that the agency reported in its first monitoring report to the QAT.				
[c] This column lists the estimated project completion date that the agency reported to auditors as of February 29, 2016.				

Source: The QAT and information the agencies provided.

Management of the projects reviewed reported that the following practices positively affected project outcomes:

➢ A strong and engaged project team.

➢ A high degree of executive management involvement in the project.

➢ A thorough and successful knowledge transfer between project managers and cross-training of project staff.

➢ Use of a phased implementation.

➢ Regular vendor oversight.

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

➢ Some agencies did not always fully complete or submit monitoring reports to the QAT in a timely manner.

➢ Turnover in key project staff caused delays or hindered reporting to the QAT.

> ➢ A lack of clearly defined system requirements resulted in defects that caused time line extensions.

> ➢ Issues with vendor performance caused delays on some projects.

A list of best practices for system development is included in the QAT's annual reports at http://qat.state.tx.us/pubs.htm.

Project Objective and Scope

The objective of this project was to, in coordination with the Legislative Budget Board and the Department of Information Resources, review information technology projects and provide technical analysis of project risks to the QAT.

The project scope covered six major information resources projects at five state **agencies. The State Auditor's Office analyzed those** six projects at the request of the QAT, which selected those projects because the QAT identified the projects as high-risk.

Contents

Detailed Results

The Department of Aging and Disability Services' State Supported
Living Center Electronic Health Record/Electronic Life Record Project

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Project Summary

As of February 29, 2016

Original:
- End Date: August 31, 2015
- Budget: $19,954,387

Current:
- End Date: August 31, 2016
- Budget: Not Revised

Status: 64 percent complete.

Project History / Overview

The purpose of the State Supported Living Center Electronic Health Record/Electronic Life Record (SSLC EHR/ELR) project is to improve the coordination of care for individuals with intellectual and developmental disabilities who reside in state supported living centers (SSLCs) operated by the Department of Aging and Disability Services (DADS). The project is partially funded under the federal Balancing Incentive Program, which is part of the federal Patient Protection and Affordable Care Act.[1]

According to DADS, the project's goal is to improve the quality of care for SSLC residents while also providing other associated benefits that include increased productivity of SSLC employees, automated functionality of processes, more consistent statewide reporting, improved recordkeeping, a reduction in the cost of care, and improved monitoring.

Many of the processes for handling health records that the SSLCs currently use are manual, and the equipment used at the SSLCs is outdated, slow, and inadequate. The SSLC EHR/ELR project includes three components:

- The SSLC infrastructure upgrade, which will improve network function through increased Internet capacity and wireless capabilities.

- Implementation of statewide video conferencing capabilities for SSLCs, which will enhance communication among care providers regarding their patients and care provided to those patients.

- The installation of new EHR/ELR software, which will improve efficiency through automation of manual processes and provide a comprehensive view of patient health information to care providers.

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[1] The Patient Protection and Affordable Care Act established the Balancing Incentive Program, which increased the federal matching assistance percentage to participating states through September 2015 in exchange for those states making certain structural reforms so that access to Long Term Services and Supports is increased.

Project Status

The Quality Assurance Team (QAT) approved the SSLC EHR/ELR project on October 22, 2013. As of February 29, 2016, DADS reported that the current expected completion date was August 31, 2016, which is one year after the original scheduled completion date of August 31, 2015. DADS attributed the delay to a longer-than-anticipated request for proposals process and extended contract negotiations with the vendor.

As of February 29, 2016, DADS reported that the project was 64 percent completed. For the project's three individual components:

- The SSLC infrastructure upgrades necessary to support the new system and increase bandwidth capacity were 100 percent complete as of August 31, 2015, and wireless Internet is now in use at the SSLCs.

- Implementation of statewide video conferencing capabilities for SSLCs was 100 percent complete as of August 31, 2015.

- The implementation of the EHR/ELR software was 64 percent complete as of February 29, 2016. The estimated completion date is August 31, 2016.

Project Costs

Table 3 on the next page summarizes budgeted and actual expenditures for the SSLC EHR/ELR project. DADS used the *Business Case Workbook* as the tool to estimate costs for the project.

Table 3

Budgeted and Actual Expenditures for the SSLC EHR/ELR Project As of February 29, 2016				
Original Budget: $19,954,387				
Budget Category	Original Budget [a]	Revised Budget	Total Expended and Encumbered [b]	Original Budget Increase/(Decrease)
Agency Personnel Expenditures	$1,489,313	Not Revised	$ 80,195	Not Revised
Contract/Consultant Services Expenditures	1,459,152	Not Revised	9,068,137	Not Revised
Other Expenditures (Hardware/Software)	17,005,922	Not Revised	1,916,933	Not Revised
Total Encumbrances	Not Applicable	Not Applicable	7,738,141	Not Applicable
Total Project Costs	$19,954,387	Not Revised	$18,803,406	Not Revised

[a] The original budget amount is from DADS's *Business Case Workbook* submitted to the QAT on June 24, 2013.

