March 28, 2019

Jeremy P. Fisher, SP 3A-C
Tina R. Shelton, LP 6C-C

REQUEST FOR MANAGEMENT DECISION – AUDIT 2019-15622 – HUMAN CAPITAL
MANAGEMENT SOLUTION

In response to concerns expressed about Tennessee Valley Authority (TVA) replacing the
current human resource (HR) system with a cloud-based human capital
management (HCM) solution, we audited TVA's project documentation related to vendor
selection. Our objectives were to assess whether TVA had (1) performed adequate
analysis to identify the risks related to implementing a new HCM solution and
(2) appropriately mitigated those risks. We reviewed TVA's project management
documentation to determine if risks were properly identified and had reasonable mitigation
plans. In addition, we reviewed completed risk mitigation actions.

In summary, we found TVA had not identified project risks related to ongoing changes in
the federal government's strategy for the use of cloud services. In addition, we were
unable to verify whether sufficient actions to mitigate one of the identified risks were
completed due to the lack of documentation. We recommend the Vice President and
Chief Information Officer, Information Technology (IT): (1) work with the HCM project
team to identify project risks and develop mitigation plans related to ongoing changes in
the federal government's strategy for the use of cloud services and (2) update processes
to document risk mitigation actions conducted in support of future IT projects. TVA
management agreed with the audit findings and recommendations in this report. See the
Appendix for TVA management's complete response.

BACKGROUND

In 2013, TVA implemented the current HR system, which TVA considers to be highly
customized. The HR system provides business functionality associated with the
implementation of several modules, including HR, benefits administration, and payroll.
When vendor support for this system ended in January 2018, TVA determined that
upgrading to a new version would require significant investment. Therefore, TVA decided
to move to a cloud-based HCM solution. To accomplish this, TVA started a project with
the scope of migrating from the current HR system to a cloud-based HCM solution that
would allow TVA's HR processes to take advantage of new functionality and reduce
complexity. In support of this project, TVA issued a request for proposal (RFP) for cloud
based HCM solutions and evaluated the responding vendor solutions as a part of their
selection process.

TVA's RFP for the HCM solution stated the new system (1) must successfully interface with other TVA systems, and (2) will need to deliver core capabilities that will replace some of TVA's customizations and simplify TVA future updates support needs. These capabilities include:

- Core HR administrative transaction support and reporting/analytics capabilities.

- Benefits (including benefits administration for both active employees and retirees).

- Compensation.

- Management and employee direct access (self service).

- Payroll.

- Talent acquisition management.

- Performance management and planning.

- Personnel security clearance tracking/processing (case management).

- Call/case management leveraged across Benefits Administration and Disbursement Services.

- Electronic medical records and test results.

- Travel and expense management.

In September and October 2018, the OIG received anonymous letters expressing concern about the selection process for the new HCM solution and requested the OIG perform a review. In response, the OIG conducted interviews with TVA leadership and others involved in the project to determine if an audit of the HCM solution project should be conducted. Based on the results of those interviews, we determined an analysis of the risks and related mitigation plans identified by the HCM project team should be performed.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objectives were to assess whether TVA had (1) performed adequate analysis to identify the risks related to implementing a new HCM solution and (2) appropriately mitigated those risks. The scope of this audit included analysis performed by TVA to make the decision to implement a new system as well as documentation supporting those decisions. Our fieldwork was performed between October 2018 and December 2018. To achieve our objective, we:

- Compared HCM project documentation with TVA Standard Program and Process 34.000, *Project Management*, to determine if project documentation was complete.

- Reviewed HCM project documentation to identify risk gaps and mitigations.

- Reviewed vendor RFP responses and compared them to the RFP and Federal Risk and Authorization Management Program[1] cloud contracting best practices for completeness.

- Reviewed the project risk register for completeness and reasonableness.

- Interviewed HR and IT personnel to gain an understanding of the project and to clarify mitigating actions taken in response to identified risks.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require 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 the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

FINDINGS

We reviewed TVA's project management documentation to determine if risks were properly identified and had reasonable mitigation plans. In addition, we reviewed completed risk mitigation actions. We found TVA had not identified project risks related to ongoing changes in the federal government's strategy for the use of cloud services. In addition, we were unable to verify whether sufficient actions to mitigate one of the identified risks were completed.

