State Auditor's Office

John Keel, CPA
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An Audit Report on

The ReHabWorks System at the Department of Assistive and Rehabilitative Services

July 2012

Report No. 12-045

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Overall Conclusion

The Department of Assistive and Rehabilitative Services (Department) did not fully complete the ReHabWorks System as it reported in August 2010. The ReHabWorks System is a case management system intended for two Department divisions: the Division for Rehabilitation Services and the Division for Blind Services (see text box for additional details).

The Department deployed the ReHabWorks System in its Division for Rehabilitation Services in February 2011. The Department is scheduled to deploy the ReHabWorks System in its Division for Blind Services in April 2013.

Based on Department documentation regarding the development of the ReHabWorks System, auditors determined that, as of August 2010, the ReHabWorks System was not yet a consolidated case management system capable of serving all customer cases for the Division for Rehabilitation Services and the Division for Blind Services because it did not yet have all the functionality of its predecessor systems.

Background Information

House Bill 2292 (78th Legislature, Regular Session) abolished the Rehabilitation Commission, the Commission for the Blind, the Interagency Council on Early Childhood Intervention, and the Commission for the Deaf and Hard of Hearing and consolidated those agencies' functions into the Department of Assistive and Rehabilitative Services (Department) effective March 1, 2004.

Following the consolidation, the Department's Division for Rehabilitation Services and Division for Blind Services had separate, redundant case management systems. The Department initiated a project to replace those systems with the ReHabWorks System, a single, Web-based case management system to serve both divisions' business requirements.

The ReHabWorks System is being developed in house under the direction of a leadership team comprising Department executive management. The project began in May 2005 with a projected completion date of August 2007. The project completion date has been revised several times and currently has an expected completion date of April 2013. (See Appendix 2 for a project time line.)

Source: The Department.

The Department classified as maintenance costs more than $2.2 million in direct contractor costs it incurred between September 2010 and March 2012 to continue the development of the ReHabWorks System. The Department did not request capital authority from the Legislative Budget Board to continue funding the project.

The Department was originally appropriated $2.4 million in federal funds for the development of the ReHabWorks System for the 2006-2007 biennium, with a completion date of August 2007. The Department modified the project scope twice, extending the completion date to August 2010.

The Department did not originally report approximately $10.9 million in indirect costs related to personnel participating in the development of the ReHabWorks System in the *Biennial Operating Plan* it submitted to the Legislative Budget Board.

This audit was conducted in accordance with Texas Government Code, Sections 321.0132 and 321.0133.

For more information regarding this report, please contact Nicole Guerrero, Audit Manager, or John Keel, State Auditor, at (512) 936-9500.

As a result, on March 7, 2012, the Legislative Budget Board requested that the Department amend its *Biennial Operating Plan* to include all project costs and accurate estimates for project completion. As of May 2012, the Department estimated in its amended *Biennial Operating Plan* that project expenditures will total $18.3 million when the project is completed in April 2013.

The Department exceeded the budget and time line for the development of the ReHabWorks System primarily because the development effort lacked sufficient planning, change control monitoring, and project documentation. Weaknesses in the process to establish system requirements resulted in insufficient development of the project scope, budget, and time lines.

Auditors also determined that data was not reliable for purposes of this audit in the following sources of information:

- The change control portal the Department used to document the priority, description, and status of change requests and decisions related to the ReHabWorks System.
- The cost tracking tool the Department used to record, calculate, and report costs for the ReHabWorks System.
- The employee training system the Department used to track training provided to ReHabWorks System end-users.

Auditors communicated other, less significant issues to the Department's management in writing.

Summary of Management's Response

The Department agreed with the recommendations in this report.

Summary of Information Technology Review

Auditors performed a limited review of controls over the ReHabWorks System. That work included reviewing policies and procedures, user access, change management, disaster recovery and backup procedures, operations monitoring, physical controls over the Department's data center in which the ReHabWorks System resides, and tests of data for completeness and reasonableness.

Auditors determined that the Department has effective password controls and appropriately limits privileged accounts. However, additional controls should be implemented to ensure that the Department adequately protects confidential information and critical equipment for the ReHabWorks System. Auditors identified the following:

- The Department inconsistently applies or does not have certain controls over user access.
- There are weaknesses in physical security and environmental controls over the Department's data center.
- Weaknesses in the Department's disaster recovery planning could impair its ability to recover from an interruption in service.
- The Department does not perform periodic reconciliations to ensure that data it uses to produce reports is complete and accurate.
- The Department's change management procedures do not incorporate certain best practices.

Auditors also assessed the reliability of the data in the Department's change control portal, cost tracking tool, and employee training database and determined that the data was not reliable for purposes of this audit.

Summary of Objectives, Scope, and Methodology

The objectives of this audit were to determine:

- Whether the Department has developed and implemented the ReHabWorks System in a manner to help ensure achievement of intended goals within anticipated time frames and budgets.
- Whether there are controls in the ReHabWorks System to help ensure current and future functionality, completeness, and security for the Division for Rehabilitation Services and the Division for Blind Services.

The scope of this audit included activities related to the development and management of the ReHabWorks System from May 2005 through March 31, 2012.

The audit methodology included collecting and reviewing information from the Department; conducting interviews with Department management, staff, and contractors involved in the ReHabWorks System; reviewing Department policies and applicable state and federal security requirements; reviewing and analyzing the Department's processes related to developing and managing the ReHabWorks System; reviewing the Department's management of the change control process; reviewing and analyzing the Department's processes related to recording, calculating, and reporting costs related to the ReHabWorks System; reviewing the Department's accounting information for costs related to the ReHabWorks System; reviewing information from the Uniform Statewide Payroll/Personnel System for selected Department employees; reviewing the Department's processes for training staff related to the ReHabWorks System; and reviewing and analyzing general controls in place related to the ReHabWorks System.

Contents

Detailed Results

Chapter 1
The Department Had Not Fully Completed the ReHabWorks System and Underreported Costs When It Reported the Project Status as Complete to Oversight Entities 1

Chapter 2
The ReHabWorks System Development Effort Did Not Have Sufficient Planning, Change Control Monitoring, and Project Documentation 15

Chapter 3
The Department Should Strengthen General Controls Surrounding the ReHabWorks System 26

Appendices

Appendix 1
Objectives, Scope, and Methodology 38

Appendix 2
Time Line of ReHabWorks System Events 43

Appendix 3
The Department's Post-implementation Review of Business Outcomes 44

Appendix 4
Department Programs and Clients Served 61

Appendix 5
Quality Assurance Team Overview 63

Appendix 6
Legislative Budget Board Requests for Amendment to the Department's Biennial Operating Plan 65

Appendix 7
System Life Cycle Processes 70

Detailed Results

Chapter 1

The Department Had Not Fully Completed the ReHabWorks System and Underreported Costs When It Reported the Project Status as Complete to Oversight Entities

The Department of Assistive and Rehabilitative Services (Department) did not fully complete the ReHabWorks System as of August 2010, as it reported to oversight entities. The ReHabWorks System is a case management system intended for two Department divisions: the Division for Rehabilitation Services and the Division for Blind Services (see text box for additional details).

The ReHabWorks System

According to the project plan, the intent of the ReHabWorks System is to have a single, Web-based case management system that:

- Combines the functionality of RehabSys and TWorks, the two predecessor systems of the ReHabWorks System.
- Meets the business requirements to support the customers of the Department's Division for Rehabilitation Services and Division for Blind Services.

The original budget for the development of the ReHabWorks System was $2.4 million for the 2006-2007 biennium, with a completion date of August 2007. As of May 2012, the Department estimated in its amended *Biennial Operating Plan* that project expenditures will total $18.3 million when the project is completed in April 2013.

Chapter 1-A

The Department Had Not Fully Completed the ReHabWorks System When It Reported It as Complete to Oversight Entities

In its *Post-implementation Review of Business Outcomes* (PIRBO), the Department reported to the Legislative Budget Board and the State's Quality Assurance Team that the project to develop the ReHabWorks System was complete as of August 2010 (see Appendix 3 and text box for additional details). However, the ReHabWorks System was not fully complete. In February 2011, six months after reporting that the project was complete, the Department deployed the ReHabWorks System in its Division for Rehabilitation Services; the Department estimates it will deploy the ReHabWorks System in its Division for Blind Services in April 2013. The Department reported in its fiscal year 2011 annual report that it served 196,075 clients in need of rehabilitative and blind services. The Division for Rehabilitation Services served 174,551, or 89 percent, of those clients. (See Appendix 4 for additional information regarding the services provided and clients served in each program.)

***Post-implementation Review of Business Outcomes* (PIRBO)**

Required by Texas Government Code, Section 2054.306, and the Department of Information Resources' *Texas Project Delivery Framework*, the PIRBO is a document through which agencies evaluate the benefits and other performance measures from a system against the predicted benefits and other performance measures to determine whether the project to develop the system met its goals and objectives.

Agencies must submit a PIRBO to the State's Quality Assurance Team within six months after a project is complete.

Because of its size, complexity, and risk level, the ReHabWorks System is considered a major information resources project and, therefore, is subject to several requirements to report to the State's Quality Assurance Team and the

Legislative Budget Board (see Appendix 5 for Quality Assurance Team reporting requirements and criteria for major information resources projects). After the Department reported that the ReHabWorks System was complete, it was no longer required to submit quarterly monitoring reports to the Quality Assurance Team. (The quarterly monitoring reports include information regarding project status and cost.) The Department also was no longer required to request capital authority from the Legislative Budget Board to continue funding the development of the ReHabWorks System. The Department has not reported the project status and cost to the Quality Assurance Team or requested capital authority from the Legislative Budget Board since reporting the project complete as of August 2010.

The Department asserts that the ReHabWorks System was capable of processing a new customer case from start to finish as of August 2010.

The Department asserts that the ReHabWorks System was capable of processing a new customer case from start to finish as of August 2010 and, because of that, the Department determined that the project to develop the ReHabWorks System was complete. However, project documentation indicated that the ReHabWorks System did not meet the approved project scope. Although the ReHabWorks System could have processed a new case as of August 2010, it was not a consolidated case management system capable of serving all customers of the Department's Division for Rehabilitation Services and Division for Blind Services because it could not serve existing customers. The ReHabWorks System also did not contain any historical customer data to enable the Department to submit required reports to oversight entities.

Project documentation indicates that, as of August 2010, one of six critical project deliverables for the ReHabWorks System was complete. In the request for offer, business case, and project plan that the Department developed for the ReHabWorks System, the Department defined project completion as deployment of the system to all Department locations without malfunction and performing to expectations for a period of 90 days. As of August 2010, the ReHabWorks System was not deployed to any Department location.

In the PIRBO that the Department submitted to the State's Quality Assurance Team in February 2011, the Department reported that the project scope had been fulfilled as of August 2010. Texas Government Code, Section 2054.151, states that "the legislature intends that a state agency information resources technology project will be successfully completed and that the projects will function and provide benefits in the manner the agency projected in its plans and in its appropriations requests submitted to the legislature."

Table 1 summarizes auditors' analysis of six deliverables documented in approved project documents for the ReHabWorks System and whether each deliverable was complete as of August 2010.

Table 1

Status of ReHabWorks System Deliverables as of August 2010						
	Deliverable	Document in which the Department Described the Deliverable [a]				Status of Deliverable as of August 2010
		Request for Offer	Business Case	Project Plan	PIRBO	
1	A consolidated case management system capable of serving all Division for Rehabilitation Services and Division for Blind Services customers	✓	✓	✓	✓	Not complete
2	A system that includes all legacy systems' (RehabSys and TWorks) functionality	✓	✓	✓		Not complete
3	Conversion of legacy systems data	✓	✓	✓	✓	Not complete
4	User acceptance testing	✓	✓	✓	✓	Not complete
5	Trained users	✓	✓	✓	✓	Complete [b]
6	Deployment of application	✓	✓	✓	✓	Not complete

[a] ✓ indicates the document described the deliverable.

[b] The Department provided training to users in 2009, approximately 20 months before it deployed the ReHabWorks System in its Division for Rehabilitation Services in February 2011.

Source: Auditors' analysis of Department documentation.

As of August 2010, the ReHabWorks System did not have certain functionality, which could have put the Department at risk of not being able to comply with certain state and federal requirements.

Workaround

A workaround is a temporary fix to overcome a known programming or hardware problem. Workarounds can require a user to complete tasks manually until problems are resolved.

Source: The Department.

The Department has a change control process for the ReHabWorks System through which it tracks, reviews, and approves additional system functionality not originally identified during planning and, therefore, not included in the approved project scope. Lack of system functionality may require users to implement a "workaround" to overcome a system's shortcomings (see text box for additional details). According to the Department's change control portal information[1] related to the ReHabWorks System, as of August 2010:

- The ReHabWorks System did not include 82 system functions that were present in at least one of its two predecessor systems.

[1] Information in the change control portal is incomplete and inaccurate; therefore, it is not considered sufficiently reliable to ensure that management can make informed decisions.

- The Department had not yet implemented a total of 103 functions that the Department had approved to be included in the ReHabWorks System. Of those 103 functions:

  - One function was classified as "critical," which means that the ReHabWorks System could "crash" without that function.

  - Fifty-one functions were classified as "severe," which means that those functions were inoperable and no workarounds were available to address those issues.

The absence of functionality could have prevented the Department from serving all of the customers of its Division for Rehabilitation Services and Division for Blind Services. It also could have prevented the Department from complying with certain state and federal requirements. Specifically, as of August 2010, the following functionality was not present in the ReHabWorks System:

- **Functionality related to age criteria for the blind children's program.** The Department needed that functionality to report case management services it delivered to customers older than 15 years of age. Not having that functionality could result in the loss of revenue and prevent the Department from complying with certain requirements in the state plan for its Division for Blind Services.

- **Functionality related to voucher interface.** The Department needed that functionality to deliver maintenance checks to customers in the Criss Cole Rehabilitation Center.

- **Functionality related to the blind children's program Medicaid interface.** The Department needed that functionality to produce accurate Medicaid reimbursement reports.

- **Functionality related to the purchase order template.** The Department needed that functionality to help ensure compliance with state and federal requirements regarding data security and confidentiality.

- **Functionality related to case service reporting.** The Department needed that functionality to provide accurate information in its *Federal Case Service Report* (also known as the RSA-911 report).

- **Functionality related to purchase orders report.** The Department needed that functionality to produce accurate purchase order reports and manage purchase orders and its budget.

After it reported that the ReHabWorks System was complete in August 2010, the Department classified more than $2.2 million in project costs as maintenance and spent those funds without requesting approval from the Legislative Budget Board.

