An Audit Report on

Information Technology Contract Oversight at the Department of Transportation

January 2019
Report No. 19-024

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Overall Conclusion

The Department had certain processes and controls in place to help manage and monitor its contract with NTT Data (vendor) to outsource and modernize its information technology operations. However, those processes had weaknesses and were not sufficient to ensure that the vendor delivered the contracted services in accordance with applicable requirements.

Outsourced Services (see Chapter 1)

The Department outsourced selected information technology functions including security operations, application maintenance, network and voice communications operations, customer relations, and professional services application support to the vendor. However, according to the contract, the Department retained "overall responsibility for high level operations management" of the outsourced functions. The Department's responsibilities included ensuring that the vendor delivered the contracted information technology functions.

Monitoring. As part of those outsourced services, the Department contracted with the vendor to provide 538 deliverables. Although the Department received certain services from the vendor, the Department lacked adequate Information Management Division (IMD) monitoring processes, policies, and procedures, and it did not monitor or performed only limited monitoring of the delivery of those deliverables. As a result of its monitoring weaknesses, the Department may not have received selected contract deliverables. Additionally, the Department did not ensure that the vendor was delivering those services in compliance with the contract terms.

Payments. The Department implemented a methodology to validate the accuracy of the vendor's invoices for payment and the calculations for the service level agreements for the outsourced operations deliverables.

> **Background Information**
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> In May of 2013, the Department signed an information technology outsourcing contract with NTT Data initially valued at $232.6 million. In September 2017, the Department increased the value of the contract to $371.6 million and extended the expiration date by a year to August 31, 2019 (see Appendix Section 3 for additional contract details).
>
> Source: The Department.

Transformation Projects (see Chapter 2)

In addition to the outsourced operations, the Department contracted with the vendor to provide transformation services (transformation projects) to modernize and "transform" the Department's information technology environment. The goals of the transformation projects were to improve service levels and reduce costs. While the vendor delivered transformation projects, certain projects exceeded their budgets and expected timeframes. The Department also did not maintain evidence that it received and approved all of the projects' deliverables. In addition:

➢ As part of the contract, the Department relied on the vendor to help it determine which transformation projects were needed and the costs associated with those projects. However, it did not verify that the vendor-provided costs were reasonable.

➢ The contract with the vendor lacked service level agreements for the transformation projects that defined the Department's expectations for the delivery of those projects.

➢ The Department did not ensure that business requirements were documented and approved, which may have contributed to project delays and cost overruns.

Receiving Contract Deliverables (see Chapter 3)

The Department did not receive selected contract deliverables. Specifically, the Department did not receive three report deliverables and one service deliverable even though the vendor was contractually required to provide the deliverables.

Table 1 presents a summary of the findings in this report and the related issue ratings. (See Appendix 2 for more information about the issue rating classifications and descriptions.)

Table 1

Summary of Subchapters and Related Issue Ratings		
Subchapter	Title	Issue Rating [a]
1-A	The Department Had Weaknesses in the Monitoring Processes It Used to Determine Whether the Vendor Provided the Outsourced Services as Contracted	High
1-B	The Department Implemented a Monitoring Process for Its Financial Payments to the Vendor for the Outsourced Services	Low
2-A	The Department Did Not Verify That Transformation Project Costs Were Reasonable	Medium
2-B	The Department's Monitoring Processes Did Not Ensure That All Required Project Documentation Was Developed and Retained for the Transformation Projects Tested	Medium
3	The Department Should Ensure That It Receives All Reports and Services as Required	Medium

Summary of Subchapters and Related Issue Ratings		
Subchapter	**Title**	**Issue Rating [a]**

[a] A subchapter is rated **Priority** if the issues identified present risks or effects that if not addressed could critically affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern and reduce risks to the audited entity.

A subchapter is rated **High** if the issues identified present risks or effects that if not addressed could substantially affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern and reduce risks to the audited entity.

A subchapter is rated **Medium** if the issues identified present risks or effects that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern and reduce risks to a more desirable level.

A subchapter is rated **Low** if the audit identified strengths that support the audited entity's ability to administer the program(s)/function(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Auditors communicated other, less significant issues separately in writing to Department management.

Summary of Management's Response

At the end of each chapter in this report, auditors made recommendations to address the issues identified during this audit. The Department concurred with the recommendations in this report.

Audit Objective and Scope

The objective of this audit was to determine whether the Department manages and monitors information technology contracts in accordance with applicable requirements.

The scope of this audit covered the Department's management and monitoring of its information technology outsourcing contract with NTT Data to provide operations and transformation services from September 1, 2016, through February 28, 2018.