[b] Total project expenditures are as of February 29, 2016, as reported to auditors. Total encumbrances (authorized purchase orders) for the project are as of February 29, 2016, as reported to auditors.

Source: The QAT and information DADS provided.

The original estimated project cost was $19,954,387. However, DADS reported to auditors that, as of February 29, 2016, the total amount expended was $11,065,265 and encumbrances were $7,738,141, for a total of $18,803,406 expended and encumbered.

The project is funded through a 50/50 (state/federal) match with the U.S. Centers for Medicare and Medicaid Services under the Balancing Incentive Program.

Project Benefits

According to DADS, the SSLCs currently handle health records using manual, paper-based processes that are highly inefficient. The new system will provide a means for securely and electronically sharing personal health information and Health Insurance Portability and Accountability Act data among medical, nursing, behavioral, and psychological services; habilitation therapies; and pharmacies that provide services to SSLC residents. Another improvement planned is the integration of dental and pharmaceutical data into the new SSLC EHR/ELR system, which will help to provide coordination of care for SSLC residents.

DADS indicated that prior to the infrastructure upgrades implemented as a part of the SSLC EHR/ELR project, the computers the SSLCs used were on an antiquated and declining network that was slow in supporting key applications, had inadequate Internet capacity, and had no wireless

capabilities. Some of the fiber cabling was more than 20 years old and had become fragile in some locations while also being at risk for outages due to exposure to the environment. According to DADS, the infrastructure upgrades allow it to implement new technologies such as virtual desktops, mobile devices, and video conferencing.

As a result of the project, DADS anticipates that the new system will greatly limit hard-copy document requirements and improve efficiency by automating processes that are currently performed manually. Overall, the new SSLC EHR/ELR system will provide a comprehensive view of each SSLC resident's health information to all authorized care personnel.

Video conferencing capabilities were also installed in SSLCs statewide to allow medical and care professionals to communicate and consult on patients and their care. The three video conferencing devices that are to be available at each SSLC facility will also be accessible by DADS employees for the purpose of conducting meetings or attending training, which should help to improve efficiency and reduce travel costs.

Additional Information

DADS reported that the SSLC EHR/ELR project benefited from a strong and engaged project team, support from an active executive staff member, and a thorough and successful knowledge transfer among project managers.

DADS did not submit the monitoring report covering the time period from April 1, 2014, to June, 30, 2014, to the QAT as required. However, DADS has submitted all other required reports to the QAT in a timely manner.

Many of the monitoring reports that DADS submitted contained missing, unclear, or outdated information. The QAT brought that to DADS's attention, and DADS resubmitted the most recent report (covering October 1, 2015, through December 31, 2015).

The Department of Family and Protective Services' Information
Management Protecting Adults and Children in Texas System Modernization Project

Project History/Overview

The Department of Family and Protective Services (DFPS) deployed the Information Management Protecting Adults and Children in Texas (IMPACT) system in 1996. Because of its age, the resources required to maintain the original IMPACT infrastructure are difficult to update and are costly. The IMPACT system is mission-critical for DFPS and used by more than 8,000 caseworkers.

The IMPACT Modernization project is divided into several sub-projects, which have been (or will be) awarded to vendors through various contracts. DFPS reported that project management wanted to avoid combining all of the components or phases of the project into a single contract. According to DFPS, the use of different vendors for the various phases will allow it to maximize the areas of expertise that the different vendors possess.

The purpose of the IMPACT Modernization project is to provide access to external Court Appointed Special Advocate volunteers, as required by House Bill 1227 (83rd Legislature, Regular Session) (see text box). In addition, according to DFPS, the project's goal is to enhance the IMPACT system's usability with new tools and interfaces and new underlying software architecture. However, the data model and database will not change, so the information retrieved from the system will remain the same.

Project Summary

As of February 29, 2016

Original:
- End Date: February 28, 2018
- Budget: $44,597,469

Current:
- End Date: February 28, 2018
- Budget: Not Revised

Status: 39 percent complete.

House Bill 1227

House Bill 1227 (83rd Legislature, Regular Session) required DFPS to develop an internet application that allows a Court Appointed Special Advocate volunteer representing a child in the managing conservatorship of DFPS **to access the child's case file through** an automated case tracking and information management system and to **add the volunteer advocate's findings and reports to the child's case file.**

Project Status

The QAT approved the IMPACT Modernization project on September 26, 2013. The original budget and time line have not changed and remain at $44,597,469 with an expected completion date of February 28, 2018.

DFPS reported that external access for Court Appointed Special Advocate volunteers to a child's case file was implemented on August 24, 2014.

Project Costs

Table 4 on the next page summarizes budgeted and actual expenditures for the IMPACT Modernization project. DFPS used the *Business Case Workbook* as the tool to estimate costs for the project.

