IT PROJECT MONITORING REPORT

Kansas Department of Labor
OSCAR IT Project
Quarter Ending December 31, 2017

CURRENT STATUS: SATISFACTORY

R-17-017.3

Legislative Division of Post Audit

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Justin Stowe, Interim Post Auditor

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March 21, 2018

To: Members, Legislative Post Audit Committee

This report contains the findings from our third monitoring report of the *Kansas Department of Labor OSCAR IT Project (Quarter ending December 31, 2017)*. The audit team included Alex Gard (Principal IT Auditor) and Katrin Osterhaus (IT Audit Manager).

We would be happy to discuss the findings and conclusions presented in this report with any legislative committees, individual legislators, or other state officials.

Sincerely,

Justin Stowe
Interim Post Auditor

The Purpose of the OSCAR Project is to Modernize the State's Workers' Compensation System	Kansas has a traditional workers' compensation program which requires employers to maintain insurance coverage for their employees in the case of workplace accidents. The Department of Labor's current core information system—Biltmore—collects and stores information about workers' compensation insurance and related claims against that insurance. The agency uses information from Biltmore to conduct fraud investigations, hold administrative hearings, and administer the workers' compensation system.

Biltmore has been in production since August 2001 and has become outdated. The system has limited audit and history capabilities, requires manual status updates, and is not integrated with some of the agency's other systems, such as the imaging system. The Department of Labor's Online System for Claims Administration and Research (OSCAR) project will replace and modernize this system. |
| ***The Current OSCAR Project Started with a Separate Planning Project Called DigiComp*** | The effort to update the agency's workers' compensation system was split into two parts and were handled as two distinct projects. The planning process for the workers' compensation modernization project was carved off and handled as its own distinct project, known as DigiComp. DigiComp's overall goals were to identify the new system's requirements and to find a suitable company through the state's request for proposal (RFP) process to build it. The DigiComp project started in early 2014 and was completed in the fourth quarter of 2016 for a cost of about $580,000. The second "OSCAR" project comprises the actual construction of the new system.

Splitting large projects into smaller ones is a common practice, and there are several reasons why an agency might do this. Smaller projects with short timelines are easier to manage than larger projects with a long timeline. If a large multi-year project does not have a dedicated funding source, splitting it up into multiple parts can allow the agency to be more agile with its finances. Finally, it can be less expensive for an agency to make changes to a project's scope or schedule when the project is smaller. |
| ***We Selected the OSCAR Project for Continuous Monitoring Due to its Criticality and Cost*** | K.S.A. 46-1135 directs our office to conduct continuous audits of ongoing information technology projects by state agencies, including systems development and implementation. Our primary objective is to identify, as early as possible, when a project is at risk of failure due to scope, schedule, cost, or quality problems, and to communicate that risk to the appropriate level of project leadership, legislative bodies, or other stakeholders to get those |

projects back on track. Our secondary objective is to evaluate whether monitored IT projects have adequately planned for the implementation of required security controls.

In December 2016, we selected the OSCAR project from a total of 25 planned and active projects by state agencies. We chose the OSCAR project for several reasons, including the project's estimated cost, its criticality for the department and its stakeholders, and the failure of the department's previous unemployment insurance modernization project—which was ultimately cancelled in 2011.

Our Monitoring Reports Evaluate the System Development and Implementation Status of the Project

Authorized under K.S.A. 46-1135, our audits of ongoing information technology projects evaluate the health of the project regarding system development and implementation, and the project's adherence to relevant state statutes, Information Technology Executive Council (ITEC) policies and guidelines, Kansas Information Technology Office (KITO) templates and instructions for IT projects, and international project management standards and guidelines.

As part of our monitoring efforts, we reviewed project documentation and read relevant KITO reports. We also attended key communication meetings (e.g. kickoff, steering committee) from October 1, 2017 through December 31, 2017, and reviewed additional project documents as they became available. Lastly, we interviewed members of the project team and steering committee as necessary.

Due to their continuous nature, these audits are not conducted in accordance with generally accepted government auditing standards.

We provided the draft report to the Department of Labor on February 2, 2018. The department's response is included as ***Appendix A***.

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Overall Project Status:
SATISFACTORY

We determined the overall project health for the OSCAR project to be satisfactory. We evaluated the project across four major areas: project scope, schedule, cost, and quality. Except for quality, these areas also are tracked by the Kansas Information Technology Office, or KITO. *Appendix B* contains a glossary of frequently used abbreviations in this report. The scale below describes the categories we established for our assessment:

- **Satisfactory status:** The project generally meets applicable state laws, policies and guidelines, generally complies with project management best practices, and has no material issues in scope, schedule, cost or quality.