According to project accounting information, the project to develop the ReHabWorks System incurred more than $2.2 million in contractor costs between September 2010 and March 2012. Texas Government Code, Section 2054.003(10), states that an information technology project with costs that exceed $1,000,000 is considered a major information resources project (see Appendix 5 for additional details). In addition, Texas Government Code, Section 2054.118(a), requires the Legislative Budget Board to approve projects before agencies can spend funds (see text box for additional details).

Texas Government Code, Section 2054.118(a)

A state agency may not spend appropriated funds for a major information resources project unless the project has been approved by:

(1) the Legislative Budget Board in the agency's biennial operating plan; and

(2) the quality assurance team.

As discussed above, after the Department reported that the ReHabWorks System was complete, the Department was no longer required to report to the State's Quality Assurance Team and it did not request capital authority from the Legislative Budget Board to continue funding the project. The Department used other appropriated federal funds from the following two strategies to pay for project expenditures:

- Vocational Rehabilitation Blind strategy - $452,018.
- Vocational Rehabilitation General strategy - $1,805,310.

Based on project cost information, after August 2010 the ReHabWorks System still met the criteria for a major information resources project subject to Quality Assurance Team reporting requirements and capital authority approval from the Legislative Budget Board. On March 7, 2012, the Legislative Budget Board requested that the Department amend its *Biennial Operating Plan* and report all project costs. On May 23, 2012, the Department submitted an amended *Biennial Operating Plan,* which the Legislative Budget Board approved as of May 30, 2012 (see Chapter 1-B and Appendix 6 for additional information on the Department's *Biennial Operating Plan*).

Recommendations

The Department should:

- Report to the State's Quality Assurance Team the current status and total cost of the ReHabWorks System project, and seek guidance for how to fulfill reporting requirements until the project is complete in accordance with the approved project scope.

- Communicate with the Legislative Budget Board to determine project funding needs for the ReHabWorks System.

Management's Response

SAO Recommendation:

The Department should report to the State's Quality Assurance Team the current status and total cost of the ReHabWorks System project, and seek guidance for how to fulfill reporting requirements until the project is complete in accordance with the approved project scope.

***Management Response**: DARS is establishing a new project baseline, revising project deliverables, and continuing ReHabWorks as a major IR project. DARS will ensure that it meets Quality Assurance Team requirements, obtaining guidance when needed, for reporting project status, and continue to use the Texas Project Delivery Framework Business Case tool to estimate total project costs.*

***Estimated Completion Date**:*

August 2012

***Title of Responsible Person**:*

Director of Information Resources

SAO Recommendation:

The Department should communicate with the Legislative Budget Board to determine project funding needs for the ReHabWorks System.

***Management Response**: DARS communicated with the Legislative Budget Board regarding estimated project costs, associated project funding, and related capital authority. The Biennial Operating Plan Amendment that included estimated project costs, and standard benefits percentage for staff, was approved by the Legislative Budget Board on May 30, 2012. DARS used capital budget transferability provisions from Article IX, Section 14.03 of the General Appropriations Act to provide capital authority to cover as much of the costs for the project years as allowable.*

DARS submitted a letter on May 31, 2012 to the Legislative Budget Board and the Governor's Office of Budget, Planning, and Policy requesting additional capital authority to cover project costs for fiscal years 2012 and 2013. The request was approved by the Legislative Budget Board on June 25, 2012. Once DARS obtains approval for additional capital authority from the Governor's Office, DARS will report ReHabWorks as a capital project for

fiscal years 2011, 2012, and 2013 in all financial reports and budget documents.

***Estimated Completion Date**:*

July2012

***Title of Responsible Person**:*

Chief Financial Officer

Chapter 1-B

The Department Underreported the Cost to Develop the ReHabWorks System

The Department underreported the cost to develop the ReHabWorks System to two oversight entities: the Legislative Budget Board and the State's Quality Assurance Team. The Department did not report any indirect costs to the Legislative Budget Board and, after it reported the project was complete in August 2010, it ceased reporting all project costs to the two oversight entities.

The Department did not have a documented and approved cost methodology to capture all project costs and calculate costs based on accurate information. The Department also did not establish a process to ensure that it reported complete and accurate costs to the Legislative Budget Board and the State's Quality Assurance Team. In addition, the Department did not review or perform reconciliations between its cost tracking tool and its accounting system prior to reporting project costs.

The Legislature appropriated $2.4 million in federal funds to the Department for the development of the ReHabWorks System for the 2006-2007 biennium. According to the Department's own bid in response to its request for offer (RFO), the Department originally estimated that the project would have direct costs of $2.0 million and indirect costs of $0.6 million, and that it would complete the project in August 2007. The Department subsequently increased the project budget and adjusted the time line several times. As discussed in Chapter 1-A, the Department amended its *Biennial Operating Plan*, and it now estimates that project costs will be $18.3 million with an expected completion date of April 2013 (see Appendix 2 for additional information on the project time line and adjusted budget).

The Department underreported project costs.

> ***Biennial Operating Plan* and *Information Technology Detail* Requirements**
>
> Texas Government Code, Section 2054.100(c), states that an agency should, at a minimum, amend its *Biennial Operating Plan* to reflect any significant new or changed information resources initiatives.
>
> The Legislative Budget Board's instructions for the *Information Technology Detail* state that costs for a project should include all information resources internal personnel costs. Costs for end-user personnel advising the project do not have to be included if those personnel do not devote more than half of their time to the project.

The Department did not originally comply with Texas Government Code, Section 2054.100(c), because it did not amend its *Biennial Operating Plan* and *Information Technology Detail* to report (1) the costs of four contractors and (2) indirect costs related to personnel participating in the development of the ReHabWorks System. The Department amended its *Biennial Operating Plan* and *Information Technology Detail* only after the Legislative Budget Board requested on March 7, 2012, that the Department do so (see text box for additional details on reporting requirements).

The Department estimated total project costs of $5.6 million in the *Biennial Operating Plans* and *Information Technology Details* it prepared for the 79th through 81st Legislatures and $0.0 project costs for the 82nd Legislature. However, the cost estimates in those reports included only direct costs. As Table 2 shows, the Department's total project cost according to its cost tracking tool and other project costs not originally identified by the Department indicated $13.2 million more in costs than the Department reported on its *Biennial Operating Plans* and *Information Technology Details*.

Table 2

ReHabWorks System - Comparison of Costs in the Department's Cost Tracking Tool and Costs the Department Reported on Its *Biennial Operating Plans* and *Information Technology Details*

Biennium	Costs in the Department's Cost Tracking Tool			Costs the Department Reported on Its *Biennial Operating Plan* and *Information Technology Detail* [a]	Difference Between Costs in the Department's Cost Tracking Tool and Costs the Department Reported in Its *Biennial Operating Plan* and *Information Technology Detail*
	Direct Costs	Indirect Costs	Total Costs		
2006-2007 (79th Legislature)	$1,436,464	$ 1,355,965 [b]	$ 2,792,429	$ 1,635,440	$ 1,156,989
2008-2009 (80th Legislature)	2,520,751 [c]	4,194,443	6,715,194	2,496,617	4,218,577
2010-2011 (81st Legislature)	3,340,942 [c]	4,594,117	7,935,059	1,472,618 [d]	6,462,441
2012-2013 [e] (82nd Legislature)	581,295	814,822	1,396,117	0	1,396,117
Totals	**$7,879,452**	**$10,959,347**	**$18,838,799**	**$5,604,675**	**$13,234,124**

[a] Amounts in this column are from the *Biennial Operating Plans* that the Department submitted prior to May 2012.

[b] This total includes $102,983 in project cost that the Department reports it incurred in fiscal year 2005.

[c] Direct costs for the 2008-2009 and 2010-2011 biennia included a total of $376,930 for four contractors that the Department did not originally identify as ReHabWorks System project costs.

[d] The Department reported no costs for fiscal year 2011 in its *Biennial Operating Plan* and *Information Technology Detail* because it reported that the ReHabWorks System was completed in August 2010.

[e] Amounts are through March 2012.

Source: Department information.

At the request of the Legislative Budget Board, the Department submitted an amended *Biennial Operating Plan* in May 2012 and it estimated total project costs would be $18.3 million through April 2013. The Department adjusted its cost methodology and asserted that all costs after August 31, 2010, were included in its amended *Biennial Operating Plan*. The Department also asserted that it would include within indirect costs the cost of all employees who spent more than half of their time each month on the ReHabWorks System, which adheres to the Legislative Budget Board's instructions for the *Information Technology Detail*. However, the Department determined that no program or network operations employees spent more than half of their time on the ReHabWorks System project. Therefore, the Department's amended *Biennial Operating Plan* included only costs for the Department's information technology development personnel assigned to the ReHabWorks System project.

Based on its prior cost methodology, the Department recorded expenditures totaling $18.8 million for the ReHabWorks System through March 2012 (see Table 2 above for details). Auditors were not able to determine whether program and network operations employees spent more than half of their time on the ReHabWorks System project because the Department did not establish a system to track the time that those employees spent on the project. According to the Department's RFO, "the respondent shall establish a plan, including written project controls, standards and procedures for all project tasks for which it will be responsible including timekeeping procedures."

Prior to submitting an amended *Biennial Operating Plan* in May 2012, the Department had omitted $376,930 in project direct costs related to contractors.

The Department asserts that it had omitted from its amended *Biennial Operating Plans* dated April 13, 2012, and April 18, 2012, $376,930 related to four contractors who worked on the ReHabWorks System project. Language in job postings and contracts specified that those contractors were dedicated to the ReHabWorks System.

Although the Department asserts that it performed a reconciliation of historical financial information before amending its *Biennial Operating Plan,* it was unable to explain why it omitted those contractors' costs from the April 2012 amended *Biennial Operating Plans* that it prepared. The Department asserts that, after auditors brought this matter to its attention, it included those costs on its amended *Biennial Operating Plan* dated May 23, 2012. The Department used other appropriated federal and General Revenue funds to pay for those four contractors from the following General Appropriation Act strategies:

- $107,633 from vocational rehabilitation – Blind.

- $269,297 from vocational rehabilitation - General.

The Department's cost tracking tool contained significant errors making available cost information for reporting unreliable.

The cost tracking tool the Department used to record, calculate, and report ReHabWorks System costs contained significant errors that made cost information unreliable. The Department did not establish a process to ensure the information that staff manually entered into its cost tracking tool was complete and accurate, nor did it reconcile that information to its accounting system. As a result, project cost information the Department reported to oversight entities was not accurate. The ReHabWorks System performance management plan includes a performance measure related to a project cost comparison against the project budget, and it states that the project cost tracking tool should be reconciled against the Department's accounting system on a monthly and quarterly basis. Furthermore, Control Objectives for Information and Related Technology (COBIT)[2] recommends that costs should be monitored and reported and that deviations should be identified in a timely manner (see text box).

Excerpt from COBIT Information Technology Framework

COBIT Information Technology Framework, Subsection PO5.4, states that "Costs should be monitored and reported. Where there are deviations, these should be identified in a timely manner, the impact of deviations should be assessed, and the program business case should be updated."

Source: The Information Technology Governance Institute.

Errors in contractor direct costs. Auditors selected 12 months from a 6-year time period and compared contractors' timesheets for those months with information in the Department's cost tracking tool and the Department's accounting system. Auditors identified the following:

- The Department did not report $79,935 in contractor costs for September 2009 because it did not record any costs for that month in its cost tracking tool.

- The Department reported other errors in contractor costs with a total absolute value of $26,842. Auditors identified these errors because costs in the Department's cost tracking tool did not match information on source documents (such as timesheets and purchase orders) and information in the Department's accounting system.

Auditors did not identify any overpayments to contractors selected for testing based on available time sheets and accounting information.

Errors in non-contractor direct costs. The Department did not have a process to track and maintain non-contractor direct costs (such as the cost of hardware, software, and training) for the ReHabWorks System. However, the Department maintained a summary of non-contractor direct costs to report to oversight entities.

[2] COBIT, version 4.1, is published by the Information Technology Governance Institute. COBIT is a globally accepted framework for the governance and management of enterprise information technology.

Auditors compared that summary to information in the Department's accounting system and determined that the Department underreported $32,534 in non-contractor direct costs.

Errors in indirect costs. To test indirect costs, auditors selected six months of Department information resources personnel timesheets related to the ReHabWorks System and compared them to the hours the Department recorded in its cost tracking tool (see text box for additional information on indirect costs). The number of errors identified in the cost tracking tools prevented auditors from quantifying the costs associated with the errors identified, however auditors identified the following:

Indirect Costs

The Department originally identified as indirect costs all information resource personnel and subject matter expert salaries and benefits for time spent on the ReHabWorks System.

Information resource personnel include development personnel and network operations personnel. Subject matter experts include Division for Rehabilitation Services and Division for Blind Services personnel who participated in testing the ReHabWorks System during development.

Source: The Department.

- The Department did not include in its cost tracking tool the costs associated with 1,316 hours that information resources personnel worked on the ReHabWorks System.
- The Department used the incorrect number of hours to calculate the cost for subject matter experts and network operations personnel for fiscal years 2010 through March 2012 due to an error in a formula on its cost tracking tool.
- The Department used the incorrect hourly rate for subject matter experts and network operations personnel throughout the ReHabWorks System project due to errors in formulas in its cost tracking tool.

The Department did not have a documented and approved cost methodology.

The Department did not have a documented and approved methodology to record, calculate, and report all costs associated with the development of the ReHabWorks System (see text box for COBIT recommendations in this area). The Department did not have written procedures to review direct and indirect costs and reconcile them with supporting information. As a result, the Department did not reconcile or review cost information prior to reporting costs to oversight entities.

Excerpt from COBIT Information Technology Framework

COBIT Information Technology Framework, Subsection DS-6.2, states that organizations should "Capture and allocate actual costs according to the enterprise cost model. Variances between forecasts and actual costs should be analyzed and reported on, in compliance with the enterprise's financial measurement systems."

Source: The Information Technology Governance Institute.

The Department's calculation of personnel costs per hour did not accurately reflect those costs. At the end of fiscal year 2006, the Department established a cost rate of $34.70 per hour for development personnel, $35.78 per hour for network operations personnel, and $23.22 per hour for subject matter experts; however, it did not update those cost rates throughout the project. In addition, as discussed above, errors in the formulas in its cost tracking tool resulted in the Department incorrectly using a single cost rate of $34.70 per hour for subject matter experts and network operations personnel.

Auditors calculated the cost per hour for each type of Department personnel using actual personnel salary information and determined that:

- Developer costs increased from $32.03 per hour in February 2007 to $35.67 per hour in January 2012.
- Network operations personnel costs increased from $37.82 per hour in February 2007 to $41.38 per hour in January 2012.
- Subject matter expert costs increased from $26.15 per hour in September 2007 to $28.62 per hour in February 2012.