Table 4

Budgeted and Actual Expenditures for the IMPACT Modernization Project As of February 29, 2016				
Original Budget: $44,597,469				
Budget Category	Original Budget [a]	Revised Budget	Total Expended and Encumbered [b]	Original Budget Increase/(Decrease)
Agency Personnel Expenditures	$ 3,407,469	Not Revised	$ 2,470,837	Not Revised
Contract/Consultant Services Expenditures	35,050,000	Not Revised	12,353,082	Not Revised
Other Expenditures (Hardware/Software and Maintenance)	6,140,000	Not Revised	4,137,479	Not Revised
Total Encumbrances	Not Applicable	Not Applicable	8,139,920	Not Applicable
Total Project Costs	$44,597,469	Not Revised	$27,101,318	Not Revised

[a] The original budget amount is from the DFPS's *Business Case Workbook* submitted to the QAT on September 16, 2013.

[b] Total project expenditures are as of February 29, 2016, as reported to auditors. Total encumbrances (authorized purchase orders) for the project are as of February 29, 2016, as reported to auditors.

Source: The QAT and information DFPS provided.

The original budget of $44,597,469 has remained consistent in the reports that DFPS submitted to the QAT. DFPS staff stated that project costs as reported to the QAT are based on paid invoices. In the total expenditures reported to the QAT, DFPS does not include (1) authorized purchase orders (encumbrances) and (2) goods and services for which the vendor had yet to submit invoices.

DFPS reported to auditors that, as of February 29, 2016, the total amount expended was $18,961,398 and encumbrances were $8,139,920, for a total of $27,101,318 expended and encumbered.

DFPS stated that the IMPACT Modernization project is partially funded by federal funds, but as of March 2016, DFPS was unable to provide a total overall percentage of federal funds that will be used for the project.

Project Benefits

According to DFPS, in addition to providing external access to Court Appointed Special Advocate volunteers, the IMPACT Modernization project has the following goals and anticipated outcomes:

- Reducing the time required to perform intake activities.

- Streamlining current processes.

- Automating manual processes.

- Improving the accuracy of the data entered for services provided to families.

- Increasing data availability.

- Providing external partner access to current case information.

According to DFPS, those outcomes will benefit both DFPS staff and external partners. In addition, DFPS's information technology support staff will be able to more quickly deliver solutions to identified issues.

Additional Information

At the onset of the IMPACT Modernization project, DFPS established an executive steering committee, and DFPS staff reported to auditors that the project had significant support from DFPS's executive management.

According to DFPS, there have been performance issues with the vendor that is working on the implementation of the IMPACT Reporting and Data Management and Phase I portions of the project. However, project management, which includes executive management and information technology management, is working closely with that vendor to resolve those issues.

DFPS calculated the reported project completion percentage based on the expenditures paid to date divided by the current estimated project cost of $44,597,469. The project completion percentage is not based on the amount of work that has been completed on project activities or a work breakdown structure, as required by the QAT's monitoring report instructions.

DFPS did not consistently submit its monitoring reports for the IMPACT Modernization project within time frames requested by the QAT. As a result, the QAT adjusted the monitoring report requirement for that project from a quarterly monitoring schedule to a monthly monitoring schedule. As of February 29, 2016, the monitoring reports for December 2015 and January 2016 had not yet been submitted to the QAT.[2]

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[2] DFPS reported that it submitted its monitoring reports for December 2015 and January 2016 to the QAT on March 18, 2016.

> **Project Summary**
>
> As of February 29, 2016
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> Original:
> - End Date: December 31, 2018
> - Budget: $28,222,300
>
> Current:
> - End Date: December 31, 2018
> - Budget: $71,610,340
>
> Status: 78 percent complete.

Project History/Overview

The purpose of the Registration and Titling System (RTS) Refactoring[3] project initiated by the Texas Department of Motor Vehicles (TxDMV) was to replace the agency's aging legacy mainframe system and associated code with a new Web-based system. TxDMV uses the RTS system to process vehicle registrations and titles for the State of Texas.

According to TxDMV, its prior RTS consisted of older generation technology and infrastructure that resulted in the following business problems:

- Increased costs and time to maintain the system and implement any changes.

- Inability to produce reports from registration and titling in a reasonable amount of time and without having to create customized code to produce the reports.

- Difficulties in deploying system changes or upgrades to the client desktop workstations located at hundreds of county tax assessor-collector offices throughout the state.

The RTS Refactoring project involves the implementation of a core system that will allow TxDMV to update legacy technology and allow for the support of future RTS enhancements not possible with the current RTS legacy system.

Project Status

The QAT approved the RTS Refactoring project on March 29, 2012. The project began on May 31, 2012, and has an expected end date of December 31, 2018. It consisted of two main production releases, which included the implementation of the Web-based RTS point-of-sale application, conversion of the mainframe application and database to the new system, and scheduled knowledge transfer and training activities to shift maintenance responsibilities from the vendor to the TxDMV. As of February 29, 2016, both production releases were complete and the new RTS was in use.

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[3] "Refactoring" refers to the process of restructuring existing computer code without changing its external behavior.

As of February 29, 2016, approximately 78 percent of the RTS Refactoring project was complete, as reported by TxDMV management. The expected completion date of the entire project is December 31, 2018.