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Detailed Results

While the Department Performed Some Monitoring of Certain Outsourced Services, It Did Not Sufficiently Verify Vendor Self-reported Data to Ensure That It Received All Services as Required

As part of its $371.6 million contract with NTT Data (vendor), the Department of Transportation (Department) outsourced selected information technology functions, including security operations, application maintenance, network and voice communications operations, customer relations, and professional services application support to the vendor. While it retained oversight of those functions, the Department did not sufficiently monitor the vendor's delivery of those outsourced services to ensure compliance with contract requirements. Specifically, the Department did not have a documented, comprehensive monitoring process for its information technology contracts, including documented policies and procedures. The Department performed only limited monitoring of the delivery of the outsourced services.

The Department monitored its financial payments to the vendor and the vendor's service level agreement performance. However, it relied on self-reported vendor data to support the payments and the service level agreement performance data.

Chapter 1-A
The Department Had Weaknesses in the Monitoring Processes It Used to Determine Whether the Vendor Provided the Outsourced Services as Contracted

Chapter 1-A Rating:

High [1]

The Department did not sufficiently monitor the vendor's delivery of outsourced services to verify that the services it received complied with the contract's terms. According to the Department's *Negotiated Contracts Procedures Manual,* the contract manager and the managing division within the Department are supposed to determine the monitoring method for each contract situation and type of service procured. However, the Department's Information Management Division did not have documented policies and procedures describing the processes it would use to monitor the contract audited for this report.

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[1] The risk related to the issues discussed in Chapter 1-A is rated as High because they present risks or results that if not addressed could substantially affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern and reduce risks to the audited entity.

Without a documented, comprehensive monitoring process, the Department limited its ability to verify that it received all outsourced services and whether the quality of those services complied with the contract.

As a result of its monitoring weaknesses, the Department may not have received outsourced services that complied with the contract terms.

The Department's contract with the vendor included 538 deliverables related to the outsourced services. The Department either did not monitor or performed only limited monitoring of the vendor's delivery of those outsourced services. As a result, the Department may not have received those contracted services as required. The *State of Texas Contract Management Guide* requires agencies to monitor the contractor's performance to ensure that goods and services procured conform to the contract requirements.

Auditors reviewed the Department's monitoring documentation for 30 deliverables and determined that for 7 (23.3 percent) deliverables, the Department sufficiently monitored the delivery of the services. However, auditors determined that for the remaining 23 deliverables:

- For 6 (20.0 percent of the 30 deliverables), the Department did not monitor the vendor's delivery of the contracted services. For example, the vendor was contracted to build, configure, and install servers and related hardware. However, the Department did not review whether the contracted servers and hardware were built and properly configured.

- For 17 (56.7 percent of the 30 deliverables), the Department monitored the delivery of only portions of the contracted services. For example, the vendor was contracted to manage and perform post implementation reviews. While the Department met with the vendor to obtain and discuss the vendor-summarized results of the reviews, the Department did not have documentation showing the reviews were properly managed and that they covered the appropriate areas.

Additionally, for 15 (50.0 percent) of the 30 deliverables tested, the contract's Statement of Work did not adequately define the deliverables, which limited the Department's ability to adequately monitor them. Specifically:

- Four of those deliverables referenced policies or standards that the Department had not documented and approved.

- Eleven deliverables contained only broad descriptions of the deliverables and the Department did not have documentation that detailed the tasks to be completed. As a result, the Department's ability to ensure that it

received the deliverables was limited. The *State of Texas Contract Management Guide* states that: "The statement of work should provide a clear and thorough description of the goods or services to be provided."

Without clear deliverables and supporting Department documentation, the Department is at an increased risk that the vendor did not properly deliver the contracted services.

The Department did not ensure that vendor-provided security monitoring services were complete as required by the contract.

In November of 2013, the Department signed multiple work orders with the vendor to perform security monitoring services of the Department's information technology resources. The Department agreed to make monthly payments to the vendor through August 2018 for those services. However, the Department did not have documentation to show that the vendor monitored the appropriate systems. In addition, the Department reported that the vendor had implemented specialized tools to help with monitoring security. However, the Department did not have monitoring processes in place to verify that those tools were properly reporting on all of the production technology resources. As a result, there is an increased risk that security issues and compromises to the Department's systems are not detected, reported, and resolved by the vendor.

Recommendations

The Department should:

▪ Ensure that all contract statement of work services deliverables are clearly defined, documented, and provided to the vendor.

▪ Design and implement processes to verify that the vendor delivers outsourced services as required by the contract.

▪ Document and approve supporting material that is included in the service descriptions in the contract's statement of work.