Additionally, the Department's methodology for determining the number of hours that development personnel worked was not always adequate. Starting in January 2010, the Department assumed that full-time hours equated to 160 hours per month (4 weeks per month); however, that assumption was equal to 48 weeks per year, rather than 52 weeks per year.

Recommendations

The Department should:

- Implement a process to ensure that its *Biennial Operating Plan* and *Information Technology Detail* accurately and completely reflect all project costs before submitting those documents to oversight authorities. That process should include the review and approval by an employee who is familiar with the project costs.
- Implement a process to periodically reconcile the cost tracking tool it uses to record, calculate, and report costs related to the ReHabWorks System to source documentation and the Department's accounting system.
- Implement a process to review its cost tracking tool for completeness and accuracy prior to reporting costs to oversight entities.
- Develop, document, and implement a methodology to record, calculate, and report all costs related to the ReHabWorks System.

Management's Response

SAO Recommendation:

The Department should:

- *Implement a process to ensure that its "Biennial Operating Plan" and "Information Technology Detail" accurately and completely reflect all project costs before submitting those documents to oversight authorities.*

That process should include the review and approval by an employee who is familiar with the project costs.

- *Implement a process to periodically reconcile the cost tracking tool it uses to record, calculate, and report costs related to the ReHabWorks System to source documentation and the Department's accounting system.*

- *Implement a process to review its cost tracking tool for completeness and accuracy prior to reporting costs to oversight entities.*

- *Develop, document, and implement a methodology to record, calculate, and report all costs related to the ReHabWorks System.*

***Management Response**: In February 2012, DARS completed an analysis of ReHabWorks project management activities and outcomes, including methodologies for estimating, tracking, and reconciling costs for projects, including major information resource projects as defined in Texas Government Code, Section 2054.003(10).*

Based on the results of this analysis, DARS developed, documented, and will implement the following improvements designed to validate and verify project cost data (monthly) contained in its (a) purchasing contractor tracking workbook, (b) cost tracking workbook, and (c) cost reconciliation workbook, and to submit the Biennial Operating Plan and Information Technology Detail:

- *Project Cost Methodology — Used for estimating, tracking and reconciling project costs. The process includes segregating and verifying project estimates, budgets, and actual costs, and comparing them to project expenditures recorded in DARS' accounting system.*

- *Time Tracking Procedure — Details procedural steps for estimating and tracking project time, including estimating and reporting indirect and direct project costs in accordance with statewide project delivery requirements stipulated or recommended by oversight entities.*

- *Cost Reconciliation Procedure — Details procedural steps for reconciling project costs. It includes related roles and responsibilities of Information Resources and Financial Services staff, and designates responsibility for reviewing and authorizing changes to allocated funds, and approving costs charged to projects, to an Information Resources employee.*

***Estimated Completion Date**:*

July 2012

***Title of Responsible Person**:*

Director of IR Business Operations Services

Director of Accounting

Chapter 2

The ReHabWorks System Development Effort Did Not Have Sufficient Planning, Change Control Monitoring, and Project Documentation

Composition of the ReHabWorks System Leadership Team

- Chief Operating Officer, Chair and Project Sponsor.
- Deputy Commissioner.
- Assistant Commissioner for Division of Rehabilitative Services.
- Assistant Commissioner for the Division for Blind Services.
- Chief Financial Officer (delegated to the Director of Accounting).

Responsibilities of the ReHabWorks System Leadership Team

The ReHabWorks System communication plan stated that "The Leadership Team acts individually and collectively as a vocal and visible project champion throughout their representative organizations; they approve project deliverables, help resolve issues and policy decisions, approve scope changes, and provide direction and guidance to the project."

Excerpt from COBIT Information Technology Framework

COBIT Information Technology Framework, Subsection PO-4.6, states that organizations should "Establish and communicate roles and responsibilities for IT personnel and end users that delineate between IT personnel and end-user authority, responsibilities and accountability for meeting the organization's needs."

COBIT Information Technology Framework, Subsection PO-10.8, states that organizations should "Define the responsibilities, relationships, authorities and performance criteria of project team members, and specify the basis for acquiring and assigning competent staff members and/or contractors to the project."

To govern the ReHabWorks System development effort, the Department established a leadership team composed of executive management representing the key divisions affected by the ReHabWorks System. The leadership team's primary responsibilities were project oversight and approval of project deliverables and scope changes (see text box for the leadership team composition and responsibilities).

COBIT recommends that responsibilities and authorities be defined (see text box for additional details). However, ReHabWorks System project planning documents did not adequately define all responsibilities for key project roles and controls for project activities. The lack of fully documented responsibilities for key roles and deliverables limited the leadership team's ability to effectively monitor project progress and measure stakeholder performance.

The Department acknowledged in its PIRBO for the ReHabWorks System that there were issues during the development process, that it had identified areas for improvement, and that it recommended changes based on what it identified and learned (see Appendix 3, Section 4, Agency and State Lessons Learned, for additional details). The Department specifically identified the fact that staff did not have experience in the system development life cycle (SDLC) methodology. Auditors also determined that some of the key project stakeholders did not have experience in information technology and professional certifications relevant to system development such as Project Management Professional, Certified Software Development Professional, Certified Information Systems Security Professional, and Certified Information Systems Auditor.

Furthermore, key stakeholders—such as the Department's information resources director, the project manager, and internal auditor—were considered "gallery" members of the leadership team and the change control board, which means that they could provide input but could not make decisions. As a result of inexperience in the system development process, the Department did not adequately perform important project activities and did not implement certain controls. Specifically, auditors identified weaknesses in the following project activities:

- System requirements.

- Change control.
- Project documentation.

The Department did not adequately define, track, and accept system requirements.

Excerpts from the Department of Information Resources' *System Development Life Cycle Guide*

System Requirements

"Eliciting and documenting system requirements facilitates a dialogue between the project team and the stakeholders. This dialogue helps the project team to understand what is required of the intended product and reduces the likelihood of there being missing or inaccurate requirements. When requirements are translated into a system design and implemented, the missing and inaccurate requirements may negatively impact the quality of the resulting system. When problems with quality occur, requests to change the system may be initiated and change requests impact cost, schedule, and scope of a project."

"Another important task in documenting system requirements is the initiation of the Requirements Traceability Matrix (RTM). The RTM facilitates backward and forward traceability of all requirements. Use of traceability confirms that all requirements have been accounted for within the entire system development life cycle. Traceability also aids in identifying requirements that are either missing from, or in addition to, the original requirements. It ensures that the product delivered satisfies the agreement between the project team and the stakeholders."

Acceptance Test

The purpose of user acceptance is to "ensure that the completed system performs according to the stakeholders' expectations based on specified requirements before the system becomes operational." This is the last activity performed prior to deployment.

Information technology system development projects generally follow an SDLC methodology as a best practice. The Department of Information Resources' *Texas Project Delivery Framework* includes a *System Development Life Cycle Guide*, which incorporates the processes and order of the SDLC methodology in the development process (see Appendix 7 for additional details). The activity to develop system requirements is one of the first activities in the SDLC. The complete and accurate definition of system requirements is critical to the development of information technology systems (see text box for an explanation of the requirements process and its importance).

Weaknesses in the Department's process to define and track requirements for the ReHabWorks System resulted in project scope changes, budget increases, deployment delays, and extensive overtime for quality assurance staff (see Appendix 2 for a project time line). Because the requirements gathering process was not adequate, the ReHabWorks System requirements were incomplete when the technical development team[3] began developing the system. Furthermore, the Department did not track the status of requirements and did not document user acceptance testing. Acceptance testing is generally one of the last processes in the SDLC methodology (see text box).

The Department reported in its PIRBO for the ReHabWorks System certain lessons learned as a result of weaknesses it encountered throughout the system development process:

- Software requirements were incomplete.
- The initial requirements development did not incorporate sufficient participation by the technical development team.
- The Department did not hold joint requirements design sessions in a timely manner because of the amount of work already performed during requirements validation sessions for bids submitted in response to the

[3] The technical development team included programmers and database administrators.

Department's request for offer. As a result, the technical development team misinterpreted requirements, which resulted in additional system defects that required resolution.

In addition, auditors identified the following weaknesses with the ReHabWorks System requirements process:

- The Department did not include internal audit department staff in project planning and monitoring.
- The Department did not include information technology project management in initial requirements gathering sessions.
- Although the Department developed a requirements traceability matrix, it did not maintain that matrix; it also did not record whether requirements passed testing and whether users accepted the requirements.
- The Department was not able to provide documentation showing that all requirements related to state and federal regulations were incorporated into the ReHabWorks System, and it was not able to confirm that it had tested and approved the functionality related to compliance with those regulations.
- Requirements documentation for the ReHabWorks System did not reflect all approved changes.

Insufficient planning adversely affected the change control process.

Due to a lack of complete software requirements for the ReHabWorks System during the planning phase, the change control process was focused primarily on addressing the project scope. That increased the project budget, expanded the time line, and increased the risk of hardware failure. Although the project plan provided strategies for controlling the change control process (see text box), not all changes approved for programming were critical. Change control information the Department provided to auditors as of April 2, 2012, indicated that 99 percent of ReHabWorks System proposed changes were approved, although they were not all critical changes.

Change Control Strategies in the ReHabWorks System Project Plan

Section 1.3, Assumptions, stated that "Project scope will be limited to combining functionality from the current TWorks and RSS case management applications, plus any additional functionality deemed critical by the DARS Change Control Board and approved by the ReHabWorks Leadership Team and DARS Guiding team."

Section 1.4, Constraints, stated that "System design (is) limited to combining two systems; reconciling differences, fixing features that are broke, etc. System enhancements will be prioritized and considered based upon their impact to the project cost, scope and time."

Section 4.1, Change Control, stated that "The impact to the project time and budget are considered prior to approving each request. Change request approvals are limited to those that provide critical functionality, where no known work around exists."

Insufficient planning affected the change control process, which contributed to two extensions of the project's completion date. Those delays increased the risk of server failure for the Division of Rehabilitation Services' RehabSys case management system (one of the ReHabWorks System's two predecessor systems). In 2005, the servers for RehabSys had reached the end of their expected useful life. The Department communicated concerns regarding possible server failure to the

ReHabWorks System leadership team in early 2006 and again in August 2010. Server failures in Fall 2010 (1) brought RehabSys down on several occasions for days at a time and (2) caused the Department to adjust the ReHabWorks System deployment strategy to focus on a version of ReHabWorks only for the Division for Rehabilitation Services. After multiple extensions, the Department's vendor for the servers supporting RehabSys set a fixed and firm expiration date of January 31, 2011, in its maintenance contract.

The Department's change control charter states that the change control process required a three-level review of each change request performed by subject matter experts, a change control board, and the leadership team. The change control process also included an assessment performed by information resources staff to estimate the cost and time impact to the ReHabWorks System development project associated with each change request. Prior to January 2011, information resources staff performed and documented those assessments for most of the change requests before the change requests were presented to the leadership team for final approval. The Department officially modified its process in January 2011, and the cost and time assessment became an informal estimate. That allowed the Department to begin scheduling change requests for programming without obtaining leadership team approval if a change request was estimated to cost less than $100,000 and take no longer than two months. As of April 2, 2012, the Department reported that 57 change requests had been scheduled for programming without first obtaining leadership team approval. That process may prevent the leadership team from tracking the cumulative effect on the project because, although an individual change request may have the appearance that it can be managed with available resources, in the aggregate, multiple change requests can significantly affect the project's scope, time, and budget.

Auditors reviewed change request information[4] as of April 2, 2012, and identified the following:

- A total of 203 (99 percent) of the 205 change requests submitted for approval were approved by the leadership team, change control board, or the application development director.

- A total of 86 (42 percent) of the 203 approved change requests were not prioritized as critical or severe, and either a work around existed for those 86 change requests or the identified problem did not affect functionality.

- A total of 7 (3 percent) of the 203 approved change requests were placed into production before the Department fully tested those changes.

[4] The change request data was incomplete and inaccurate; therefore, auditors concluded that it was not sufficiently reliable to ensure that management could make informed decisions based on that information.

Auditors also identified significant errors and inconsistencies in the change control portal information that the Department provided. The Department reported that some of those inconsistencies were the result of the loss of data in its change control portal. Auditors worked with the Department to reconcile and correct some of the inconsistencies that auditors identified prior to detailed analysis of the data. The Department asserts that it has continued to review and update its change control portal data to ensure that the data is complete and accurate.

The Department did not adequately maintain project documentation.

Testing documentation. The Department asserts it conducted multiple levels of testing for the ReHabWorks System, including pre-user acceptance testing, ad hoc testing, database conversion testing, and user acceptance testing. Auditors analyzed project documents related to testing activities and identified the following:

- The Department did not update testing activities schedules in the project plan to reflect major changes in scope and strategy.

- The Department did not sufficiently document testing results. The Department asserts that prior to November 2011, it documented only defects; therefore, auditors were not able to determine whether the Department successfully tested each requirement.

- The Department did not document user acceptance testing prior to deploying the ReHabWorks System in the Division for Rehabilitation Services in February 2011. The business requirements team had primary responsibility for performing final user acceptance testing according to the performance management plan. That plan also stated that the final user acceptance testing plan would be finalized in November 1, 2008. However, that document was not updated.

Training documentation. Auditors were unable to verify whether the Department achieved its objective to "Ensure all users are trained on [the] new system." The Department provided training to end users and developed training materials, such as an on-line user guide, periodic release notes, and a training manual for staff who attended training. However, end user training documentation was insufficient. Specifically:

- Both the Division for Rehabilitation Services and the Division for Blind Services declined to have supervisors sign off on whether all end users had received training as the project plan required.

- The Department did not maintain training records for all staff.

- The training records that the Department did maintain existed in separate databases that were no longer in service, and auditors were not able to verify existing controls.[5]

Approval documentation. The Department of Information Resources' *Texas Project Delivery Framework* requires agencies' executive management to approve specific documents at certain phases of an information technology project. Agencies also must submit some of the documents to the State's Quality Assurance Team, and they must maintain other documents.

The Department completed most of the required documents. However, only one of the four documents that executive management was required to approve and that the Department submitted to the State's Quality Assurance Team—the Department's PIRBO—contained signatures documenting approval. [6]

Other supporting documentation. The Department did not retain other supporting documentation related to the ReHabWorks System. Specifically, the Department did not retain:

- Supporting documents for some project costs, such as hardware costs and full-time employee hours worked prior to February 2007.

- Documentation specifying which individuals were involved in determining the project's business requirements and how those requirements were determined.