- **Caution status:** The project does not meet several state laws, policies or guidelines, has deviations or unrealistic milestones in scope, schedule, cost, or quality, or has weak or insufficient mitigation plans for known issues which could result in project failure.

- **Unsatisfactory status:** The project is not in compliance with many state laws, policies or requirements, or has scope, schedule, cost, or quality deviations that are sufficiently material and no mitigation plans, thus causing the project to be at significant risk of failure.

Appendix C summarizes the project measurement guidelines established by the Joint Committee on Information Technology. KITO uses these measures in their quarterly summary reports to determine whether active projects should be considered in alert or caution status.

The table on the next page provides a summary of our findings through the end of this monitoring period. The following sections provide details of our assessment in each of the four major areas we evaluated.

	Kansas Department of Labor's OSCAR Project Summary of LPA Monitoring Findings as of December 31, 2017				
Area	**Summary of Assessment**	**Satisfactory**	**Caution**	**Unsatisfactory**	**Informational**
Scope	The scope for this project remains unchanged.	x			
Schedule	Performance statistics for the project show work appeared to be on track as of the end of the fourth quarter.	x			
	As of January 22, 2018, the agency was working with its contractor to correct minor discrepancies in its project documentation.				x
Cost	Performance statistics for the project show spending appeared to be on track as of the end of the fourth quarter.	x			
Quality	Despite being nearly halfway through execution, officials have not made significant progress on a security plan for the system.		x		
Source: LPA review of project documents, interviews, and attendance of periodic project meetings					

SCOPE: SATISFACTORY

The scope for this project remains unchanged (satisfactory). The department's fixed-price contract with CapTech (which constitutes most of the work) helps prevent scope creep by removing the incentive to add work for more pay. Additionally, potential changes to project scope must go through an established change control process, which is an appropriate project management control. We observed the department's active participation in monitoring the contractor's activities and progress and noted no signs of scope issues thus far. Lastly, the project has an established process to track risks, assumptions, and issues, which helps project management staff identify potentially necessary scope changes.

SCHEDULE: SATISFACTORY

Performance statistics for the project show work appeared to be on track as of the end of the fourth quarter (satisfactory). Our review of the project schedule, milestones, and deliverables shows that sufficient time appears to have been devoted to the various project areas (e.g. requirements gathering, code writing, user testing, etc.). The fixed-price contract with CapTech, which promotes timely deliverables, accounts for more than two-thirds of the project costs. During this quarterly monitoring period, the department received and approved three expected deliverables that

were scheduled to get completed. The project manager's performance statistics, which incorporate the main contractor's work as well as an approximate status of internal and other costs, show the project is about 1% ahead of schedule.

As of January 22, 2018, the agency was working with its contractor to correct minor discrepancies in its project documentation (informational). At the end of each quarter, department officials are required to submit certain documents to the Kansas Information Technology Office (KITO). In preparing those documents for the period ending December 31, 2017, department officials noticed discrepancies in some project documentation normally updated by the contractor. We learned they are working with CapTech to get those documents revised and resubmitted to KITO. We verified the discrepancies did not affect our project management statistics listed in *Appendix D*, which resulted in an informational finding only.

COST: SATISFACTORY	**Performance statistics for the project show spending appeared to be on track as of the end of the fourth quarter (satisfactory).** This $8.3 million project has several cost components, the largest of which is a $6 million contract with CapTech. The department has made $2.6 million in payments to CapTech for 13 deliverables that have been completed and accepted through the end of this monitoring period. Performance statistics show that the project is about 2% over budget, which is within accepted limits. One primary reason why OSCAR appears over-budget is because more work has been done on the project than originally planned through the end of this monitoring period. We do not have concerns in this area at this point.
QUALITY: CAUTION	Project management standards include best practices for such things as product quality and management of stakeholders and project staff to help ensure projects have the best chance for success. We review those areas at the start of our monitoring activities and at a higher level throughout the monitoring period. We also specifically review whether project officials appropriately plan for implementing IT security requirements. Concerns we identify in any of these areas are reported in this section. **Despite being nearly halfway through execution, officials have not made significant progress on a security plan for the system (caution).** Best practices recommend evaluating security risks and necessary controls as early in an IT project as possible. This ensures the system will comply with necessary security standards and avoids having to "bolt on" necessary features at the end (often resulting in higher costs). Although officials answered our questions about planned security of OSCAR, they acknowledged

they had not begun translating security requirements from the planning documents into a comprehensive written security plan. Officials said OSCAR's security plan would be translated by April 2018. They also told us about other security actions planned for future quarters, including a system risk assessment, regular vulnerability scans, and a wholesale scan and review of the source code.

We will monitor this aspect of the project in detail during the next quarter to ensure IT security efforts make sufficient progress.