▪ Document and approve detailed information technology contract monitoring policies and procedures.

Management's Response

The Department concurs with SAO's recommendations.

Better alignment within contract and procurement policies and procedures manuals will strengthen oversight of vendor service obligations. The audit

identifies an oversight gap by the Department in monitoring deliverables, which includes both tangible work products and itemized service responsibilities. Deliverables-based contracts tie vendor payment to the completion of a tangible deliverable (or milestone). The Department carefully accounts for tangible deliverables through existing contract management processes. However, oversight of vendor service responsibilities relies on vendor management activities to affirm the Department receives expected contracted services. The department uses the contract structure, including service level agreements and contract governance, and risk monitoring efforts, to aid in its effort to ensure that the required work is performed.

- *Working with internal contracts and procurement experts, the Information Management Division (IMD) will strengthen processes detailed within the Service Management Manual (SMM) to enhance the oversight of contractual service obligations. IMD will conduct a process improvement exercise to advance how the Department oversees vendor technology services and better track issues that may present risk.*

- *IMD charters vendor management committees to assess contract performance, including overall service delivery. The Department will reinforce the structure of vendor management committee meetings that monitor technology service fulfillment, such as updating meeting charters, developing agenda templates and archiving recorded outcomes.*

- *Vendor service oversight requires IMD staff enabled with knowledge and tools to assure understanding of how contracted services enable business capabilities. IMD will update SMM reference materials and related contract training to elevate staff knowledge of vendor service management activities and best practices.*

- *Service level measures enable the Department to quantify outputs of vendor technology services. Assessing outcomes of technology services differs from other government procured services, such as building services. Therefore, IMD will reconsider the existing service delivery measurement model to improve how the Department monitors technology service quality.*

- *Better guidance and definitions of contractual service terms, such as 'deliverables', would alleviate confusion for state contract managers monitoring vendor technology services. The 'deliverable' term within the State of Texas Procurement and Contract Management Guide addresses tangible work products, but lacks guidance on vendor services related to technology. In a good faith effort, the Department recently initiated outreach to the Department of Information Resources (DIR) to offer*

*procurement and contract management recommendations with
technology services and products.*

Individual responsible for agency action due to recommendation:

Information Management Division, Director

Estimated date of resolution of recommendation:

February 1, 2020

Chapter 1-B
The Department Implemented a Monitoring Process for Its Financial Payments to the Vendor for the Outsourced Services

**Chapter 1-B
Rating:**

Low [2]

The Department implemented a monitoring process to help ensure that the vendor invoices were accurate. The *State of Texas Contract Management Guide* requires that state agencies ensure that contractors are billing only for goods or services received.

For the five payment vouchers tested totaling $23.3 million (from a population of 19 vouchers totaling $78.1 million), the payments matched the vendor-provided supporting documentation, including the invoices. In addition, the Department identified some issues that resulted in $80,465 in reductions to the amounts on the invoices for those 5 payment vouchers.

The Department also implemented a monitoring process to help ensure the accuracy of the 19 critical service level agreement performance metrics used in the calculation and payment of service bonuses and payment credits. For example, that review process included validating the calculations used to arrive at the final compliance percentages for the three applicable payment vouchers[3] reviewed by auditors.

In addition, for the one payment voucher tested that had bonus payments and service credits (bonus and credit amounts were calculated monthly and payable quarterly), the calculation of those items followed the contractually required methodology.

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[2] The risk related to the issues discussed in Chapter 1-B is rated as Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/function(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

[3] Two of the five payment vouchers tested were dated between July 2017 and February 2018 when the service level agreement process was on hold due to a contract dispute.

The Department monitored voucher payments and service level agreements for the outsourced operations. For the five payment vouchers tested totaling $23.3 million, the Department received invoices with variable operations costs that totaled $8.6 million (37 percent of the vouchers' total). Those costs did not include costs calculated from vendor employee labor hours worked (see text box for more information about the categories of variable operations costs). Each of those invoices included 13 different variable cost line items. The Department processes included validating the price of each item. For example, the Department performed a reasonableness review of the vendor self-reported list of mobile phone numbers and identified some that were listed more than once.

The Department validated that some service level agreement calculations were accurate, but it relied on vendor-managed systems as part of that validation process. For some service level agreements, the specific type of service and timeliness of service resolution were used to calculate performance bonuses and service credits. For example, one service level is the restoration time for critical applications should a production application fail. For those type of service level agreements, the Department used the vendor-programmed and -submitted data from the help desk system, as well as the vendor-designed and -maintained help desk system reports to determine whether the vendor qualified for performance bonuses. The vendor programmed the help desk system to assign the tickets to a service level agreement category and to calculate the timeliness of the ticket's resolution.