- Request for offer documents and corresponding responses related to phase 1 of the ReHabWorks System development project (the Department later located those documents at the Health and Human Services Commission).

The Department developed adequate technical documentation for the stage in which the ReHabWorks System development project existed during this audit. For example, it provided auditors with technical documentation procedures that included diagrams of the ReHabWorks System database and servers. The Department also had documented procedures for promoting changes to the ReHabWorks System.

[5] The Department's training data was incomplete and auditors were not able to verify that controls existed for the historical data. Therefore, the data was considered not sufficiently reliable to ensure that management could make informed decisions based on that data.

[6] The *Texas Project Delivery Framework* requires an agency to submit the following documents: a *Business Case, a Statewide Impact Analysis*, a *Project Plan*, and a PIRBO.

Recommendations

The Department should:

- Ensure that the individuals assigned to develop and deploy current and future information technology projects possess expertise required to successfully complete those projects, including following the Department of Information Resources *Texas Project Delivery Framework* and Quality Assurance Team guidelines.
- Identify system requirements and ensure that key stakeholders participate at the inception of projects and develop project plans to minimize the need for refining and adding new requirements.
- Enforce controls over priorities, scheduling, and deliverables during planning to help ensure that it completes information technology projects within budget and on time.
- Effectively monitor the change management process to mitigate the risk that information technology projects exceed budgets and time lines.
- Maintain adequate project documentation for training, specific approvals, and other supporting documentation.
- Document all testing results and final user acceptance and approval of the ReHabWorks System and future systems.

Management's Response

SAO Recommendation:

The Department should ensure that the individuals assigned to develop and deploy current and future information technology projects possess expertise required to successfully complete those projects, including following the Department of Information Resources "Texas Project Delivery Framework" and Quality Assurance Team guidelines.

***Management Response**: DARS seeks to leverage staff with the necessary skills, knowledge, and abilities to meet business and technology needs. To ensure individuals assigned to deliver technology projects possess the necessary expertise, DARS compares the identified business needs and gaps to potential project roles based on job descriptions and contractor statements of work.*

Consistent with this objective, the Information Resources Division recently added individuals in key decision-making roles that possess expertise,

business acumen, and experience with project management, systems development, and statewide project delivery requirements, such as the Texas Project Delivery Framework and Texas Administrative Code, Chapter 216. Within the past seven months DARS hired a Director of IR Business Operations, a Director of Application Development and Support, and a Project Manager. The individuals serving in these positions possess relevant certifications, operational experience, and extensive knowledge of related disciplines.

***Estimated Completion Date**:*

Implemented

***Title of Responsible Person**:*

Director of Information Resources

SAO Recommendation:

The Department should identify system requirements and ensure that key stake holders participate at the inception of projects and develop project plans to minimize the need for refining and adding new requirements.

***Management Response**: DARS will perform an analysis of its systems development methodologies to identify process gaps and opportunities for solutions that can be implemented for the remainder of the ReHabWorks project life cycle and future projects. The analysis should result in (a) improved methods for establishing a baseline set of requirements and (b) identification of interdependencies with application change management processes, and minimize instances in which system requirements are subsequently changed. DARS will ensure all project management and technical staff (programmers, database administrators, and quality assurance personnel) review the Texas Project Delivery Framework System Development Life Cycle Extension and industry best practices to enhance the ability to adequately manage requirements.*

DARS will ensure key stakeholders participate in the establishment of a new project baseline that will be described in upcoming approved revisions to the Business Case, Project Plan, and other related project deliverables.

***Estimated Completion Date**:*

August 2012 — Review of Texas Project Delivery Framework System Development Life Cycle Extension completed by ReHabWorks project management and technical staff.

January 2013 — Applicable processes documented within system development methodologies and established for future projects.

***Title of Responsible Person**:*

Director of Application Development and Support

SAO Recommendation:

The Department should enforce controls over priorities, scheduling, and deliverables during planning to help ensure that it completes information technology projects within budget and on time.

***Management Response**: In February, 2012, DARS completed an analysis of ReHabWorks project management activities and outcomes, including methodologies for controlling the planned schedule, budget, and scope. As part of this effort, DARS plans to develop, document, publish, and implement a formal prioritization methodology for application changes to establish controls over priorities, scheduling, and deliverables during planning for the remainder of the ReHabWorks project life cycle and for future projects.*

Concurrent with the establishment of a new project baseline, DARS will ensure subject matter experts, change control board members, and leadership team members review proposed changes that could impact project scope. Sufficient information will be provided to help ensure the potential impact of each alternative on the project scope, schedule, and budget are considered, and to appropriately balance project needs with available technical resources.

***Estimated Completion Date**:*

August 2013

***Title of Responsible Person**:*

Director of IR Business Operations Services

SAO Recommendation:

The Department should effectively monitor the change management process to mitigate the risk that information technology projects exceed budgets and time lines.

***Management Response**: DARS recognizes that establishing management controls over application changes is an important component of overall project management. To improve application change management, DARS plans to analyze the Applications Change Control Board purpose, composition, authority, and responsibility to enhance monitoring and control of change management.*

DARS will develop, document, and implement formal application change management policies and procedures to mitigate the risk that information technology projects exceed budgets and timelines. The policies and procedures will address clear definitions of roles, responsibilities, and terminology to improve communications throughout the change control process. DARS will also analyze the existing Application Change Management database and tools to improve the quality of the data and enhance the ability to use the data to monitor the change management process. Finally, DARS will develop training for existing and new board members, subject matter experts, technical staff, and others involved in the change management process.

***Estimated Completion Date**:*

August 2013

***Title of Responsible Person**:*

Director of IR Business Operations Services

SAO Recommendation:

The Department should maintain adequate project documentation for training, specific approvals, and other supporting documentation.

***Management Response**: In addition to the training documentation described in the audit report, DARS provided reports from HHS PeopleSoft that listed all staff from both the Division for Rehabilitation Services and the Division for Blind Services that completed ReHabWorks training in 2009. The Division for Rehabilitation Services also conducted refresher training by webinar prior to the rollout of ReHabWorks in February 2011. DARS acknowledges that it did not maintain all supporting documentation for the classroom training in 2009 and for the subsequent webinars.*

DARS established the Center for Learning Management in 2010 by merging training staff from three divisions, including the Division for Rehabilitation Services and the Division for Blind Services, into one integrated center for staff training and development. Center for Learning Management staff will review current procedures and systems for training documentation and approvals in an effort to ensure adequate supporting documentation is maintained and appropriate controls are in place for both instructor-led and computer-based courses. The Center for Learning Management will make necessary revisions to its processes and implement them consistently for all applicable courses.

***Estimated Completion Date**:*

September 2012

***Title of Responsible Person**:*

Director, Center for Learning Management

SAO Recommendation:

The Department should document all testing results and final user acceptance and approval of the ReHabWorks System and future systems.

***Management Response**: In 2011, DARS began expanding use of the Quality Center tool to record and control testing results, and automated test scripts are now consistently used. DARS plans to perform an analysis of its testing methodologies to identify gaps and opportunities for solutions that can be implemented for the remainder of the project life cycle, specifically assessing methods for recording whether requirements passed testing and users completed formal acceptance testing.*

Concurrent with the establishment of a new project baseline, DARS will ensure all project management and technical staff (programmers, database administrators, and quality assurance personnel) review the Texas Project Delivery Framework System Development Life Cycle Extension and industry best practices to enhance their ability to fully manage testing in relation to requirements for the remainder of the life cycle and future projects. DARS will ensure users formally accept the system before deploying it to the production environment, and will use the Texas Project Delivery Framework Acceptance to Deploy tool.

***Estimated Completion Date**:*

March 2013

***Title of Responsible Person**:*

Director of Application Development and Support

Chapter 3

The Department Should Strengthen General Controls Surrounding the ReHabWorks System

Summary of Information Security Standards

- Title1, Texas Administrative Code, Chapter 202, specifies security standards for all state agencies.
- The Department's information resources policies and procedures specify standards for all authorized users (including contractors and Department staff) of the Department's information resources.
- COBIT outlines a framework for information technology that defines processes for managing information technology.

The Department has implemented certain information technology controls surrounding the ReHabWorks System. For example, the Department has implemented effective password controls for the ReHabWorks System, and it appropriately limits privileged accounts on the ReHabWorks System servers. The Department also has adequate controls to monitor daily operations.

However, the Department should implement certain controls to help ensure that it adequately protects confidential information and critical equipment for the ReHabWorks System. This is particularly important because the ReHabWorks System includes protected client health and educational data. Auditors identified the following weaknesses in information technology controls:

- The Department inconsistently applies or does not have certain controls over user access.
- There are weaknesses in physical security and environmental controls over the Department's data center.
- Weaknesses in the Department's disaster recovery planning could impair its ability to recover from an interruption in service.
- The Department does not perform periodic reconciliations to verify that data it uses to produce reports is complete and accurate.
- The Department's change management procedures do not incorporate certain best practices.

The Department does not periodically review user access.

Title 1, Texas Administrative Code, Section 202.25, requires agencies to modify or remove user access when users' employment or job responsibilities within agencies change. In addition, the Department's policy requires that user access be deactivated no later than an employee's last physical day of duty. However, the Department does not have a policy requiring the periodic review of user accounts and does not perform such reviews for the ReHabWorks System. Periodically reviewing user access is important in identifying possible unauthorized access. Not performing such reviews increases the risk of unauthorized access to the ReHabWorks System.

Auditors identified the following:

- The Department could not verify whether 200 (6 percent) of 3,455 active ReHabWorks System user accounts were associated with current employees or contractors.
- The Department does not track contractors associated with the ReHabWorks System and could not provide auditors with a list of all current contractors.

The Department has assigned ReHabWorks System administrative user accounts to users who do not require that level of access.

Administrative Accounts

Administrative accounts should be assigned to the system administrator(s) who is responsible for managing an application. Administrative accounts have the highest privileges on an application.

Assigning unnecessary administrative user accounts increases the risk of unauthorized access to the ReHabWorks System. Administrative accounts generally provide users with widespread capabilities to extensively modify data, applications, and establish other user accounts (see text box).

Auditors identified 40 users with administrative access to the ReHabWorks System. Of those 40 users, 20 (50 percent) had access to all ReHabWorks System functions; the remaining 20 users could establish and remove user accounts. The Department confirmed that it has not reviewed its use of administrative accounts and does not have policies or procedures for periodically reviewing administrative access.

Examples of the identified users with administrative access included 9 programmers, 2 information resources directors, 16 systems analysts, 4 database administrators, and the ReHabWorks System project manager. Providing members of management, developers, and programmers with unrestricted access to an application makes it difficult to ensure segregation of duties, which increases the risk that an individual could modify or delete information and then delete any record of that action.

The database administrators also have direct access to the ReHabWorks System servers. That increases the risk that inappropriate or fraudulent transactions could be processed. To ensure that it can adequately track changes to the ReHabWorks System and hold users accountable for those changes, the Department should not permit the same individual to make changes directly to the database and also make changes through the ReHabWorks System.

There are weaknesses in physical security controls for the Department's data center.

The Department's process for reviewing physical access to its data center, where the ReHabWorks System equipment resides, is not effective, and

improvements are necessary to help ensure that the Department protects its information technology assets.

Although the Department relies on the Texas Facilities Commission to add and remove individuals' physical access to the data center, responsibility for that function is shared among the Department, the Health and Human Services Commission, and the Texas Facilities Commission. However, there is no formal agreement that specifies each agency's responsibilities.

Auditors identified the following weaknesses:

- The process for requesting physical access to the data center is informal, and the Department does not document requests for access.
- The Department does not review the information in the access card system to verify that it is accurate.
- Thirty security cardholders for the Department's data center no longer required access. Auditors determined the following:
  - Twenty (67 percent) of the 30 cardholders were former employees (11 were former Department employees, 4 were former employees of other state agencies, and 5 were contractors).
  - Five (17 percent) of the 30 cardholders were either current contractors or state employees.
  - Five (17 percent) of the 30 cardholders could not be identified by the Department or associated with an agency or contractor.

In addition, 7 (23 percent) of the 30 cardholders discussed above had used their security cards to gain access to the data center since September 2011 (the Texas Facilities Commission asserts that this is the first month for which access activity information was available).

There are weaknesses in environmental controls for the Department's data center.

The Department risks losing equipment and data in the event of a natural disaster or other threat because its data center does not have adequate protection against environmental dangers. At the time of the auditors' visit to the data center, the Department had not yet corrected environmental control deficiencies the State Fire Marshal reported in August 2011. Those deficiencies included the following:

- A handheld fire extinguisher had an expired inspection tag.
- The fire suppression system was "red tagged" on July 5, 2011 (see text box).

Red Tag

According to Title 28, Texas Administrative Code, Section 34.521, a completed red tag must be attached to a portable extinguisher or fixed system determined to be unsafe or inoperable. A red tag indicates that corrective action or replacement is necessary.

- A portable halon fire extinguisher located in a data center storage room did not have a service tag.

Auditors also observed that the Department stored paper boxes in the data center, which increased the risk of fire and could make a fire harder to control.

Weaknesses in disaster recovery planning could impair the Department's ability to recover from an interruption in services.

Contractual Requirement for Disaster Recovery Plans

The contract between the Department of Information Resources and the State Data Center vendor requires that all systems with a disaster recovery plan be tested annually by the State Data Center vendor and the agency.

It is the responsibility of the State Data Center vendor to maintain disaster recovery plans and server runbooks for participating agencies. A server runbook contains detailed technical information necessary for the recovery of the server in the event of a failure. Participating agencies have a joint responsibility with the vendor to ensure that these documents are accurate and current.

Title 1, Texas Administrative Code, Section 202.24(a)(4)

Disaster Recovery Plan—each state agency shall maintain a written disaster recovery plan for major or catastrophic events that deny access to information resources for an extended period. Information learned from tests conducted since the plan was last updated will be used in updating the disaster recovery plan. The disaster recovery plan will:

(A) Contain measures which address the impact and magnitude of loss or harm that will result from an interruption;

(B) Identify recovery resources and a source for each;

(C) Contain step-by-step implementation instructions;

(D) Include provisions for annual testing.

The Department has documented its disaster recovery plan for information resources. It also stores backup media containing critical data (including data from the ReHabWorks System) off site in a secure, environmentally safe, locked facility. However, the Department has not tested its disaster recovery plan recently enough to determine whether it would be able to maintain or quickly resume mission-critical functions. It last tested its disaster recovery plan in September 2010. The state data center vendor and the Department have joint responsibility for disaster recovery planning and testing (see text box for additional details). Title 1, Texas Administrative Code, Chapter 202, requires that disaster recovery plans be tested annually (see text box for additional details).