APPENDIX A
Agency Response

On February 2, 2018, we provided copies of the draft audit report to the Department of Labor. Its response is included as this Appendix. In its response, the agency generally concurred with the report's findings.

STATE OF KANSAS

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GOVERNOR JEFF COLYER, M.D.
LANA GORDON, SECRETARY

February 8, 2018

Justin Stowe, Interim Post Auditor
Legislative Division of Post Audit
800 SW Jackson, Ste. 1200
Topeka, KS 66612

Dear Mr. Stowe,

The Kansas Department of Labor received the draft report from Legislative Post Audit on February 2, 2018, for the Kansas Department of Labor's Online System for Claims Administration and Research (OSCAR) Workers' Compensation modernization project. We have reviewed the draft report and findings, as well as discussed them with Post Audit staff on February 5, 2018. This letter constitutes our official response.

KDOL views data security as one of the agency's top priorities. From the inception of the OSCAR Project, security has been a foundational requirement of the project. OSCAR is being developed in an Agile Project environment, and data security requirements, including risk assessments and controls, are imbedded in the system requirements at every stage. Additionally, KDOL has had an Information Security Officer assigned to the steering committee for the duration of the project. At the onset of the project, system security requirements were provided to the vendor, CapTech. CapTech incorporated those security requirements during the development the OSCAR system. Recently, a subset of the OSCAR steering committee, began completion of a robust system security plan based on the National Institute of Standards and Technology (NIST) standards and guidelines. The OSCAR system security plan is on schedule and is on track for completion in late March/early April 2018. A copy of the OSCAR system security plan has been provided to Legislative Post Audit for their review. Future planned security tests for the OSCAR system include vulnerability scans of the server configuration, application code review, system risk assessment, and business impact analysis. Full system security testing is scheduled to begin October 8, 2018. These security measures will all take place well before the November 30, 2018 implementation date.

KDOL would like to thank the LPA and their staff for their continued participation and feedback.

Respectfully,

Lana Gordon, Secretary
Kansas Department of Labor

Itemized Response to LPA Recommendations

Audit Title: **IT Project Monitoring Report - Kansas Department of Labor OSCAR IT Project**
Quarter Ending December 31, 2017

Agency: KDOL

	LPA FINDING	Agency Action Plan
1	**QUALITY - Despite being nearly halfway through execution, officials have not made significant progress on a security plan for the system (caution).**	Security has always been a priority for the OSCAR project. Security requirements were included in the project requirements developed during the planning portion of the project named DigiComp and provided to our vendor (CapTech) which have been used during the development of this project. KDOL has had a security officer assigned to the steering committee for the duration of the project. Recently a subset of the current Steering Committee began meeting to complete a robust system security plan based on NIST framework. Milestones: Due Date System Risk Assessment 3/2/2018 Business Impact Analysis 3/30/2018 System Security Plan 4/13/2018 Set-up PROD Environment 4/27/2018 User Roles and permissions 6/21/2018 Application Code Review 9/7/2018 Vulnerability Testing Performed as needed

APPENDIX B
Glossary of Frequently Used Terms and Abbreviations

The following list contains various abbreviations and a definition of those terms.

- **CITO - Chief Information Technology Officer**. K.S.A 75-7205 through K.S.A. 75-7207, established a CITO for each of the executive, judicial, and legislative branches of government. The respective CITO reviews and consults with each their branch agencies regarding information technology plans, monitors compliance with all information technology policies, and coordinates implementation of new information technology, among other duties.

- **OSCAR – Online System for Claims Administration Research/Regulation.** The new workers' compensation system created through this project. As of June 30, 2017, the system is scheduled to start being used (go live) in November 2018.

- **DigiComp –** The planning phase of the new workers' compensation system. This phase was handled as its own project. It started in early 2014 and was completed in the fourth quarter of 2016, for a cost of about $580,000.

- **ITEC - Information Technology Executive Council**. The 17-member Information Technology Executive Council is responsible for approval and maintenance of all information technology policies, IT project management procedures, the statewide technical architecture, and the state's strategic information management plan.

- **KDOL - Kansas Department of Labor.** The department is a Kansas Cabinet-level agency and assists in the prevention of economic insecurity through unemployment insurance and workers compensation. The department provides a fair and efficient venue to exercise employer and employee rights and helps employers promote a safe work environment for their employers.

- **KITO - Kansas Information Technology Office.** KITO supports the statutory responsibilities of the Executive, Judicial, and Legislative Branch CITOs and the state's Chief Information Technology Architect by providing enterprise services across state government.

- **SPI - Schedule Performance Index**. A measure of schedule efficiency expressed as the ratio of earned value (how much work has been completed by a certain date) to planned value (how much work was supposed to have been completed by that date). If the result is less than one, it indicates the project is behind schedule.