The Department's monitoring did not include a process to help detect and correct inappropriate changes to either the help desk system reports or the data used to generate the service level compliance reports. The Department of Information Resources *Security Control Standards Catalog* requires (1) systems to maintain appropriate audit trails and (2) agencies to monitor the audit trail data. As a result of the Department not adequately monitoring vendor changes to the reports or the data, it may not have detected reporting errors that result in the Department approving and issuing unearned bonus payments or service credits.

Recommendations

The Department should:

- Strengthen its monitoring processes to include some verification of the accuracy of vendor self-reported data used to determine service level agreement bonus payments and service credits.

- Implement an audit and monitoring process to help identify and correct reporting errors in the vendor-provided data.

Management's Response

The Department concurs with SAO's recommendations.

Financial payments managed by the Department help ensure vendor invoice accuracy, supported by the implementation of service level agreements.

- *Department considers data integrity a critical requirement to measure vendor performance in an accurate and reliable manner. Given challenges to edit data in production, IMD considers data manipulation by the vendor highly unlikely. IMD will research current service ticket system (i.e. ServiceNow system) access management and data review processes to create data log reports and auditable internal controls.*

- *Business process transactions source the vendor performance data used to calculate bonus payments and service credits payments. IMD contract managers oversee system data outputs over time to validate performance. If vendor performance trends towards an unexpected manner, then IMD staff investigates the data anomalies. While the potential for a vendor to record a significant volume of undetected fraudulent transactions is low, IMD will evaluate processes to improve how IMD audits service ticket submissions by vendor staff.*

Individual responsible for agency action due to recommendation:

Information Management Division, Director

Estimated date of resolution of recommendation:

February 1, 2020

While the Vendor Developed Transformation Projects as Required, the Department Should Strengthen Its Monitoring to Ensure the Cost Effectiveness and Timely Delivery of Those Projects

Transformation Projects

The Department's contract with the vendor included requirements to implement a series of projects/initiatives to improve the Department's overall information technology environment and reduce costs. Those "transformation projects" include projects to transform processes and the underlying information technology environment. The projects included:

- Upgrade application development maintenance and support processes.
- Upgrade information technology hardware.
- Major enhancements to systems.
- Minor enhancements to systems that exceed predetermined capacity.
- Development of new applications.
- Migration of applications to new technologies.

Source: The Department's contract with the vendor.

As part of its information technology outsourcing contract, the Department contracted with the vendor for transformation projects to modernize and improve the Department's technology environment (see text box for more information about the transformation projects). As part of the contract, the Department relied on the vendor to help it determine which transformation projects were needed and the costs associated with those projects. The vendor performed work to develop and deliver some of those transformation projects. However, the Department did not verify that the vendor-determined transformation project costs were reasonable.

In addition, the Department did not have comprehensive, documented, and approved policies and procedures for the delivery and monitoring of contracted services, including the transformation projects. While the Department generally ensured that certain documentation was developed and retained, it did not develop or retain other required documentation.

Chapter 2-A
The Department Did Not Verify That Transformation Project Costs Were Reasonable

Chapter 2-A Rating:

Medium [4]

The Department outsourced the delivery of the transformation projects to the vendor without sufficient Department oversight of the cost of the projects. The Department's transformation project development process relied on the vendor to provide the Department with detailed project costs. However, the Department did not have a process to verify that those detailed project costs were reasonable.

The Department reported that the vendor completed 64 transformation projects in fiscal year 2017 and the first 6 months of fiscal year 2018. Auditors reviewed 13 of those completed projects (see text box on the next page for a description of the projects reviewed). For all 13 of those projects, the Department assigned the delivery of the transformation projects to the

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[4] The risk related to the issues discussed in Chapter 2-A is rated as Medium because they present risks or results that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern and reduce risks to a more desirable level.

vendor where the vendor project tasks may include planning, developing, and implementing the projects. The Department relied on the vendor to determine the detailed costs for all 13 transformation projects tested, but it did not have documentation showing that it verified those costs were reasonable. Without the use of a cost validation process, the Department did not have other independent data to help ensure that the project costs proposed by the vendor were reasonable.

While the Department prepared high-level summary estimates of the project costs for 7 of the 13 projects reviewed, it did not have support detailing how the Department determined those estimates. The actual costs for those 7 projects were 61.1 percent more than the Department estimates. As a result of these weaknesses, the Department cannot ensure that it received the best value on the vendor-implemented transformation projects.