In addition, documentation contained in the ReHabWorks System server runbooks is incomplete and inaccurate. This could further impede the Department's efforts to recover from a disaster. Having procedures outlined in runbooks would enable administrators to effectively manage and troubleshoot the system in an emergency.

The Department does not perform periodic reconciliations to verify that data used for ReHabWorks System reports is complete and accurate.

The Department uses a data warehouse to create ReHabWorks System reports that it runs regularly. The Department updates the data warehouse each night based on extracts from the production database. However, the Department does not reconcile data in the data warehouse to production data to verify that its reports are accurate.

Not performing such reconciliations creates the risk that the Department may not implement adequate corrective action when data extracts do not process correctly. Auditors observed, however, that the Department has processes to monitor automated routines that update the data warehouse and make corrections when those routines do not process correctly. However, the Department has not documented those processes.

Change management policies and procedures do not incorporate certain best practices.

The Department's change management policies and procedures do not incorporate certain recommended best practices in COBIT. Specifically, the Department's change control policies and procedures do not:

- Specify how the Department will keep change requestors informed about the status of their requests.
- Specify how the Department will assess proposed changes to determine their effect on system availability; system security; and integrity objectives, policies, and standards.
- Require the Department to develop back-out plans prior to the implementation of changes.
- Define the various change categories such as "enhancement" and "critical change."
- Include a detailed and accurate description of the process the Department will use to review and approve a change request, including procedures to manage emergency change requests.

In addition, while the Department has documented test procedures, those procedures:

- Do not include a requirement to test changes before implementing them.
- Do not specify the environment (for example, a development environment or test environment) in which the Department will develop and test changes.

Recommendations

The Department should:

- Develop, document, and implement policies and procedures to (1) immediately notify account administrators when the employment of employees and contractors is terminated and (2) require account administrators to deactivate those individuals' ReHabWorks System access in a timely manner.
- Perform a comprehensive review of the levels of access that users have to the ReHabWorks System and restrict users' levels of access to the levels required to perform their duties.

- Regularly review and appropriately manage employees', contractors', and vendors' access to the ReHabWorks System.
- Establish procedures and assign responsibility for periodically reviewing the appropriateness of all individuals' physical access to its data center.
- Train designated employees to monitor environmental control procedures and equipment in its data center, and train them on how to respond to environmental problems.
- Work with the Texas Facilities Commission and the Health and Human Services Commission to formally specify responsibilities for controls over its data center.
- Ensure that technical documentation for the ReHabWorks System servers is complete and that it tests its disaster recovery plan annually in accordance with Texas Administrative Code requirements.
- Document and implement policies and procedures requiring periodic reconciliation of the data warehouse to production data for the ReHabWorks System, and document its procedures for monitoring automated routines.
- Fully develop, document, and implement policies and procedures that accurately reflect the Department's change control process. The Department also should consider incorporating best practices in its change management policies and procedures.
- Comply with Title 1, Texas Administrative Code, Chapter 202, which establishes information security standards for state agencies.

Management's Response

SAO Recommendation:

The Department should develop, document, and implement policies and procedures to (1) immediately notify account administrators when the employment of employees and contractors is terminated and (2) require account administrators to deactivate those individuals' ReHabWorks System access in a timely manner.

***Management Response**: DARS implemented provisioning and de-provisioning processes designed to timely provide account credentials and access permissions based upon a user's functional role. Requests for new accounts and terminations are reviewed regularly (daily for DARS employees and monthly for contractors, temporary staff, and interns), and accounts are provisioned/de-provisioned following standard DARS policies and*

procedures. As part of this process, DARS notifies account administrators when employees and contractors are terminated, and account administrators, immediately upon notification, deactivate ReHabWorks System access for terminated individuals.

***Estimated Completion Date**:*

Implemented

***Title of Responsible Person**:*

Information Security Officer

SAO Recommendation:

The Department should perform a comprehensive review of the levels of access that users have to the ReHabWorks System and restrict users' levels of access to the levels required to perform their duties.

***Management Response**: DARS will perform a re-certification of user access levels in the ReHabWorks System and ensure each user's access level does not exceed what is functionally required to perform assigned duties.*

***Estimated Completion Date**:*

November 2012

***Title of Responsible Person**:*

Information Security Officer

SAO Recommendation:

The Department should regularly review and appropriately manage employees', contractors', and vendors' access to the ReHabWorks System.

***Management Response**: Upon completion of an access re-certification review, DARS will complete revision and documentation of the current provisioning process. The revised process will be implemented to manage day-to-day provisioning/de-provisioning activities, as well as to facilitate routine re-certifications for user access within ReHabWorks. The frequency of access re-certification will be established based on the impact to business practices.*

***Estimated Completion Date**:*

November 2012

***Title of Responsible Person**:*

Information Security Officer

SAO Recommendation:

The Department should establish procedures and assign responsibility for periodically reviewing the appropriateness of all individuals' physical access to its data center.

***Management Response**: DARS will review current processes for obtaining physical access to its data center and formally assign responsibility for performing regular reviews of physical access. In addition, DARS will partner with the Texas Facilities Commission and Health and Human Services Commission Facilities Management to formally specify the respective roles and responsibilities of each entity and to increase awareness of controls over the DARS data center in the Brown-Heatly building.*

***Estimated Completion Date**:*

December 2012

***Title of Responsible Person**:*

Director of IR Operations

SAO Recommendation:

The Department should train designated employees to monitor environmental control procedures and equipment in its data center, and train them on how to respond to environmental problems.

***Management Response**: Key DARS Operations staff are now trained on the use of environmental monitors and equipment in the DARS data center and how to respond in the event of an emergency. DARS Operations plans to track attendance and retain documentation to indicate who has completed the training.*

DARS Operations staff also have access to instructions on the use of the Supervisory Control And Data Acquisition system, the system that monitors environmental conditions as well as the status of emergency systems, including the backup generator and fire suppression systems.

Each person who has a business need to access the DARS data center in the Brown-Heatly building is provided with a handout documenting emergency procedures for the data center. In addition, to ensure readily available access to emergency phone numbers, Emergency Phone Contact lists are posted throughout the DARS data center.

***Estimated Completion Date**:*

August 2012

***Title of Responsible Person**:*

Director of IR Operations

SAO Recommendation:

The Department should work with the Texas Facilities Commission and the Health and Human Services Commission to formally specify responsibilities for controls over its data center.

***Management Response**: DARS is actively engaged with Health and Human Services Commission Facilities Management and Texas Facilities Commission staff to formalize responsibilities for the DARS data center in the form of an amendment to an existing Inter-Agency Contract. DARS plans to amend and execute the Inter-Agency Contract before the end of this calendar year.*

***Estimated Completion Date**:*

December 2012

***Title of Responsible Person**:*

Director of IR Operations

SAO Recommendation:

The Department should ensure that technical documentation for the ReHabWorks System servers is complete and that it tests its disaster recovery plan annually in accordance with Texas Administrative Code requirements.

***Management Response**: DARS formally requested that the previous Data Center Services provider test the DARS disaster recovery plan. This request was submitted via a Remedy request on September 14, 2010 (Remedy ticket #387704), but the provider did not test the disaster recovery plan as requested.*

The current Data Center Services contract requires the new provider to update disaster recovery plans (with scheduled testing at least annually) and obtain DARS approval by the end of this calendar year.

DARS also requested revisions and updates to technical documentation from the previous Data Center Services provider. This request was submitted via a Remedy request on September 9, 2011 (Remedy ticket # 551046), but the provider did not update the documentation as requested.

The current Data Center Services contract requires the new provider to update technical documentation, including revised, accurate runbooks, for all DARS servers by the end of calendar year 2012.

DARS is actively monitoring the new Data Center Services provider's progress in creating or updating disaster recovery plans and technical documentation on all DARS systems.

***Estimated Completion Date**:*

December 2012

***Title of Responsible Person**:*

Director of IR Operations

SAO Recommendation:

The Department should document and implement policies and procedures requiring periodic reconciliation of the data warehouse to production data for the ReHabWorks System, and document its procedures for monitoring automated routines.

***Management Response**: During development and conversion of the ReHabSys database and data warehouse, various methods were used to ensure end-of-day processes and interfaces that build and maintain the data warehouse were accurately cloning, extracting, and updating the tables in the data warehouse to match the associated data in the production database, following business rules established for that purpose. DARS will develop, document, and implement formal policies and procedures to apply these same methods on a periodic schedule to verify that the data in the data warehouse is accurate and complete.*

The output of these methods will be reconciliation reports of on-line 'master data' (key statistical information, such as the total number of cases, total number of service records, and purchase orders) and 'transactional data' (cases in specific phases, the sum of encumbrances, sum of expenditures, and other key data elements), compared to the equivalent data in the warehouse.

These reconciliation reports will be scheduled on a regular basis. Documentation for monitoring automated routines has been completed and added to standard operating procedures documentation.

***Estimated Completion Date**:*

July 2013

***Title of Responsible Person**:*

Director of Applications Development and Support

SAO Recommendation:

The Department should fully develop, document, and implement policies and procedures that accurately reflect the Department's change control process. The Department also should consider incorporating best practices in its change management policies and procedures.

***Management Response**: DARS previously contracted with Gartner Inc. to complete a comprehensive formal assessment of DARS' Information Resources processes as compared to industry standards and best practices. The assessment focused on areas such as data/network security, governance, change and service management, technology planning, and systems availability.*

In response to the Gartner recommendations and as a first step toward improvement, in December 2011 DARS initiated plans to implement formal best practices from Information Technology Infrastructure Library standards.

Some of DARS' change management processes are well documented and others are conducted informally using historical information. DARS applies documented practices for changes such as server side management through Data Center Services by the Texas Department of Information Resources, pre-approved and planned maintenance windows schedules, applications promotion processes, and application management.

DARS continues to define, document, and enhance repeatable practices for changes such as user requests, logical database, and support. The Information Resources Division ensured 100 percent of the Help Desk staff, for example, completed Information Technology Infrastructure Library V3 Lite training.

Information Resources will plan and prioritize how to fully develop, document, and implement comprehensive policies and procedures for change control processes, including assessment of critical metrics.

***Estimated Completion Date**:*

September 2013

***Title of Responsible Person**:*

Director of Information Resources

SAO Recommendation:

The Department should comply with Title I, Texas Administrative Code, Chapter 202, which establishes information security standards for state agencies.

***Management Response**: Per the DARS annual risk assessment process, the Information Resources Manager and Information Security Officer will review DARS' compliance with Texas Administrative Code, Chapter 202, which establishes information security standards for state agencies, and take appropriate action, when required.*

***Estimated Completion Date**:*

December 2012

***Title of Responsible Person**:*

Information Security Officer

Appendices

Appendix 1

Objectives, Scope, and Methodology

Objectives

The objectives of this audit were to determine:

- Whether the Department of Assistive and Rehabilitative Services (Department) has developed and implemented the ReHabWorks System in a manner to help ensure achievement of intended goals within anticipated time frames and budgets.

- Whether there are controls in the ReHabWorks System to help ensure current and future functionality, completeness, and security for the Division for Rehabilitation Services and the Division for Blind Services.

Scope

The scope of this audit included activities related to the development and management of the ReHabWorks System from May 2005 through March 31, 2012.

Methodology

The audit methodology included collecting and reviewing information from the Department; conducting interviews with Department management, staff, and contractors involved in the ReHabWorks System; reviewing Department policies and applicable state and federal security requirements; reviewing and analyzing the Department's processes related to developing and managing the ReHabWorks System; reviewing the Department's management of the change control process; reviewing and analyzing the Department's processes related to recording, calculating, and reporting costs related to the ReHabWorks System; reviewing the Department's accounting information for costs related to the ReHabWorks System; reviewing information from the Uniform Statewide Payroll/Personnel System for selected Department employees; reviewing the Department's processes for training staff related to the ReHabWorks System; and reviewing and analyzing general controls in place related to the ReHabWorks System.

Auditors assessed the reliability of the Department's accounting system data and determined that the data was sufficiently reliable for the purposes of this audit. Auditors also reviewed data from the following databases or tools used to track information related to the ReHabWorks System and determined that

information in those systems was not complete, accurate, and sufficiently reliable for the purposes of this audit:

- The change control portal the Department used to document the priority, description, and status of change requests and related decisions related to the ReHabWorks System.
- The cost tracking tool the Department used to record, calculate, and report costs related to the ReHabWorks System.
- The employee training system the Department used to track training provided to ReHabWorks System end-users.

Information collected and reviewed included the following:

- Policies and procedures related to the ReHabWorks System.
- ReHabWorks System project documentation, including the request for offer, business case, project plan, communication management plan, performance management plan, and test plan.
- The *Information Technology Details* and *Business Operation Plans* for the 79th through the 82nd Legislatures that the Department submitted to the Legislative Budget Board.
- Quarterly monitoring reports and the *Post-implementation Review of Business Outcomes* that the Department submitted to the State's Quality Assurance Team.
- The cost tracking tool that the Department used to record, calculate, and report ReHabWorks System costs to the State's Quality Assurance Team.
- Cost information related to the ReHabWorks System from the Department's accounting system.
- Uniform Statewide Payroll/Personnel System information for selected Department employees.
- User access data from the ReHabWorks System.
- User access information for the Department's data center.
- Department ReHabWorks System leadership team meeting minutes.
- Department change management procedures.
- Documentation related to developing and testing the ReHabWorks System.

- Technical reference documents related to the ReHabWorks System.
- Training materials related to the ReHabWorks System.
- User manuals related to the ReHabWorks System.
- Data center inventory of databases from the Department of Information Resources.

Procedures, analysis, and tests conducted included the following:

- Interviewed key Department staff and contractors working on the ReHabWorks System.
- Tested ReHabWorks System costs that the Department reported to the Legislative Budget Board and the State's Quality Assurance Team for completeness and accuracy.
- Tested general controls over the Department's information technology environment.
- Reviewed change control portal data to identify functionality not yet present in the ReHabWorks System as of August 31, 2010.
- Analyzed project information to determine whether the Department:
  - Accurately reported the status of the ReHabWorks System to the State's Quality Assurance Team.
  - Followed Quality Assurance Team reporting guidelines related to major information resources projects.
  - Followed system development life cycle industry standards for the ReHabWorks System.
  - Selected sustainable system technology architecture for the ReHabWorks System.
  - Provided scheduled ReHabWorks System training to program staff.
  - Clearly identified staff roles and responsibilities for the ReHabWorks System.
  - Conducted adequate business gathering requirements for the ReHabWorks System.
  - Adequately tested the ReHabWorks System prior to implementing it.

- Staffed the ReHabWorks System development team with individuals knowledgeable in system development.
- Followed policies and procedures related to information technology project management in developing the ReHabWorks System.