According to TxDMV, the remaining work associated with the RTS Refactoring Project includes: system enhancements, knowledge transfers, and training activities facilitated between the project vendor and TxDMV's information technology staff. TxDMV's information technology staff will support and maintain the new RTS after deployment.

Project Costs

Table 5 summarizes budgeted and actual expenditures for the RTS Refactoring project. The TxDMV used the *Business Case Workbook* as the tool to estimate costs for the project.

Table 5

Budgeted and Actual Expenditures for the RTS Refactoring Project As of February 29, 2016				
Original Budget: $28,222,300				
Budget Category	Original Budget [a]	Revised Budget [b]	Total Expended and Encumbered [c]	Original Budget Increase/(Decrease)
Agency Personnel Expenditures	$ 7,792,300	$ 9,589,500	$ 3,884,592	$ 1,797,200
Contract/Consultant Services	20,280,000	61,870,840	34,718,505	41,590,840
Other Expenditures	150,000	150,000	0	0
Total Encumbrances	Not Applicable	Not Applicable	23,590,896	Not Applicable
Total Project Costs	$28,222,300	$71,610,340	$62,193,993	$43,388,040

[a] The original budget amount is from TxDMV's *Business Case Workbook* submitted to the QAT on March 8, 2012.

[b] The revised budget amount is from TxDMV's *Business Case Workbook* submitted to the QAT on June 9, 2014.

[c] Total project expenditures are as of February 29, 2016, as reported to auditors. Total encumbrances (authorized purchase orders) for the project are as of February 29, 2016, as reported to auditors.

Sources: The QAT and information that TxDMV provided.

The initial project budget was $28,222,300; however, TxDMV increased the project's budget to $71,610,340. TxDMV prepared the initial project budget prior to bidding out the project and it included only updates to the RTS point-of-sale application. TxDMV added plans to modernize the database platform allowing end users access to information in a customer-centric (rather than a vehicle-centric) manner. The revised budget also included software and associated maintenance costs and data center services costs for the RTS Refactoring project. According to TxDMV, unexpended balances in its

appropriated Automation Fund are sufficient to cover the increased project costs.

TxDMV reported to auditors that, as of February 29, 2016, the total amount expended was $38,603,097 and encumbrances were $23,590,896, for a total of $62,193,993 expended and encumbered.

The entire amount of $71,610,340 in budgeted project funds was sourced from state appropriated funds and did not consist of any federal funds.

Project Benefits

TxDMV reported that the RTS Refactoring project provides various benefits, which include the following:

- Allowing for the complete separation of TxDMV from the Department of Transportation for maintenance and operations of the RTS.

- Moving from an outdated mainframe system to a Web-based system that can be more easily updated and enhanced.

- Providing enhanced enterprise business reporting capabilities through use of a reporting tool.

Project Demonstration

Auditors, representatives from the Department of Information Resources, and representatives from the Legislative Budget Board attended a demonstration of the updated RTS and, according to TxDMV, the system is functioning as intended. The demonstration provided an overview of the functionality that the RTS Refactoring project achieved, including the processing of a standard registration renewal and title request within the RTS point-of-sale application, as well as the capability of generating standard and ad hoc reports through the use of an enterprise reporting tool.

Additional Information

The overall goal of the RTS Refactoring project was to ensure that the new system looked and behaved in the same manner as the previous system for the approximately 2,800 users located across 254 counties. To achieve that, TxDMV used a phased implementation approach across the counties to ensure that the servers were not overloaded during the implementation process. TxDMV management indicated that the new RTS was rolled out to the smaller counties first to resolve any issues prior to implementing it in the larger counties.

TxDMV attributed the successful implementation of the RTS Refactoring project to a rigorous governance process, which included regular vendor oversight and a high degree of executive management involvement during the project.

Project History / Overview

The purpose of the Department of State Health Services' (DSHS) Integrated Business Information System (IBIS) project was to create and implement a centralized information management system to replace two existing legacy applications: the Children with Special Health Care Needs Management Information System and the Automated System for Kidney Health Information Tracking. Those systems provide support for the Children with Special Health Care Needs Program and the Kidney Health Care Program.

The Children with Special Health Care Needs Program provides benefits to children with special health care needs, as well as to individuals of any age who have cystic fibrosis. The Kidney Health Care Program provides various benefits—such as kidney dialysis treatments, surgery, prescription drugs, transportation to health care visits, and assistance with Medicare premiums—to individuals who have end-stage renal disease.

The Purchased Health Services Unit at DSHS did not have a centralized management information system to support the full scope of that unit's business processes, such as provider enrollment, client eligibility determination, and claims payment for three of the programs that it administers. Those three programs are the Kidney Health Care Program, Children with Special Health Care Needs Services Program, and the Hemophilia Assistance Program.

The Children with Special Health Care Needs Management Information System and the Automated System for Kidney Health Information Tracking were stand-alone systems that were not integrated with other systems. Those systems were designed with outdated technology that required constant maintenance and were subject to frequent downtime. According to DSHS, that resulted in processing and resource inefficiencies for the program areas.