Certain transformation projects tested were over budget, late, and lacked required Department approvals. Some of the 13 transformation projects that auditors tested exceeded planned budgets and timelines and did not comply with certain contract requirements. Specifically:

- For 9 (69.2 percent) of 13 projects tested, the actual project costs exceeded the vendor's cost estimate. For the 13 projects, the vendor's total estimated costs were $3.87 million and the total actual costs were $7.11 million, an 84 percent increase from the original estimated cost of the project.

- For 1 (14.3 percent) of 7 projects tested that had specific deliverables and was not canceled before project completion, the Department did not ensure that the deliverables were either accepted or rejected. The 7 projects tested had 47 total defined deliverables. Specifically, of the 47 deliverables:

    - For 2 deliverables, the Department had a signed deliverable form; however, that form did not include evidence that the deliverable was accepted or rejected by Department staff. In addition, for 1 of those 2 deliverables, the form was not signed within the contractually required time period of 15 business days.

    - For 3 other deliverables, the Department did not sign the deliverable acceptance forms within the contractually required time-period of 15 business days. The contract included a provision that states the Department loses any rights and remedies associated with any non-compliance for deliverables that it did not notify the vendor of non-compliance within the 15 day timeframe. For the 4 deliverables that

were not signed within 15 days, the Department's approval ranged from 2 to 26 business days late.

- For 6 (67 percent) of 9 projects tested that had a closeout report, the vendor exceeded the estimated delivery timeframe. The projects were from 2 months to 14 months late. For one project, the time taken to complete the project was 187 percent later than the original estimate.

While there may have been multiple reasons for the delays and cost increases discussed above, the Department did not sufficiently monitor the projects' planning and development (see Chapter 2-B for additional information). A lack of adequate planning and development increases the risk of a project not being completed within expected timeframes and budgets.

The Department's contract with the vendor for transformation projects did not include service level agreements (SLAs) covering the delivery of transformation projects. SLAs define the performance standards related to the vendor's delivery of contracted services. Without adequately defined SLAs, the Department was not able to hold the vendor financially accountable for certain problems related to the delivery of the projects. Depending on the language and nature of a SLA, it could include the authority to reduce the invoiced amounts due when the vendor delivered projects that exceeded the planned time, planned budget, or did not have the required functionality. In addition, having sufficiently detailed service level agreements could help the Department ensure that the transformation projects do not exceed the planned costs.

Recommendations

The Department should:

- Implement a transformation project cost validation process to verify that project costs are reasonable and help ensure that the Department receives best value.

- Ensure that the Department approves and documents in a timely manner the receipt of all project deliverables.

- Include sufficient service level agreements for the transformation projects.

- Develop and implement a comprehensive monitoring process for the transformation projects, including the documentation and approval of comprehensive monitoring policies and procedures.

Management's Response

The Department concurs with SAO's recommendations.

Timely delivery of projects and efficient stabilization of the Department's IT environment is paramount to support Department technology goals. IMD will align planned IT managed services outsourcing contracts to further attain those goals.

- *Department currently performs project cost validation utilizing past performance and industry benchmarks. IMD scrutinizes each project scope, such as costs, staffing resources, duration, risks, assumptions and change orders. IMD recognizes the need to evolve to a more competitive multi-vendor IT environment for the next generation of contracts, including upgraded project management Service Level Agreements (SLA). IMD is currently improving the Department's process for procuring vendor technology services.*

- *The current IMD governance framework includes the Service Management Manual (SMM), the repository of IMD procedures, and several vendor committees to conduct performance monitoring and contract compliance. IMD will review project development processes and documentation to further improve the oversight of transformation projects.*

Individual responsible for agency action due to recommendation:

Information Management Division, Director

Estimated date of resolution of recommendation:

February 1, 2020

The Department's Monitoring Processes Did Not Ensure That All Required Project Documentation Was Developed and Retained for the Transformation Projects Tested

Chapter 2-B Rating:

Medium [5]

The Department did not ensure that it and/or the vendor developed and retained all Department required project documentation. The Department did not have comprehensive, documented, and approved policies and procedures for the delivery and monitoring of contracted services, including the delivery of transformation projects (see Chapter 1-A for additional information). As a result of the lack of detailed policies and procedures, the Department did not ensure that it had complete documentation for certain transformation projects.

The Department generally ensured that certain documentation was developed and retained as documented in Department processes. Ten of the 13 transformation projects that auditors reviewed required the vendor to compile project documentation. For all 10 of those transformation projects, the Department:

- Had a documented project plan detailing the specific activities and milestones required to complete the project.

- Included the project in its weekly transformation project monitoring meetings with the vendor.