Criteria used included the following

- Quality Assurance Team guidelines and *Information Technology Detail* instructions.
- Department of Information Resources' *Texas Project Delivery Framework.*
- The Department's request for offer for the ReHabWorks System.
- The ReHabWorks System business case, project plan, communication management plan, performance management plan, and test plan.
- The Department's *Post-implementation Review of Business Outcomes*.
- The Information Technology Governance Institute's Control Objectives for Information and Related Technology (COBIT), Version 4.1.
- Texas Government Code, Chapter 2054.
- Title 1, Texas Administrative Code, Chapter 202.
- The Health Insurance Portability and Accountability Act.

Project Information

Audit fieldwork was conducted from April 2012 through May 2012. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following members of the State Auditor's staff performed the audit:

- Cyndie Holmes, CISA (Project Manager)
- Ileana Barboza, MBA, CGAP (Assistant Project Manager)
- Kathy Aven, CIA
- Arby J. Gonzales, CFE

- Joseph Kozak, CPA, CISA
- Marlen Kraemer, MBA, CGAP, CISA
- Joseph K. Mungai, CIA, CISA
- Dana Musgrave, MBA (Quality Control Reviewer)
- Nicole M. Guerrero, MBA, CIA, CGAP (Audit Manager)

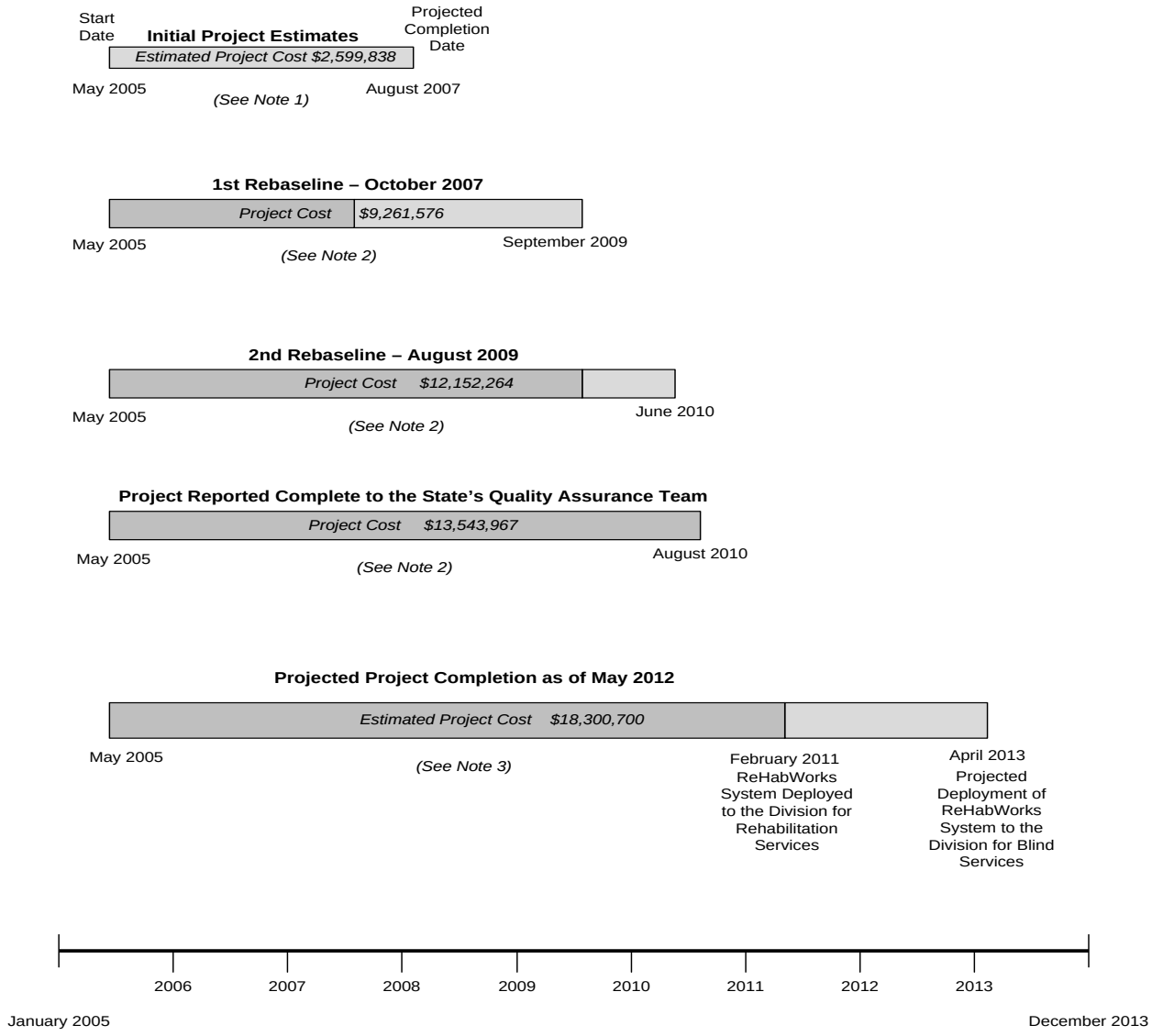
Appendix 2

Time Line of ReHabWorks System Events

Figure 1 presents a time line of events in the Department of Assistive and Rehabilitative Services' (Department) development of the ReHabWorks System.

Figure 1

ReHabWorks System Project Time Line and Budget



Note 1: The project cost is the amount the Department bid in its request for offer, which included $2,002,961 for direct costs and $596,877 for indirect costs.

Note 2: The project cost is the cost that the Department reported in its quarterly monitoring reports to the State's Quality Assurance Team.

Note 3: The estimated project cost is from the Department's *Biennial Operating Plan* dated May 23, 2012.

Source: Developed by auditors using Department information.

Appendix 3

The Department's Post-implementation Review of Business Outcomes

Texas Government Code, Section 2054.306, states that after implementation of a major information resources project, a state agency shall prepare a post-implementation review. Texas Government Code, Section 2054.1182(a), further states that a state agency shall complete that evaluation and report to the State's Quality Assurance Team on whether the project met the agency's objectives or other expectations.

The Department of Assistive and Rehabilitative Services (Department) prepared its *Post-implementation Review of Business Outcomes* for the ReHabWorks System, dated February 28, 2011, and submitted it to the State's Quality Assurance Team as required. In that document, the Department reported that the project to develop the ReHabWorks System was complete as of August 31, 2010, at a total cost of $13,543,967. The Department also reported that the project met all the goals and objectives described in the business case and refined in the project plan.

The Department's *Post-implementation Review of Business Outcomes* for the ReHabWorks System is presented on the following pages.

TEXAS PROJECT DELIVERY FRAMEWORK

POST-IMPLEMENTATION REVIEW OF BUSINESS OUTCOMES

Benefits Realization
REVIEW GATE

Department of Assistive and Rehabilitative Services

ReHabWorks

[Formerly DARS Consumer Support System (DCSS)]

VERSION: 1.0 REVISION DATE: 2/28/2011

Approval of the Post-Implementation Review of Business Outcomes indicates an understanding and acceptance of the post-implementation results described in this deliverable. By signing this deliverable, each individual agrees the information accurately conveys project delivery results and is ready to be forwarded to the Quality Assurance Team.

Agency Head		
Debra Wanser, Interim Commissioner	Debra.Wanser@dars.state.tx.us	512.377.0600
Signature: Debra Wanser		Date: 4/7/2011

Executive Sponsor		
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Signature: Alvin Miller		Date: 4/6/11

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Contents

Section 1. Project Impact on Agency Objectives 1
1.1 Product and/or Service Performance 1
1.2 Goals and Objectives 1
Section 2. Quantitative and Qualitative Benefits 2
2.1 Statutory Fulfillment 2
2.2 Strategic Alignment 3
2.3 Agency Impact Analysis 4
2.4 Financial Analysis 5
Section 3. Project Outcomes 7
3.1 Project Quality 7
3.2 Scope 8
3.3 Cost (Budget) 9
3.4 Schedule 9
Section 4. Agency and State Lessons Learned 10
Section 5. Future Review Plans 13
Section 6. Glossary 14
Section 7. Revision History 14
Section 8. Appendices 14

Section 1. Project Impact on Agency Objectives

1.1 Product and/or Service Performance

Business goals and objectives were described in the Business Case and refined in the Project Plan by establishing performance objectives, standards, and measurements for the product and/or service. Describe the actual performance measurement results achieved for each performance objective.

Product and/or Service Performance Objective	Performance Standard	Actual Performance Measurement Results
Reduce IT complexity and support costs for application and infrastructure maintenance.	Baseline existing system infrastructure and support costs compared to post implementation system infrastructure and support costs	Staged decommission of multiple legacy systems.
Reduce IT complexity and support costs for providing Federal Vocational Rehabilitation (VR)/Independent Living (IL) regulatory reporting activities.	Baseline existing standardized reports across DBS and DRS compared to post implementation	Staged decommission of legacy Federal VR/IL reporting systems.
Reduce IT complexity and support costs for development tools and skills requirements.	Inventory of development tools and required skills sets (pre and post implementation)	Decommission all instances of Top End middleware, PowerBuilder and Service Interface Painter from DARS Application Development. Current development tools include Java, Spring, Hibernate, Wiley and Web Logic.
Increase DARS information sharing and communications.	Consolidation of data warehouse for maintaining information relevant to DBS and DRS	Increased DARS information sharing through consolidation of legacy data warehouses.

1.2 Goals and Objectives

Based on actual performance measurement results, describe the project's impact on the agency's ability to meet the business goals and objectives described in the Business Case and refined in the Project Plan. If the stated business goals and objectives were not met, include factors that inhibited performance in the project impact description.

Business Goal/Objective	Product and/or Service Performance Objective	Project Impact to Business Outcome
Project is managed according to plans outlined within the Project Management Framework.	Project management adhered to DIR's Texas Project Delivery Framework as documented on the DIR website.	Ensured the project adhered to project management practices and processes.

Business Goal/Objective	Product and/or Service Performance Objective	Project Impact to Business Outcome
Provide a web based application to support all DARS Consumers.	ReHabWorks is deployed providing all necessary functionality via a web-based application.	DARS has one consolidated case management system which supports the DARS mission critical need of efficient, reliable service delivery to consumers.
Equal accessibility for all users, regardless of physical status, cognitive ability, or technology.	ReHabWorks is developed and thoroughly tested to ensure high levels of accessibility.	ReHabWorks meets and exceeds Federal Section 508 standards providing equal accessibility for all users.
ReHabWorks, the DARS Consumer Case Management application, will be compliant with all Enterprise (HHSC), state and federal regulations.	ReHabWorks meets all required Enterprise, state and federal regulations.	ReHabWorks case management system supports the agency's compliance with the Rehabilitation Act of 1973 as amended, Federal Regulation 34 CFR Part 361, Section 508 of the Federal Government, the Health Information Portability and Accountability Act (HIPAA) Electronic Data Interchange (EDI) and Security Standards, the Family and Educational Rights and Privacy Act (FERPA), and Texas Administrative Code (TAC) Title 40, Part 2, TAC, Title 1, Part 10, §202 and T.A.C. §206 State Web Sites, and HHSC Architecture standards and Federated Identity Management Standards.

Section 2. Quantitative and Qualitative Benefits

2.1 Statutory Fulfillment

For each of the factors identified and described in Section 5 of the Business Case, and shown below, describe the project's impact on the agency's ability to fulfill statute and other mandates. If a value factor is not applicable to the project, state "not applicable." If applicable, include reasons that inhibited achieving the expected benefit in the project impact description.

#	Value Factor	Project Impact to Business Outcome
1	The project is implemented to satisfy a direct mandate or regulation (state, federal, national, international)	Not applicable
2	The project is implemented to satisfy a derived mandate or regulation (state, federal, national, international)	HB 2292 mandated consolidation of all Health and Human Services agencies. Inherent in the legislation is the mandate to consolidate administrative services and processes where possible to streamline processes. This project replaces two legacy case management systems with one consolidated, web-based system.

#	Value Factor	Project Impact to Business Outcome
3	Implementing the project improves the turnaround time for responses to mandates or regulatory requirements	ReHabWorks enables business compliance with federal reporting requirements from a single data warehouse resulting in more efficient and timely reporting.
4	The project results in agency compliance to mandates or regulatory requirements	The project supports the agency's compliance with the Rehabilitation Act of 1973 as amended, Federal Regulation 34 CFR Part 361, Section 508 of the Federal Government, the Health Information Portability and Accountability Act (HIPAA) Electronic Data Interchange (EDI) and Security Standards, the Family and Educational Rights and Privacy Act (FERPA), and Texas Administrative Code (TAC) Title 40, Part 2, TAC, Title 1, Part 10, §202 and T.A.C. §206 State Web Sites, and HHSC Architecture standards and Federated Identity Management Standards.
5	The project results in agency avoidance of enforcement actions (e.g., penalties) based on mandates or regulatory requirements	Not applicable
6	Implementing the project achieves the desired intent or expected outcomes of the mandates or regulatory requirements	The project supports the agency's compliance with the intent of Texas HB 2292 by replacing two legacy case management systems with one consolidated system and reducing administrative redundancy.
7	Implementing the project imposes stricter requirements, or different or additional requirements, than those required by the mandates or regulations	Having all case management records in one system will eliminate the possibility of a consumer receiving benefits from more than one agency program. ReHabWorks also technologically enforces many business rules and regulations improving the overall quality of DARS' case management.

2.2 Strategic Alignment

For each of the factors identified and described in Section 5 of the Business Case, and shown below, describe the project's impact on the ability to deliver a technology solution aligned with the agency's and the state's strategic goals and objectives. If a value factor is not applicable to the project, state "not applicable." If applicable, include reasons that inhibited achieving the expected benefit in the project impact description.

#	Value Factor	Project Impact to Business Outcome
1	The project is aligned with, and delivers business outcomes, that support agency and statewide goals	ReHabWorks provides case management and reporting functionality that directly support DARS' goal of delivering services to Texans with disabilities.

#	Value Factor	Project Impact to Business Outcome
2	The project satisfies a strategic agency or state mission critical need, regardless if required by a mandate or regulation	ReHabWorks provides an upgraded and architecturally compliant case management system which supports the DARS mission critical need of efficient, reliable service delivery to consumers.
3	The project results in the ability of the agency or state to better share resources with other agencies or states as part of a long-term strategic alignment effort	At this point, no other Texas state agency has shown an interest in ReHabWorks. However, several other states have requested the code for the application.
4	The project is aligned with the overall mission of the agency and state	Per #2 above, ReHabWorks provides critical case management support to DARS counselors as they deliver services to Texans with disabilities.
5	The project strategically consolidates and streamlines business practices and administrative processes	A primary purpose of this project was to consolidate two legacy case management systems into a single, web-based case management system yielding more efficient and standardized service delivery business practices and administrative processes.
6	The project is aligned with the overall vision of the agency and state	As stated in #2 and 4 above, ReHabWorks is aligned with the DARS vision of enabling Texans with disabilities to pursue independent and productive lives.
7	The project is aligned with the overall priorities of the agency and state	The project is aligned with the agency and state priorities of providing services to Texans with disabilities in a cost effective manner. ReHabWorks is a robust, technologically advanced case management system that facilitates accomplishment of the DARS mission.