Project Status

The QAT approved the IBIS project on June 26, 2012. The project was originally scheduled to be completed by August, 29, 2014, at a cost of $3,660,000. As of February 29, 2016, the project was 96 percent completed and was scheduled to be implemented by June 1, 2016.

Project Summary

As of February 29, 2016

Original:
- End Date: August 29, 2014
- Budget: $3,660,000

Current:
- End Date: June 1, 2016
- Budget: $8,483,464

Status: 96 percent complete.

As of February 29, 2016, IBIS was being used by DSHS employees, as well as by subcontractors who were performing some final testing on the system. The next step will be to make IBIS available to DSHS's external partners, such as the U.S. Centers for Medicare and Medicaid services, prescription drug programs, and the Texas Medicaid and Healthcare Partnership. The remaining activities to be completed as of February, 29, 2016, were data migration validation, user acceptance testing, and deployment activities, all of which are related to external use of the system.

Project Costs

Table 6 summarizes budgeted and actual expenditures for the IBIS project. DSHS used the *Business Case Workbook* as the tool to estimate costs for the project.

Table 6

Budgeted and Actual Expenditures for the IBIS Project As of February 29, 2016				
Original Budget: $3,660,000				
Budget Category	Original Budget [a]	Revised Budget [b]	Total Expended and Encumbered [c]	Original Budget Increase/(Decrease)
Agency Personnel Expenditures	$ 552,765	$ 847,246	$ 893,636	$ 294,481
Contract/Consultant Services Expenditures	1,930,904	7,095,170	6,983,538	5,164,266
Hardware/Software Expenditures	603,633	192,659	12,564	(410,974)
Contingency Expenditures	572,698	348,389	0	(224,309)
Total Encumbrances	Not Applicable	Not Applicable	467,500	Not Applicable
Total Project Costs	$3,660,000	$8,483,464	$8,357,238	$4,823,464

[a] The original budget amount is from DSHS's *Business Case Workbook* submitted to the QAT on June, 20, 2012.

[b] The revised budget amount is from DSHS's *Business Case Workbook* submitted to the QAT on December 19, 2014.

[c] Total project expenditures are as of February 29, 2016, as reported to auditors. Total encumbrances (authorized purchase orders) for the project are as of February 29, 2016, as reported to auditors.

Source: The QAT and information DSHS provided.

The initial project budget was $3,660,000; however, DSHS increased the budget to $8,483,464. According to DSHS, the budget increase was the result of key staff attrition and critical defects identified during user testing.

DSHS reported to auditors that, as of February 29, 2016, the total amount expended was $7,889,738 and encumbrances were $467,500 for a total of $8,357,238 expended and encumbered. As of February 2016, according to DSHS, approximately 32.8 percent of the IBIS project was federally funded.

Project Benefits

IBIS is a Web-based system that will allow DSHS's external partners to access it. That will enable providers to enter client claims and manage their own information. According to DSHS, IBIS will be an integrated system that will lead to enhanced functionality to further enable process efficiencies. DSHS expects the project to accomplish the following:

- Establish a centralized information management system.

- Replace two outdated legacy systems.

- Reduce duplicative interfaces and processes.

- Facilitate mandatory reporting requirements.

- Eliminate many manual processes.

- Increase data security.

- Enhance data collection and compliance assurance.

- Streamline provider enrollment, client eligibility, and claims payment workflow processes.

Project Demonstration

Auditors, representatives from the Department of Information Resources, and representatives from the Legislative Budget Board attended a demonstration of IBIS. According to DSHS, IBIS is functioning as intended. Some of the features demonstrated included a new document imaging program, a new learning management program, and a user interface (called a "dashboard").

According to DSHS, the new document imaging program offers DSHS efficiencies in storage and record retention. DSHS stated that the document imaging software has greater functionality than the old software because the new software has the ability to scan, capture, and store all incoming client applications and information.

The new learning management program can automatically track training progress and assign training modules to employees based on their job tasks. DSHS also showed that the IBIS dashboard allows an employee to select one of many different program activity tasks, such as coordination of benefits or client eligibility activities. DSHS stated that the new dashboard makes the completion of those tasks much easier than they were previously by

streamlining the process and enabling employees to easily access and track different program activities.

Additional Information

DSHS extended the project end date and increased the budget multiple times due to various reasons. According to DSHS, one major challenge for the project was staff attrition. During the project development, several key information technology staff members left employment at DSHS. One of the key staff members who left DSHS had extensive, in-depth knowledge about the original Automated System for Kidney Health Information Tracking.

In addition, DSHS stated that user acceptance testing caused project delays because the system requirements were not well defined. As a result, numerous unexpected critical defects were identified during user acceptance testing. Due to the work that was required to resolve those defects, the project's end date was extended. DSHS reported that its staff is working closely with the vendor to understand the corrections for the critical defects.