However, the Department did not develop and/or retain other Department required documentation. Specifically, of those 10 projects:

- One (10.0 percent) project did not have a documented needs assessment. While the remaining nine projects had a needs assessment, those assessments did not have documented Department approval. Without documented and approved project needs assessments, the Department is at an increased risk of developing projects that do not sufficiently address a business need.

- Two (20.0 percent) projects did not have documented business requirements. For two other projects, the Department did not approve the business requirements. Not documenting and approving business requirements increases the risk that completed transformation projects do not address all required functionality, which may result in the expenditure of additional funds to address those needs. For example, if a purchasing system was implemented without the required functionality

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[5] The risk related to the issues discussed in Chapter 2-B is rated as Medium because they present risks or results that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern and reduce risks to a more desirable level.

that allowed users to make corrections to purchase orders entered with errors, the Department would have to either implement workarounds or incur additional costs to fix that system.

- Five (50.0 percent) projects did not have a documented Department monitoring schedule and 1 project had a documented schedule that covered only a portion of the project's lifecycle. The monitoring schedules tracked the project deliverables, work products, and meetings with Department staff. The lack of a monitoring schedule increases the risk that the Department did not effectively monitor the projects.

Auditors tested all 13 transformation projects sampled for compliance with change order requirements. Of those 13 transformation projects, 9 (69.2 percent) did not have all Department-required approvals on the executed change orders. Ensuring that change orders are properly approved decreases the risk of unauthorized project changes.

The Department's lack of project documentation, including approved needs assessments and business requirements, may have contributed to scope changes, cost increases, and project delays for the transformation projects. For example, the 13 projects tested had 56 change orders, 31 of which increased estimated project costs by $3.64 million (93.9 percent more than originally estimated).

Of the $3.64 million in project cost increases, $2.35 million (64.6 percent) was related to scope changes. One project without defined and approved business requirements was responsible for 6 changes totaling $2.07 million. Adequately defining and documenting projects' needs and business requirements may have helped the Department better plan the projects and reduce the risk of scope changes and the associated cost increases.

Recommendations

The Department should:

- Document, approve, and follow comprehensive monitoring policies and procedures that cover all phases of the transformation project lifecycle.

- Ensure that Department business user needs and requirements are properly documented and approved during the planning of transformation projects.

- Verify that the Department and vendors complete and approve all required transformation project documentation.

- Ensure that all change orders receive all required approval signatures.

Management's Response

The Department concurs with SAO's recommendations.

Although the Department complies with state law, IMD lacked robust internal controls prior to FY 2017 to address the audit findings related to proper documentation and approvals.

- *Since FY 2017, the Department performed an organizational and process realignment to enhance IMD governance oversight throughout the project lifecycle to coincide with industry standards (e.g. ITIL). These enhancements included revamped business requirement documents and the establishment of change control board and project review committees. The Department will strengthen processes and documentation of change control board and project review committees.*

- *Continuous improvement will include more focus on our vendor management functions to ensure proper documentation is maintained throughout the lifecycle of projects. IMD will perform continuous improvement activities and better communicate knowledge gains, such as shared best practices, vendor performance review and cost-saving initiatives.*

Individual responsible for agency action due to recommendation:

Information Management Division, Director

Estimated date of resolution of recommendation:

February 1, 2020

The Department Should Ensure That It Receives All Reports and Services as Required

**Chapter 3
Rating:**

Medium [6]

Auditors determined that the Department did not receive three report deliverables and one service deliverable even though the vendor was contractually required to provide the deliverables. Specifically, the vendor did not provide the following:

- The annual 2017 transformation plan that documented the information technology projects that the Department planned to implement during the upcoming year.

- A periodic report (not less than annually) documenting the vendor's efforts in the preceding year to generally improve the quality of the vendor's performance. The Department asserted that the vendor attempted to deliver the report in 2015 but could not reach agreement with the Department on the content of the report. The Department received a copy of the report in September 2018 for calendar year 2017.

- A technology plan that documented multi-year implementation plans to achieve multi-year objectives that were included in the Department's information technology strategic plan. According to the contract, the technology plan must include details for refreshing equipment and software, as well as the adoption of new technologies and processes. Additionally, the contract required the Department to review the technology plan and provide potential amendments as needed.

- Security and validation services as required by the contract for four transformation projects tested that included application modifications/enhancements (see Chapter 2 for more information about the transformation projects).

Recommendation

The Department should design and implement processes to verify that the vendor delivers all contracted information technology deliverables as required.

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[6] The risk related to the issues discussed in Chapter 3 is rated as Medium because they present risks or results that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern and reduce risks to a more desirable level.