2.3 Agency Impact Analysis

For each of the factors identified and described in Section 5 of the Business Case, and shown below, describe the project's impact on the ability to deliver a technology solution that supports the agency's architecture and standards. If a value factor is not applicable to the project, state "not applicable." If applicable, include reasons that inhibited achieving the expected benefit in the project impact description.

#	Value Factor	Project Impact to Business Outcome
1	The project results in systems which support the defined architecture/standards for the agency and state	ReHabWorks conforms to all HHSC Architectural standards and Service Oriented Architecture Requirements.
2	The project results in systems which reduce or eliminate redundant systems	ReHabWorks replaces two legacy case management systems with one consolidated system eliminating redundancy.
3	The project results in systems which enable reuse of code/components available from other state or federal agencies	Code from ReHabWorks is being re-used in another DARS application currently in development. Several other states have requested the code for the application.

#	Value Factor	Project Impact to Business Outcome
4	The project results in systems which improve consistency between systems within the agency through standardization	Improvements in standardization will occur as a result of only one case management system interfacing with 11 different systems instead of two systems interfacing with 11 different systems. Another positive project impact will be improved date integrity and reporting from one consolidated data warehouse.
5	The project results in systems which leverage the technical capability of commercial-off-the-shelf (COTS) software packages	Not applicable.
6	The project results in systems which provide the ability to evolve as new technologies emerge	Consistent with other HHSC agencies and current industry best practices in Service Oriented Architecture (SOA), ReHabWorks is built upon the user familiarity and web-orientation of a Windows-based, web-service structured front-end on top of the strength, power and versatility of a Unix-based back-end with commercial IBM Relational Database Management System (RDBMS) technology. This contemporary but proven architecture should afford DARS the benefits of maximum flexibility and portability, over time.

2.4 Financial Analysis

For each of the factors that represent the project's quantitative benefits, identify and quantify the benefits realized to date. Provide a forecast of the benefits not yet realized. Identify the specific time period (mm-yy) encompassed by the realized and forecasted benefits. If a factor is not applicable to the project, state "not applicable."

NOTE: This project was not undertaken to reduce costs. The project justification focused on consolidation and business process improvement. In the Business Case v1, Benefit Cost Ratio section, DARS stated Costs Exceeded Benefits because there is no method to quantify the soft benefits of compliance with HHSC architectural requirements, providing new service-oriented architecture and averting the risk of legacy system failure due to aging technology.

Realized Time Period	Forecasted Time Period
May 2005 to August 31, 2010	September 2010 to August 2012

#	Value Factor	Realized	Forecasted
Identify Cumulative Savings			
1	Reduced IT and non-IT FTE costs including fringe benefits	N/A	N/A
2	Reduced IT and non-IT contractors/consultants	N/A	N/A

#	Value Factor	Realized	Forecasted
3	Reduced outsourced labor costs	N/A	N/A
4	Improved workflow/business processes	N/A	N/A
5	Reduced error rate	N/A	N/A
6	Reduced hardware maintenance/upgrade expense	N/A	N/A
7	Reduced software maintenance/upgrade expense	N/A	N/A
8	Reduced facilities rental/maintenance expense	N/A	N/A
9	Reduced equipment rental/supplies and materials expense	N/A	N/A
10	Other	N/A	N/A
NOTE: The project justification focused on consolidation of a mission critical application; therefore no cumulative savings were quantified.			
Identify Cost Avoidance			
11	Avoid penalties	N/A	N/A
12	Avoid loss of funding	N/A	N/A
13	Improved enforcement actions	N/A	N/A
14	Asset protection	N/A	N/A
15	Other cost avoidance (ceased project to migrate one of the two legacy systems to a web-based system).	$1,514,456	N/A
Identify Revenue Generation			
16	Additional revenue generated	N/A	N/A
17	Increased interest earned	N/A	N/A
18	Other	N/A	N/A
Identify Constituent Project Benefits			
NOTE: The project justification focused on consolidation of a mission critical application; therefore no constituent benefits were quantified.			
19	Reduced constituent transaction costs	N/A	N/A
20	Reduced service delivery cycle time	N/A	N/A
21	Increased service availability/accessibility	N/A	N/A
22	Expansion of services	N/A	N/A
23	Reduced (paper) reporting requirements	N/A	N/A
24	Improved ability to locate regulatory requirements	N/A	N/A
25	Improved accountability/compliance	N/A	N/A
26	Greater consistency in constituent/state transactions	N/A	N/A
27	Other	N/A	N/A
General Questions Regarding Financial Forecast:			

#	Value Factor	Realized	Forecasted
28	Will the Net Present Value exceed 0? If so, by how much?	No	No
29	When is the expected Project Breakeven Point?	N/A	N/A
30	What is the project's expected Return on Investment?	N/A	N/A
	NOTE: The project justification focused on consolidation of a mission critical application. (See Note at beginning of Section 2.4).		

Section 3. Project Outcomes

3.1 Project Quality

3.1.1 Quality Standards

Summarize the overall project quality, including the impact on business outcomes, based on an assessment of whether the project satisfied the quality standards defined for the project.

There were five quality standards defined in the Project Plan. Standards 1 and 2 stated the project be completed by the established finish date and within budget. The RHW project was completed by the re-baselined finish date and within the re-baselined budget.

Standard 3 stated that quarterly reviews of contractors work would show they were delivering the requirements specified by agreed upon due dates and this did occur.

Standard 4 stated project issues were documented and resolved within 10 calendar days of identification or extensions were justified and approved. The Issues Log confirms this did occur.

Standard 5 stated the project would be completed based upon the original project scope and all approved scope changes. This was achieved through re-baselining the project according to the specified change management process.

In addition to the above standards, there was a rigorous testing process for all functional and system requirements. Defects were identified, prioritized and fixed prior to deployment.

The business outcomes of following and meeting these defined Quality Standards is a robust system that supports counselors' needs in providing services to Texans with disabilities.

3.1.2 Methodologies

Summarize which aspects of the planned methods were used and explain the impact of using or not using each method on project outcomes, including the impact of using the defined project life cycle methodology, project management methodology, systems development methodology, or other methodologies on project outcomes.

The Texas Project Delivery Framework Project Management Methodology and the DARS policy on project management were used during this project. The Framework and DARS policy

provided the necessary structure to proactively manage change, track and evaluate the project scope, schedule and budget.

The Software Development Lifecycle (SDLC) Extension was not a part of the Texas Project Delivery Framework when this project began in May 2005. The SDLC extension became available in September 2007, well after the requirements of the project had been captured. The decision was made not to back-fill these documents at this point in the project. The SDLC processes were used during testing. As stated in section 4, Agency and State Lessons Learned, SDLC processes are presently used in DARS software development projects and will increase the quality of current and future efforts.

3.2 Scope

Summarize the impact of any changes to the initial project scope on business outcomes, including approved and non-approved changes.

The impact of changes to the initial scope on business outcomes has been overall positive. Although the changes in scope delayed the project completion, it has enabled DARS to produce an enhanced system with all the required functionality to better support DARS counselors' delivery of services to Texans with disabilities. ReHabWorks incorporates more advanced technologies and a number of major improvements, including additional federal reporting requirements as well as enhancements to help meet legislative information requests and reporting.

Enhancements to the scope necessitated the project be re-baselined. The re-baseline in October 2007 incorporated consumer waiting list functionality as well as other customer requirements. In August 2009, the project was re-baselined again to optimize use of American Recovery and Reinvestment Act (ARRA) funds that were approved to enhance DARS VR systems and services. This change incorporated additional VR federal requirements that had been enacted, as well as additional customer-required improvements to the system prior to deployment. All of these changes had direct positive impact to the business outcomes, as well as DARS end users.

All changes to the project scope, schedule and budget were made in accordance with DARS' project management policy and processed through the DARS Change Control Board with management approval and with Quality Assurance Team (QAT)/Legislative Budget Board (LBB) approval.

3.3 Cost (Budget)

Identify the initial estimated and final project costs.

Project Item	Report to Date
Initial Estimated Project Cost	$2,436,400 **Direct costs only**
Project Cost to Date (Fiscal)	$13,543,967 **Direct and Indirect costs (Combined costs reported per DIR Texas Project Delivery Framework)** $5,183,430 **Direct Costs** $8,360,537 **Indirect Costs**
Project Cost to Date (Total)	$13,543,967 **Direct and Indirect costs**

Summarize the impact of any changes to the initial cost baseline on business outcomes, including approved and non-approved changes.

The increase in project cost was necessary to accommodate the required changes in scope (see Section 3.2). The result was an overall positive business impact because the enhanced scope produced a better final product and provided functionality, which was not defined in the initial requirements.

The re-baseline in October 2007 included consumer waiting list functionality, incorporated federal/state reporting requirements, and other critical customer needs. The re-baseline in August 2009 optimized use of ARRA funds that were approved to enhance DARS VR systems and services. This change incorporated additional VR federal/state requirements that had been enacted and other customer required improvements in the system prior to deployment.

All changes to the project schedule, scope and budget were made in accordance with DARS' project management policy and processed through the DARS Change Control Board with management approval and with QAT/LBB approval.

3.4 Schedule

Identify the initial planned project start and finish dates. Identify the final project start and finish dates.

Project Item	Report to Date		
Initial Planned Project Start and Finish Dates	05/09/05 to 08/31/07	Baseline Date:	05/09/05
Final Project Start and Finish Dates	05/09/05 to 08/31/10	1st Re-baseline Date 2nd Re-baseline Date	10/01/07 08/01/09

Summarize the impact of any changes to the initial schedule baseline on business outcomes, including approved and non-approved changes.

As stated in sections 3.2 and 3.3, the changes to the project budget and schedule were driven by necessary changes in project scope. As noted in section 3.2, these changes have resulted in a superior product that better supports DARS counselors' delivery of services to Texans with disabilities (see Section 3.2 for addition details) and therefore had a positive impact on business outcomes.

The project schedule was re-baselined to accommodate necessary changes in scope. The re-baseline in October 2007 incorporated consumer waiting list functionality and included other needed customer requirements. In August 2009, the project re-baseline optimized the use of ARRA funds that were approved to enhance DARS VR systems and services. This change incorporated additional VR federal/state requirements that had been enacted and other customer required improvements in the system prior to deployment.

Although the schedule changes did result in a delay in delivering the system, the end product is significantly better than the one initially envisioned in the initial project schedule.

All changes to the project schedule, scope and budget were made in accordance with DARS' project management policy and processed through the DARS Change Control Board with management approval and with QAT/LBB approval.

Section 4. Agency and State Lessons Learned

State lessons learned in terms of a problem (issue). Describe the problem and include any agency/state-level references (e.g., Governance Handbook, Business Continuity Plan, Texas Project Delivery Framework tool) that provide additional details. Identify recommended improvements to correct a similar problem in the future, including elevation plans for communication and follow-up about the improvement.

NOTE: Several of our lessons learned are closely related. There is overlap in the lessons learned and in our recommended changes for the items listed below.

Problem Statement	Problem Description	References	Recommended Change	Elevated To
Outsourcing Challenges	DARS issued a Request for Proposal (RFP) to solicit qualified vendors to develop the ReHabWorks system. DARS was unsuccessful in identifying a qualified vendor who could complete this specialized vocational rehabilitation (VR) consumer case management system and subsequently made the decision to build the system in-house utilizing experienced DARS staff, coupled with the utilization of Staff Augmentation services through DIR's "GoDirect" vendor services. The unsuccessful outsourcing phase delayed Phase 2 of the project start date by 14 months and caused some downstream delays.	N/A	• Increase staff skill sets in outsourced procurements. **NOTE:** Current DARS outsourcing efforts are coordinated with HHS Enterprise Contract Procurement Services (ECPS) and utilize DIR's Deliverable Based Information Technology Services (DBITS) processes.	COO and IRM
Incomplete Software Requirements	ReHabWorks is a complex application. It deals with 8 agency programs each having different rules and regulations; has 14 interfaces with other internal and external systems (e.g. HCATS, CCRC, HHSAS); and required the conversion of approximately 450,000 consumer cases, 14 million consumer case notes, and 12 million purchase orders (POs). The initial requirements for the RHW project were compiled for an RFP and did not include the level of detail required for system development purposes. The RFP bid requirements were used to develop functionality. Although the requirements were extensive, they did not contain all required functionality in sufficient detail, which resulted in extensive development re-work.	N/A	• Improve staff skill sets in SDLC methodology including requirements development and validation processes. • Strengthen internal oversight to ensure SDLC processes are followed. • Implement Agile product development methodology **NOTE:** SDLC skill sets have already been significantly increased through extensive training and practice. Agile development methodology has been implemented in current projects. Agile development processes facilitate more timely involvement by both the technical development team and the business owners in the requirements development process.	COO and IRM

Problem Statement	Problem Description	Refer-ences	Recommended Change	Elevated To
Lack of sufficient participation by the Technical Development Team during initial requirements development	Although extensive sessions were conducted to validate requirements, Joint Application Development (JAD) sessions (a method in which business SMEs and the Technical Development Team generate, analyze, and document requirements) were not held in a timely manner. DARS felt at the time that JADs were not needed because of the amount work already performed during the earlier requirements validation sessions. This approach resulted in the Technical Development Team misinterpreting requirements in selected functionality which resulted in additional defects requiring resolution.	N/A	• Increase staff skill in SDLC methodology • Strengthen internal oversight to ensure SDLC processes are followed • Implement Agile product development methodology **NOTE:** SDLC skill sets have already been significantly increased through extensive training and practice. Agile development methodology has been implemented in current projects.	COO and IRM
Schedule Changes	The unsuccessful RFP process consumed 14 months after which DARS decided to build the consumer case management system internally. In October 2007, the project timeline was re-baselined to incorporate consumer waiting list functionality and included other needed customer requirements. In August 2009, the project was re-baselined to optimize use of ARRA funds that were approved to enhance DARS VR systems and services. This change incorporated additional VR federal/state requirements that had been enacted and other customer-required improvements in the system prior to deployment The delay caused by the unsuccessful outsourcing efforts, the need for revisions to the requirements and necessary scope changes were the primary reasons the project timeline was extended. All changes to the project schedule were made in accordance with DARS' project management policy and processed through the DARS Change Control Board with management approval and with QAT/LBB approval.	N/A	• Increase staff skill sets in outsourced procurements. • Increase staff skill sets in project management • Implement Agile product development methodology **NOTE:** Current DARS outsourcing efforts are coordinated with HHS Enterprise Contract Procurement Services (ECPS) and utilize DIR's Deliverable Based Information Technology Services (DBITS) processes. Agile development methodology has been implemented in current projects. Agile development processes facilitate more timely involvement by both the technical development team and the business owners in the requirements development process.	COO and IRM

Problem Statement	Problem Description	References	Recommended Change	Elevated To
Budget Changes	In March 2004, DARS submitted its Legislative Appropriations Request for FY 06/07. The initial project budget and project timeline were established using a high order of magnitude estimate based on our experience in developing our two existing legacy consumer case management systems. This was the best data we had available at the time to develop an estimate for the system. During the project, it was necessary to re-baseline the project schedule and budget in order to accommodate necessary expansion of scope (See Schedule Changes above). Therefore, the cost to complete this consolidated consumer case management system exceeded our original estimate developed in 2004. However the scope, functionality and technologies of the system DARS originally conceived and on which the original estimate was based, is not the same system that was ultimately developed and implemented. The new system incorporates more advanced technologies and a number of major improvements, including additional federal/state reporting requirements as well as enhancements to help meet legislative information requests and reporting. All changes to the project budget were made in accordance with DARS' project management policy and processed through the DARS Change Control Board with management approval and with QAT/LBB approval.	N/A	• The recommended changes relating to improved requirements gathering and validation processes have significantly improved our estimation processes.	COO and IRM

Section 5. Future Review Plans

Describe plans for performing future review(s) of benefits or business outcomes following project closeout if necessary. Include planned execution and approval dates, who is responsible for ensuring the review is accomplished, and the frequency, if applicable.