The Health and Human Services Commission's Balancing Incentive
Program—*No Wrong Door Project*

Project History / Overview

The Health and Human Services Commission's (HHSC) Balancing Incentive Program—No Wrong Door (BIP-NWD) project, was initiated to develop a single entry point for individuals to undergo a screening process to obtain information about Medicaid-based Long Term Services and Supports (LTSS) programs for which they may be eligible. Prior to that, individuals who needed LTSS assistance were required to provide information to each health and human services agency separately. That process may have involved completing separate applications to each agency for obtaining services. Those individuals were additionally required to contact each agency to obtain information regarding their benefits.

The BIP-NWD project allows potential consumers to complete and submit an online screening form on the "Your Texas Benefits" Web site to receive referrals to LTSS services for which they may be eligible. The system then tracks those referrals and their acceptance by health and human services agencies through the LTSS Worker Portal site. Health and human services agencies use the LTSS Worker Portal site to manage the follow-up on inquiries for services, track the status of referrals, and share information among LTSS providers.

According to HHSC, the purpose of the BIP-NWD project was to help Texas qualify for additional funding under the federal Patient Protection and Affordable Care Act[4] and improve technology and information sharing among the health and human services agencies so that individuals who need LTSS assistance can receive quality care and live in their homes and communities. To qualify for the additional funding, the State had to:

- Implement a "no wrong door" screening and referral system.

- Develop core standardized assessment instruments.

- Ensure that case management activities were conflict-free.

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[4] The Patient Protection and Affordable Care Act established the Balancing Incentive Program, which increased the federal matching assistance percentage to participating states through September 2015 in exchange for those states making certain structural reforms so that access to LTSS is increased.

To achieve that, the BIP-NWD project consisted of the following tasks:

- Developing and implementing an LTSS screening tool for clients.

- Creating the LTSS Worker Portal site, which health and human services agency employees use to help manage LTSS referral cases.

HHSC worked with the Department of Aging and Disabilities Services and the Department of State Health Services to develop and implement the BIP-NWD project.

Prior to the implementation of the project, health and human services agencies did not have an adequate LTSS screening tool. The previous assessment process was paper-based and lacked uniformity across the different programs that provide LTSS services. Each health and human services agency maintained its own system for managing inquiries for services. According to HHSC, most of those inquiries were managed using Excel spreadsheets and Access databases at each agency, and the agencies did not have an official way of sharing information about LTSS clients among the agencies.

Additionally, an individual seeking LTSS services had to repeat his or her information to the different health and human services agencies administering LTSS programs. According to HHSC, the process that was in place led to repetition, redundancy, and data errors.

Project Status

The QAT approved the project on May 6, 2014. HHSC reported in the monitoring report it submitted to the QAT in September 2015 that all components of the BIP-NWD project had been implemented and the project was 100 percent complete. In addition, HHSC stated that an additional 15,000 hours were allocated in the contract for system enhancements that may be needed after system implementation. Those enhancements could include upgrades to the system software or hardware or other improvements based on user feedback.

According to the first monitoring report that HHSC submitted to the QAT, the original end date for the project was July 30, 2015. However, the final project completion date was revised to August 31, 2015. HHSC stated that additional time was needed to accommodate further user acceptance testing and worker training.

Project Costs

Table 7 summarizes budgeted and actual expenditures for the BIP-NWD project. HHSC used the *Business Case Workbook* as the tool to estimate costs for the project.

Table 7

Budgeted and Actual Expenditures for the BIP-NWD Project As of February 29, 2016				
Original Budget: $33,800,000				
Budget Category	Original Budget [a]	Revised Budget [b]	Total Expended [c]	Original Budget Increase/(Decrease)
Agency Personnel Expenditures	$ 5,820,000	$ 995,861	$ 422,601	$ (4,824,139)
Contract/Consultant Services Expenditures	27,980,000	28,674,010	20,909,306	694,010
Other Expenditures (Hardware/Software and Other)	0	4,034,955	1,283,448	4,034,955
Total Project Costs	$33,800,000	$33,704,826	$22,615,355	$ (95,174)
[a] The original budget amount is from HHSC's *Business Case Workbook*, submitted to the QAT on April 1, 2014. [b] The revised budget amount is as of February 29, 2016, as reported to auditors. [c] Total project expenditures are as of February 29, 2016, as reported to auditors.				

Sources: The QAT and information that HHSC provided.

HHSC reported that the BIP-NWD project was completed under budget. The original project budget was $33,800,000; however, the final amount expended was $22,615,355. HHSC stated that the project was completed under budget due to project management planning and continuous involvement in the overall status of the project. Federal funds had paid approximately 89 percent of the project's actual costs as of February 29, 2016.

Project Benefits

According to HHSC, the ability to view and track referrals, share information within the worker portal, and access LTSS-related information gathered by multiple health and human services agencies within a single system allows LTSS workers at the agency level to spend more time addressing client needs rather than collecting client demographic information. The BIP-NWD project also allows LTSS workers to coordinate with other service providers and provide more appropriate and integrated support for clients seeking services.

According to HHSC, the implementation of the BIP-NWD project resulted in the following benefits:

- Creation of a consolidated LTSS screening tool and referral system.