Management's Response

The Department concurs with SAO's recommendations.

IMD management and staff routinely conduct oversight of required contract reporting, which includes defining acceptance criteria and approving contract deliverables.

- *Department acknowledges select deliverable reports were not agreed upon in a timely manner, but determined that the delay did not impact overall service delivery. To improve, IMD has placed a greater focus on tracing vendor reporting schedules. In the most recent contract year, all deliverables were received and approved on time. Going forward, IMD will continue to regularly review the delivery and progress of required technology contract deliverables and service responsibilities.*

Individual responsible for agency action due to recommendation:

Information Management Division, Director

Estimated date of resolution of recommendation:

February 1, 2020

Appendices

Objective, Scope, and Methodology

Objective

The objective of this audit was to determine whether the Department of Transportation (Department) manages and monitors information technology contracts in accordance with applicable requirements.

Scope

The scope of this audit covered the Department's management and monitoring of its information technology outsourcing contract with NTT Data to provide operations and transformation services from September 1, 2016, through February 28, 2018.

Methodology

The audit methodology included collecting information and documentation, and interviewing Department staff regarding contract management and monitoring processes. Audit methodology also included identifying risk, conducting data analysis, and testing documentation related to the Department' management and monitoring of service delivery and financial payment processes, and analyzing and evaluating results of the tests.

Data Reliability and Completeness

Auditors reviewed Uniform Statewide Account System (USAS) vendor payment data during the audit period. To determine the reliability and completeness, auditors (1) reviewed the data extraction criteria and (2) performed a high-level review of data fields and their contents for appropriateness. In addition, auditors relied on previous State Auditor's Office audit work on USAS. Auditors determined the data was complete and sufficiently reliable for the purposes of this audit.

Auditors reviewed a Department-compiled list of transformation projects with a closed date during the audit period. To determine the reliability of the data, auditors tested the information in detail during the course of the audit. However, auditors were unable to determine the completeness of the data. As a result, the data was of undetermined reliability for the purposes of this audit.

Auditors reviewed an extract from a population of information technology system changes. That extract was from a help desk system used to track those changes; that system is owned and managed by third-party vendors. A review of the controls over that system was outside the scope of the audit. As a result, the data was of undetermined reliability for the purposes of this audit. However, no other sources of data for a population of system changes was available to auditors, and auditors used it for the purposes of this audit.

The Department provided auditors a report of detailed contract expenditures covering the contract from inception through February 2018. Auditors used that data, which auditors did not verify, to report contract expenditures in Appendix 3. As a result, that information is of undetermined reliability for the purposes of this audit.

Sampling Methodology

Auditors selected a risk-based sample of (1) vendor payment transactions from an extract of USAS data, (2) vendor-implemented closed transformation projects from the list provide by the Department, and (3) operational services from the contract statement of work exhibits. Auditors also selected weeks for testing based on risk to review the Department's monitoring. The sample items from the data sets above were generally not representative of the populations; therefore, it would not be appropriate to project the test results to the populations.

Auditors selected a non-statistical sample of system changes from a third party-managed help desk tool of information technology system changes primarily through random selection. The sample items were not necessarily representative of the population; therefore, it would not be appropriate to project the test results to the population.

Information collected and reviewed included the following:

- Department policies, procedures, process descriptions, and guidelines.

- Vendor-developed policies and procedures.

- USAS data of Department payments to vendors.

- Invoices and supporting documentation for the Department's vendor payments.

- Vendor contract and the contract exhibits including the statements of work.

- Documentation related to the Department's monitoring of the vendor's service delivery.

- Documentation from the Department's change management tool.

Procedures and tests conducted included the following:

- Interviewed Department staff to identify the Department's information technology contract management and monitoring processes.

- Reviewed applicable security and contract management and monitoring policies and procedures.

- Tested a sample of Department contract payments made to the primary vendor.

- Reviewed and tested the Department's monitoring of a sample of vendor-provided services.

- Reviewed and tested the Department's monitoring of a sample of closed transformation projects.

- Reviewed and tested the Department's monitoring of a sample of vendor-implemented information technology changes.

Criteria used included the following:

- Department policies, procedures, and process flow documentation.

- Vendor-developed policies and procedures.

- Texas Government Code, Chapters 2154, 2155, 2157, and 2262.

- *State of Texas Procurement and Contract Management Guide*, Version 1.1.

- *State of Texas Contract Management Guide*, Version 1.10.

- Title 34, Texas Administrative Code, Chapter 20.

- Title 1, Texas Administrative Code, Chapter 202 (including the Department of Information Resources' *Security Control Standards Catalog,* Version 1.3).