- **CPI – Cost Performance Index.** A measure of cost efficiency expressed as the ratio of budgeted cost of work performed to the actual cost of work performed. If the result is greater than 1, then the project is under budget, which is the best result.

APPENDIX C
JCIT Project Measurement Guidelines

JCIT Policy 2, approved by the committee in 1998, establishes many specific measures to evaluate state projects in active status. The table below enumerates those measures.

JCIT Project Measurement Guidelines		
Area	**JCIT Threshold**	**Condition**
Critical Path	10%-20% behind schedule	Project will be considered in a caution status.
Critical Path	20% or more behind schedule	Project will be considered in a red or alert status.
Task Completion Rate	Completion rate of 80%-90%	Project will be considered in caution status.
Task Completion Rate	Completion rate of 80% or less	Project will be considered in red or alert status.
Deliverable Completion Rate	Completion rate of 80%-90%	Project will be considered in caution status.
Deliverable Completion Rate	Completion rate of 80% or less	Project will be considered in red or alert status.
Cost	10-20% deviation from plan	Project will be considered in caution status.
Cost	20%-30% deviation from plan	Project will be considered in red or alert status.
Cost	30% or more deviation from plan	If costs are 30% higher than planned, serious consideration should be given to stopping the project. JCIT should find specific approval of the agency head and approval of a rationale that strongly supports continuation of the project. JCIT should consider recommending that an independent 3rd party be obtained to conduct a project review and make recommendations to the agency head and JCIT regarding causes for the project deviation from plan, corrective actions needed, expected outcomes, and whether the project should be continued.
Actual vs. Planned Resources	Deficiency gap of 15%-20%	The project manager should be acting with the project sponsor to correct this condition. For some projects, the impact of this level of deficiency may be greater than indicated and be reflected in other measures as well.
Actual vs. Planned Resources	Deficiency gap of 20%-25%	There should be a plan to show a compensatory change in resources or a plan to reduce the scope, costs, and objectives for the project with approval of the agency head. For some projects, the impact of this level of deficiency may be greater than indicated and nwill be reflected in the other measures as well.
Actual vs. Planned Resources	Deficiency gap of 25%-30%	A deficiency of this magnitude places the project in jeopardy and 3rd party review should be considered if the impact is reflected in other measures. The project should not be permitted to drift awaiting a compensatory resources plan or a new reduced project scope plan. If a new project plan is developed, the new financial plan, return on investment, and objectives to be achieved must be recalculated and presented for review as well.
Source: LPA review of project documents, interviews, and attendance of periodic project meetings		

APPENDIX D
Summary Schedule and Cost Statistics For OSCAR

This table includes quarterly statistics for the OSCAR project based on our review of internal project management reports for the quarterly time periods from January 1, 2017 through December 31, 2017. The initial project cost for the project was $8.7 million and is scheduled to be completed April 2019.

Summary Schedule and Cost Statistics				
Calendar Year Quarter ending	3/31/2017	6/30/2017	9/30/2017	12/31/2017
Cost Baseline - the approved version of the project budget	$8,678,450	$8,661,400	$8,256,450 (b)	$8,256,450
Planned Value (PV) - the authorized budget assigned to scheduled work (also known as Budgeted Cost of Work Scheduled)	(a)	(a)	$2,650,320	$3,542,017
Earned Value (EV) - the measure of work performed expressed in terms of the budget authorized for that work (also known as Budgeted Cost of Work Performed)	(a)	(a)	$2,749,398	$3,575,043
Actual Cost (AC) - the realized cost incurred for the work performed on activity during a specific time period	(a)	(a)	$2,877,006	$3,657,808
Schedule Variance (SV) - a measure of schedule performance expressed as the difference between the Earned Value and the Planned Value	(a)	(a)	$99,078	$33,026
Schedule Performance Index (SPI) - a measure of schedule efficiency expressed as the ratio of Earned Value to Planned Value (a ratio of 1.0 or better is good)	(a)	(a)	1.04	1.01
Cost Variance (CV) - the amount of budget deficit or surplus at any given point in time, expressed as the difference between Earned Value and Actual Cost	(a)	(a)	($127,608)	($82,765)
Cost Performance Index (CPI) - a measure of the cost efficiency of budgeted resources expressed as the ratio of earned value to actual cost (a ratio of 1.0 or better is good)	(a)	(a)	0.96	0.98
(a) As of June 30, 2017, agency staff had not created overall statistics to track cost and schedule. We did not calculate cost or schedule metrics for the first or second quarter of 2017. (b) Cost baseline was adjusted when estimated costs for an originally planned subproject were removed. Source: LPA analysis of OSCAR project management documentation				

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