- Creation of a central repository for information about the needs of LTSS clients.

- Improved employee workflow for processing completed LTSS screenings.

- Increased exchange of LTSS-related information among HHSC, the Department of Aging and Disability Services, and the Department of State Health Services.

In addition, due to the completion of the BIP-NWD project, Texas is now eligible for a 2 percent enhanced federal matching assistance percentage available through the federal Patient Protection and Affordable Care Act.

Project Demonstration

Auditors, representatives from the Department of Information Resources, and representatives from the Legislative Budget Board attended a demonstration of the BIP-NWD project's LTSS screening tool and the LTSS Worker Portal in a pre-production environment. HHSC asserted that the BIP-NWD project met the functionality requirements that the agency set out to obtain. During the demonstration to auditors, the LTSS screening tool initially failed to respond and had to be restarted to continue with the demonstration. After the system was restarted, HHSC was able to complete the demonstration.

The demonstration of the LTSS Worker Portal showed that employees have access to a list of their assigned referrals and the referrals' status. Employees can now effectively search through the referrals using a number of different search fields that were previously unavailable to them. Those searches can be based on fields such as last name, Social Security number, Medicaid number, gender, or other identifying information. That search function allows employees to more easily locate client records. Employees can also (1) view referrals to other program areas and see the current status of those referrals and (2) leave notes for staff in the other program areas.

Additional Information

Project management and stakeholders reported that the LTSS screening tool and LTSS Worker Portal functioned well and achieved the desired results. Management reported that the LTSS screening tool had been utilized approximately 41,600 times per month from September 2015 to February 2016.

As of March 16, 2016, HHSC had not submitted its *Post-Implementation Review of Business Outcomes* (PIRBO) for the BIP-NWD project to the QAT. Agencies are expected to submit a PIRBO to the QAT six months after a project is completed. The PIRBO for the BIP-NWD project was due March 31, 2016.

Project History / Overview

The purpose of the Health and Human Services Commission's (HHSC) Enterprise Data Warehouse (EDW) project is to provide accurate, consistent reporting of Medicaid/Medicare data for Texas. According to HHSC, the EDW project will collect Medicaid and Medicare data from the health and human services agencies into one main database that will provide a single source of reliable information for all of the health and human services agencies. The information provided for those agencies will be used internally to conduct data analysis to identify and meet the health care needs of the agencies' clients.

Federal funds provided by the U.S. Centers for Medicare and Medicaid Services provide 90 percent of the funding for the HHSC EDW project.

The data that is intended to be collected and consolidated within the EDW system is currently scattered across 13 systems at the health and human services agencies. According to HHSC, comparing and analyzing that data can be time-consuming because it is formatted and categorized in different ways in the different systems. The multiple hardware environments and agency-specific applications that comprise the current technology setting have created challenges due to program-specific management and delivery policies that make enterprise and statewide analysis extremely expensive and time-consuming.

HHSC reported that some of the difficulties caused by the 13 different systems include:

- Different technologies on different life cycle paths.

- Federal and state funding structures and rules that inhibit resource consolidation and standardization of information management.

- Data being replicated across multiple systems, creating inefficiencies and unnecessary expense.

To analyze the data from the various systems, a "key identifier" in each system must be established. That portion of the project is referred to as "enterprise data governance." Establishing the key identifier is considered the backbone of the EDW project because it ensures that the information from each recipient can be identified in all 13 systems.

Project Summary

As of February 29, 2016

Original:
- End Date: April 30, 2017
- Budget: $100,002,963

Current:
- End Date: April 30, 2019
- Budget: $129,851,871

Status: 9 percent complete.

Project Status

HHSC reported to the QAT that the start date for the EDW project was April 1, 2008. In addition, HHSC indicated that the current expected completion date is April 30, 2019, which is an extension of two years from the original completion date of April 30, 2017. With the extension, the project time line is now 11 years, compared to the original expected duration of 9 years. HHSC attributed that delay to challenges and setbacks in the procurement process that resulted in the project remaining in the request for proposals phase for longer than anticipated.

As of February 29, 2016, HHSC reported that the project was 9 percent complete.

Project Costs

Table 8 summarizes budgeted and actual expenditures for the EDW project. HHSC used the *Business Case Workbook* as the tool to estimate cost for the project.

Table 8

Budgeted and Actual Expenditures for the EDW Project As of February 29, 2016				
Original Budget: $100,002,963				
Budget Category	Original Budget [a]	Revised Budget [b]	Total Expended and Encumbered [c]	Original Budget Increase/(Decrease)
Agency Personnel Expenditures	$ 10,210,538	$ 9,775,530	$ 1,032,337	$ (435,008)
Contract/Consultant Services Expenditures	55,939,766	56,539,332	16,304,896	599,566
Other Expenditures (Hardware/Software and Maintenance)	33,852,659	63,537,009	20,196,319	29,684,350
Total Encumbrances	Not Applicable	Not Applicable	2,666,310	Not Applicable
Total Project Costs	$100,002,963	$129,851,871	$40,199,862	$29,848,908

[a] The original budget amount is from HHSC's *Business Case Workbook* submitted to the QAT on December 11, 2009.