Project Information

Audit fieldwork was conducted from January 2018 through September 2018. 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:

- Michael Yokie, CISA (Project Manager)

- Jessica Volkmann, CPA (Assistant Project Manager)

- Katrina Koroma

- Alejandra Moreno Del Angel, CPA

- Brenda Zamarripa, CGAP

- Mary Ann Wise, CPA, CFE (Quality Control Reviewer)

- Cesar Saldivar, CFE, CGAP (Audit Manager)

Auditors used professional judgement and rated the audit findings identified in this report. Those issue ratings are summarized in the report chapters/sub-chapters. The issue ratings were determined based on the degree of risk or effect of the findings in relation to the audit objective(s).

In determining the ratings of audit findings, auditors considered factors such as financial impact; potential failure to meet program/function objectives; noncompliance with state statute(s), rules, regulations, and other requirements or criteria; and the inadequacy of the design and/or operating effectiveness of internal controls. In addition, evidence of potential fraud, waste, or abuse; significant control environment issues; and little to no corrective action for issues previously identified could increase the ratings for audit findings. Auditors also identified and considered other factors when appropriate.

Table 2 provides a description of the issue ratings presented in this report.

Table 2

Summary of Issue Ratings	
Issue Rating	**Description of Rating**
Low	The audit identified strengths that support the audited entity's ability to administer the program(s)/function(s) audited <u>or</u> the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.
Medium	Issues identified present risks or effects that if not addressed could <u>moderately affect</u> the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern(s) and reduce risks to a more desirable level.
High	Issues identified present risks or effects that if not addressed could <u>substantially affect</u> the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern(s) and reduce risks to the audited entity.
Priority	Issues identified present risks or effects that if not addressed could <u>critically affect</u> the audited entity's ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern(s) and reduce risks to the audited entity.

Table 3 shows the operations and transformation contract amounts that were budgeted and expended. The Department of Transportation shifts funds between the operations and transformation budgets as needed.

Table 3

Operations and Transformation Contract Details (Total Dollar Change Amendments Only) As of February 28, 2018				
	Outsourced Operations		Transformation Projects	
Contract Category	Budgeted	Department-reported Expenditures	Budgeted	Department-reported Expenditures
Initial Contract – Executed on May 30, 2013 (total contact amount of $232,648,454) [a]	$133,317,454		$99,331,000	
First Contract Amendment – Executed on May 31, 2013 (total amendment amount of $246,466,454)	13,818,000			
Fiscal Years 2013-2014 Expenditures [a b c]		42,861,664		$15,287,316
Fiscal Year 2015 Expenditures [c]		29,054,893		17,963,513
Fiscal Year 2016 Expenditures [c]		28,272,002		15,588,153
Fiscal Year 2017 Expenditures [c]		26,975,230		25,896,416
Purchase Order Change Notice – Executed on September 25, 2017 (total contract amount of $371,566,454) [d]	26,700,000		98,400,000	
Fiscal Year 2018 (through February 28, 2018) Expenditures [c]		13,444,601		13,685,120
Totals	**$173,835,454**	**$140,608,390**	**$197,731,000**	**$88,420,518**

[a] Contract includes $4,012,729 in initial transition costs that were included in the Operations Services category for both the initial contract amount and the expenditure amount for fiscal years 2013 and 2014.

[b] Includes amounts from June 2013 through August 2014.

[c] The expended amount in the transformation category includes service level agreement bonus payments. The Department paid bonuses totaling $3,778,418 from June 2013 through February 2018.

[d] Instead of amending the contract with the vendor, the Department amended a purchase order to increase the amount payable to the vendor for contracted services.

[e] Expenditure amounts are from Department-provided data that auditors did not verify.

Sources: The Department's contract with NTT Data and the amendment to that contract, and unaudited expenditure data from the Department.

Copies of this report have been distributed to the following:

Legislative Audit Committee

The Honorable Dan Patrick, Lieutenant Governor, Joint Chair
The Honorable Dennis Bonnen, Speaker of the House, Joint Chair
The Honorable Jane Nelson, Senate Finance Committee
The Honorable Robert Nichols, Member, Texas Senate
The Honorable John Zerwas, House Appropriations Committee
The Honorable Dustin Burrows, House Ways and Means Committee

Office of the Governor

The Honorable Greg Abbott, Governor

Department of Transportation

Members of the Texas Transportation Commission
    Mr. J. Bruce Bugg Jr., Chair
    Mr. Jeff Austin III
    Mr. Alvin New
    Ms. Laura Ryan
Mr. James Bass, Executive Director