Review Description	Planned Date	Planned Approval Date	Assigned To	Frequency
No future reviews planned at this time				

Section 6. Glossary

Define all terms and acronyms required to interpret the Post-Implementation Review of Business Outcomes properly.

RFP: Request for proposal

SDLC: Software Development Lifecycle-a software development industry best practice.

HCATS: Health and Human Services Contract Administration and Tracking System

CCRC: Criss Cole Rehabilitation Center

HHSAS: Health and Human Services Administrative System

JAD: Joint Application Development

VR: Vocational Rehabilitation

ARRA: American Recovery and Reinvestment Act of 2009

Section 7. Revision History

Identify changes to the Post-Implementation Review of Business Outcomes.

Version	Date	Name	Description
1.0	3/23/2011	Kay Ellen Shores	Document created

Section 8. Appendices

Include any relevant appendices.

N/A

Appendix 4

Department Programs and Clients Served

The Department of Assistive and Rehabilitative Services (Department) developed the ReHabWorks System to establish a Web-based case management system with functionality for its Division for Rehabilitation Services and its Division for Blind Services. The ReHabWorks System is intended to replace two case management systems: the RehabSys application and the TWorks application, which the Department's predecessor agencies (the Texas Rehabilitation Commission and the Texas Commission for the Blind) developed.

According to the Department's annual report for fiscal year 2011, the Division for Rehabilitation Services provides vocational rehabilitation for individuals with disabilities other than individuals who are blind. That division has the following programs:

- Vocational Rehabilitation.
- Independent Living Services.
- Deaf and Hard of Hearing Services.
- Centers for Independent Living.
- Comprehensive Rehabilitation Services.

According to the Department's annual report for fiscal year 2011, the Division for Blind Services works with individuals who are blind or visually impaired to allow them to pursue independence and employment. That division has the following programs:

- Vocational Rehabilitation.
- Business Enterprises of Texas.
- Independent Living.
- Blind Children's Vocational Discovery and Development Program.
- Blindness Education, Screening, and Treatment.

Tables 3 and 4 show the number of clients that selected programs served in fiscal year 2011.

Table 3

Division for Rehabilitation Services Programs Numbers of Clients Served in Fiscal Year 2011	
Program	**Number of Clients Served**
Vocational Rehabilitation	87,902
Independent Living Services	1,478
Deaf and Hard of Hearing Services	79,550
Centers for Independent Living	5,133
Comprehensive Rehabilitation Services	488
Total	174,551

Source: The Department.

Table 4

Division for Blind Services Programs Numbers of Clients Served in Fiscal Year 2011	
Program	**Number of Clients Served**
Vocational Rehabilitation	10,425
Business Enterprises of Texas	1,700 [a]
Independent Living	3,493
Blind Children's Vocational Discovery and Development Program	4,068
Blindness Education, Screening, and Treatment	1,838
Total	21,524

[a] This is the number of individuals the program employs; 200 of those individuals have disabilities.

Source: The Department.

Quality Assurance Team Overview

The 73rd Legislature established the State's Quality Assurance Team. The Quality Assurance Team comprises representatives from the Legislative Budget Board, the State Auditor's Office, and the Department of Information Resources and is authorized in Texas Government Code, Chapter 2054 - Information Resources.

The role of the Quality Assurance Team is to review, approve, and monitor projects that meet the criteria for major information resources projects specified in the Texas Government Code. Since fiscal year 2005, the State Auditor's Office has delegated its voting authority on the Quality Assurance Team to the Legislative Budget Board to maintain the State Auditor's Office's independence as required by auditing standards.

Definition of a Major Information Resources Project

Texas Government Code, Section 2054.003(10), defines a major information resources project as:

(A) Any information resources technology project identified in a state agency's biennial operating plan whose development costs exceed $1 million and that:

(i) requires one year or longer to reach operations status;

(ii) involves more than one state agency; or

(iii) substantially alters work methods of state agency personnel or the delivery of services to clients; and

(B) Any information resources technology project designated by the legislature in the General Appropriations Act as a major information resources project.

Funding for a Major Information Resources Project

Texas Government Code, Section 2054.118, states that:

(a) A state agency may not spend appropriated funds for a major information resources project unless the project has been approved by:

(1) the Legislative Budget Board in the agency's biennial operating plan; and

(2) the quality assurance team.

Quality Assurance Team Monitoring Schedule

According to the Quality Assurance Team's *Quality Assurance Review Guide*, project monitoring begins after the Quality Assurance Team determines a project meets the criteria for quality assurance review. The Quality Assurance Team assigns the level of monitoring, which typically corresponds with a project risk level assessment. Monitoring can begin in the initial planning stages or it can begin later in the project. Monitoring generally continues through a project's implementation phase. The Quality Assurance Team's post-implementation monitoring consists of verifying that the agency evaluates the project's benefits and other performance measures realized against those predicted to determine whether the project met its goals and objectives.

Appendix 6

Legislative Budget Board Requests for Amendment to the Department's Biennial Operating Plan

On March 7, 2012, the Legislative Budget Board requested that the Department of Assistive and Rehabilitative Services (Department) amend its *Biennial Operating Plan* to reflect that the Department was still in the process of developing the ReHabWorks System.

The Department submitted an amended *Biennial Operating Plan* on April 13, 2012. The Legislative Budget Board did not approve that plan because, although the Department reported indirect salary costs related to information resources personnel participating in the development of the ReHabWorks System, it did not report benefits.

The Department submitted another amended *Biennial Operating Plan* on April 18, 2012. The Legislative Budget Board did not approve that plan because the Department did not use the 27.86 percent rate currently used by the Legislative Budget Board to determine benefits.

The Department submitted another amended *Biennial Operating Plan* on May 23, 2012. The Legislative Budget Board approved that plan on May 30, 2012.

Letters from the Legislative Budget Board regarding the amended plans are presented on the following pages.

LEGISLATIVE BUDGET BOARD

Robert E. Johnson Bldg.
1501 N. Congress Ave. - 5th Floor
Austin, TX 78701

512/463-1200
Fax: 512/475-2902
http://www.lbb.state.tx.us

March 7, 2012

Debra Wanser
Commissioner
Department of Assistive and Rehabilitative Services
4800 N. Lamar Blvd.
Austin, Texas 78756

RE: 82nd Regular Session Biennial Operating Plan (BOP) – Amendment

Dear Commissioner Wanser:

It has come to the attention of the Legislative Budget Board (LBB) that the Department of Assistive and Rehabilitative Services (DARS) is continuing with development of the ReHabWorks project.

Article IX Sec. 9.03 of the General Appropriations Act, 82nd Legislature, Regular Session requires that agencies and institutions of higher education receiving appropriated funds for the acquisition of information technology must have a current a Biennial Operating Plan (BOP) including any amendments as approved by the LBB prior to expending any funds for information technology.

The LBB may direct the Comptroller to deny the agency or institution of higher education access to information technology appropriations for non-compliance.

The LBB is requesting that your agency submit a BOP amendment for the ReHabWorks project. A template is provided with this correspondence. The LBB will review the amendment and if the amendment is approved a letter will be sent to the agency detailing the approval.

Mailing Address: P.O. Box 12666 ı Austin, TX 78711-2666

After LBB approval, the LBB will notify the Quality Assurance Team (QAT) regarding the possibility that the continuation of this project could be defined as a major information resource project. The QAT may select the project for oversight.

If you have any questions, please contact me at (512) 463-1200.

Sincerely,

Gerry M. Caffey

Gerry Caffey

cc: Alvin Miller, Department of Assistive and Rehabilitative Services

Mailing Address: P.O. Box 12666 ! Austin, TX 78711-2666

LEGISLATIVE BUDGET BOARD

Robert E. Johnson Bldg.
1501 N. Congress Ave. - 5th Floor
Austin, TX 78701

512/463-1200
Fax: 512/475-2902
http://www.lbb.state.tx.us

May 3, 2012

Debra Wanser
Commissioner
Department of Assistive and Rehabilitative Services
4800 N. Lamar Blvd.
Austin, Texas 78756

RE: 82nd Regular Session Biennial Operating Plan (BOP) – Amendment

Dear Commissioner Wanser:

The Legislative Budget Board (LBB) received the Department of Assistive and Rehabilitative Services (DARS) Biennial Operating Plan (BOP) amendment on April 13, 2012 and a revised amendment on April 18, 2012 for the ReHabWorks project. Both amendments have been reviewed and have been disapproved.

For BOP submission and amendments, the LBB requires agencies to use the instructions from the Information Technology Detail (ITD) plan. The ITD instructs agencies to include all costs, both capital and informational which include state staff costs including benefits. The first BOP amendment included state staff costs but did not include benefits. The second BOP amendment included benefits but at a lower percentage rate than the LBB uses for identifying costs.

The LBB requests the latest amendment be re-submitted showing all state staff costs including benefits. Currently the LBB uses a 27.86 percentage rate for benefits.

The due date for re-submission of the BOP amendment is May 23, 2012.

If you have any questions, please contact me at (512) 463-1200.

Sincerely,

Gerry M. Caffey

Gerry Caffey

cc: Alvin Miller, Department of Assistive and Rehabilitative Services

Mailing Address: P.O. Box 12666 ! Austin, TX 78711-2666

LEGISLATIVE BUDGET BOARD

Robert E. Johnson Bldg.
1501 N. Congress Ave. - 5th Floor
Austin, TX 78701

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http://www.lbb.state.tx.us

May 30, 2012

Debra Wanser
Commissioner
Department of Assistive and Rehabilitative Services
4800 N. Lamar Blvd.
Austin, Texas 78756

RE: 82nd Regular Session Biennial Operating Plan (BOP) - Amendment

Dear Commissioner Wanser:

The Legislative Budget Board (LBB) has reviewed the Biennial Operating Plan (BOP) amendment for the ReHab Works project. The LBB approves your BOP amendment subject to funding availability, capital budget authority, any stipulations as directed and state purchasing laws.

If you have any questions, please contact me at (512) 463-1200.

Sincerely,

Richard Corbell

Richard Corbell

cc: Alvin Miller, Department of Assistive and Rehabilitative Services

Mailing Address: P.O. Box 12666 ! Austin, TX 78711-2666

Appendix 7

System Life Cycle Processes

Table 5 presents the processes in the system life cycle and depicts concurrent processes throughout system development. Auditors developed Table 5 from the *System Development Life Cycle Guide* that the Department of Information Resources published within its *Texas Project Delivery Framework.*

Table 5

System Life Cycle Processes						
Enterprise Processes						
Enterprise Environment Management						
Investment Management						
System Life Cycle Processes Management						
Resource Management						
Quality Management						
Agreement Processes						
Acquisition						
Supply						
Project Processes						
Project Planning Management	Project Assessment	Project Control	Decision Making	Risk Management	Configuration Management	Information Management
Technical Processes						
Development		Operations		Maintenance		Disposal

Source: Developed by auditors based on information from the Department of Information Resources.

According to the Department of Information Resources' *System Development Life Cycle Guide*, system life cycle processes may be concurrently and iteratively executed to deliver a system and/or system components. The guide also states that the development process is intended to be integrated with the other system life cycle processes.

Agencies are required to define project management practices they will use in technology projects. For major information resource projects, those practices must use the Department of Information Resources' Framework System Development Life Cycle Extension toolset.

Table 6 describes the processes that agencies should complete when following the system development life cycle.

Table 6

System Life Cycle Processes	
Enterprise Processes	
System Life Cycle Processes Management	
Technical Process: Development	
Process	**Activities**
Development Process Tailoring	Identify and document the system development life cycle model and development process activities and tasks. Integrate system development life cycle activities, tasks, and deliverables into planning documents.
System Requirements	Establish a common understanding of the system requirements among the project team and the stakeholders.
System Design	Determine and document in sufficient detail how the system will be constructed meeting system requirements and standards.
Software Requirements	Establish a common understanding of the software requirements among the project team and the stakeholders.
Software Design	Determine and document in sufficient detail how the software will be constructed meeting software requirements and standards.
Construction	Construct and unit test the software product described by the software design description.
Integration Test	Ensure that aggregates of units tested during the unit test phase can be integrated into a software as designed.
System Test	Ensure that the system performs to documented system requirements.
Acceptance Test	Ensure that the completed system performs according to the stakeholders' expectations based on the specified requirements before the system becomes operational.
Deployment	Complete deployment preparation and deployment of the system, as documented in the deployment plan.

Source: Developed by auditors based on information from the Department of Information Resources.

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 Steve Ogden, Senate Finance Committee
The Honorable Thomas "Tommy" Williams, Member, Texas Senate
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

Health and Human Services Commission

Mr. Thomas Suehs, Executive Commissioner

Department of Assistive and Rehabilitative Services

Ms. Debra Wanser, Commissioner

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