[b] The revised budget amount is from HHSC's *Business Case Workbook* submitted to the QAT in September of 2012.

[c] Total project expenditures are as of February 29, 2016, as reported to auditors. Total encumbrances (authorized purchase orders) for the project are as of February 29, 2016, as reported to auditors.

Sources: The QAT and information that HHSC provided.

The EDW project was estimated to cost $100,002,963 in 2009. Estimated costs increased in 2013 to the current estimated cost of $129,851,871. As of February 29, 2016, HHSC had spent $37,533,552 of the $129,851,871 budgeted for the project. The majority of the current costs were expended in

October 2015 when HHSC needed to purchase universal license agreements for 2 pieces of software for $18,571,891, which will be used across all health and human services agencies as part of the EDW project.

HHSC reported to auditors that, as of February 29, 2016, the total amount expended was $37,533,552 and encumbrances were $2,666,310, for a total of $40,199,862 expended and encumbered.

Project Benefits

According to HHSC, the collection and consolidation of data from 13 health and human services agencies' systems into one statewide database through the EDW project is expected to provide a number of benefits. Those include:

- Improved delivery of health care services to Texans.

- Improved ability to determine the level of program and cross-agency program effectiveness.

- Enhanced detection and prevention of fraud and abuse.

- Reduced overall costs to taxpayers.

The new system also aims to improve security for the data across the health and human services agencies and provide enhanced organization of records across all programs.

HHSC anticipates that the greatest benefit of the EDW project will be the ability for HHSC to conduct advanced, agency-wide data analysis via a single source. The system will allow HHSC to interpret patterns and gain insights into outcomes regardless of the agency that provided the service. Those evidence-based outcomes, as reported from the EDW, will have the potential to improve best practice service delivery and improve standards compliance and accountability, while also allowing HHSC to determine which programs are most effective. In addition, HHSC anticipates that the reporting feature in EDW will assist it to predict future health care needs for the State, thereby allowing HHSC to make more informed decisions on how to spend funds.

Additional Information

HHSC asserted that the EDW project has benefited from the cross-training of staff working on the development of the project so that no one employee is key to a process.

In the monitoring reports that HHSC submitted to the QAT for the time period covering March 16, 2015, to January 15, 2016, HHSC reported that the project was 18 percent complete. However, HHSC later confirmed to

auditors that the project was only 9 percent complete. HHSC indicated that reporting error was due to a procurement being canceled at the last minute. HHSC corrected the percentage error in the monitoring report it submitted to the QAT for the time period covering January 16, 2016, to February 15, 2016.

Appendix

Objective, Scope, and Methodology

Objective

The objective of this project was to, in coordination with the Legislative Budget Board and the Department of Information Resources, review information technology projects and provide technical analysis of project risks to the Quality Assurance Team (QAT).

Scope

The scope of this project covered six major information resources projects at five state agencies. The State Auditor's Office analyzed those six projects at the request of the QAT, which selected those projects because they were identified as high-risk projects.

Methodology

Auditors reviewed the documentation that the agencies provided to QAT for the six selected high-risk major information resources projects. That documentation included *Acquisition Plans*, *Business Cases*, *Business Case Workbooks*, *Statewide Impact Analyses*, *Project Plans*, and monitoring reports. Auditors also conducted interviews with key personnel involved in the projects, obtained additional project-related information from the agencies, and observed demonstrations of systems when possible.

The agencies self-reported the project information presented in this report to auditors and 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.

- Title 1, Texas Administrative Code, Chapter 216.

- The Department of Information Resources' *Texas Project Delivery Framework*.

- General Appropriations Act (84th Legislature).

Project Information

Fieldwork was conducted from February 2016 through March 2016. This project was a non-audit service; therefore, the information in this report was not subject 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 performed this project:

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

- Kelly Bratton, CFSA, CRMA (Assistant Project Manager)

- Mary K. Anderson

- Rachel Goldman

- Jack Lee, CPA

- Jonathan Morris

- Ashley Rains

- Shelby Rounsaville

- Brianna C. Lehman, CPA (Quality Control Reviewer)

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

Copies of this report have been distributed to the following:

Legislative Audit Committee
The Honorable Dan Patrick, Lieutenant Governor, Joint Chair
The Honorable Joe Straus III, Speaker of the House, Joint Chair
The Honorable Jane Nelson, Senate Finance Committee
The Honorable Robert Nichols, Member, Texas Senate
The Honorable John Otto, House Appropriations Committee
The Honorable Dennis Bonnen, House Ways and Means Committee

Office of the Governor
The Honorable Greg Abbott, Governor

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

Department of Family and Protective Services
Mr. John J. Specia, Commissioner

Department of State Health Services
Dr. John Hellerstedt, Commissioner

Health and Human Services Commission
Mr. Chris Traylor, Executive Commissioner

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    Mr. John Walker, III
Ms. Whitney Brewster, Executive Director