RISKS RELATED TO ONGOING CHANGES IN FEDERAL CLOUD STRATEGY

The federal government has started a process to move from the current cloud strategy, Cloud First, to a new strategy, Cloud Smart.[2] As part of this move, the Chief Information Officer Council and Chief Financial Officer Council are working with several federal agencies to develop a work plan of actions and targeted policy updates to the Cloud Smart strategy. Some of these policy updates and actions are scheduled to be completed before TVA's HCM solution is implemented. The HCM project team uses a risk register to identify items and future events that could impact the project's risks along with mitigation plans. However, the HCM project team had not identified and documented project risks and mitigation plans related to the Cloud Smart policy updates and actions.

UNABLE TO VERIFY SUFFICIENT ACTIONS TAKEN TO MITIGATE RISK

The HCM project team's risk register identified the risk that personal information may not be as secure in the cloud as compared to the current on premise HR system. To address this risk, TVA conducted security architecture reviews on each proposed system during

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[1] The Federal Risk and Authorization Management Program is a government-wide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services.

[2] Cloud First was created in 2010 by the Federal Government as its first cloud strategy. Cloud Smart is a long term, high level strategy that embraces best practices from both the federal government and the private sector, ensuring agencies have capability to leverage leading solutions to better serve agency mission, drive improved citizen services, and increase cyber security.

vendor demonstrations. However, due to a lack of documentation, we were unable to verify that these reviews sufficiently addressed the risk.

RECOMMENDATIONS

We recommend the Vice President and Chief Information Officer, IT:

1. Work with the HCM project team to identify project risks and develop mitigation plans related to ongoing changes in federal government's strategy for the use of cloud services.

2. Update processes to document risk mitigation actions conducted in support of future IT projects.

TVA Management's Comments – TVA management agreed with the audit findings and recommendations in this report. See the Appendix for TVA management's complete response.

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This report is for your review and management decision. Please advise us of your management decision within 60 days from the date of this report. If you have any questions, please contact Scott A. Marler, Audit Manager, at (865) 633-7352 or Sarah E. Huffman, Director, IT Audits, at (865) 633-7345. We appreciate the courtesy and cooperation received from your staff during the audit.

David P. Wheeler
Assistant Inspector General
  (Audits and Evaluations)
WT 2C-K

SAM:KDS
cc (Attachment):
  TVA Board of Directors William D. Johnson, WT 7B-K
  Samuel A. Austin, SP 3L-C Justin C. Maierhofer, WT 7B-K
  Clifford L. Beach Jr., WT 6A-K Jill M. Matthews, WT 2C-K
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  Janet J. Brewer, WT 7C-K Sherry A. Quirk, WT 7C-K
  Susan E. Collins, LP 6A-C Wilson Taylor III, WT 7D-K
  Trevor L. Cothron, SP 2A-C John M. Thomas III, MR 6D-C
  Robertson D. Dickens, WT 9C-K Rebecca C. Tolene, WT 7B-K
  Megan T. Flynn, LP 3A-C OIG File No. 2019-15622
  Dwain K. Lanier, MR 6D-C

March 25, 2019

David P. Wheeler, ET 3C-K

RESPONSE TO REQUEST FOR COMMENTS – DRAFT AUDIT 2019-15622 – HUMAN CAPITAL MANAGEMENT SOLUTION

Our response to your request for comments regarding the subject draft report is attached. Please let us know if your staff has any concerns with TVA's comments.

We would like to thank Sarah Huffman, Scott Marler, and the audit team for their professionalism and cooperation in conducting this audit. If you have any questions, please contact Krystal Brandenburg.

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Information Technology
WT 5D-K

Tina Shelton
Director
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LP 6C-C

ASB:SLW
cc (Attachment):
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OIG File No. 15622

Audit 2019-15622
Human Capital Management Solution
Response to Request for Comments

	Recommendation	Comments
1	We recommend the IT Vice President and Chief Information Office work with the HCM project team to identify project risks and develop mitigation plans related to ongoing changes in federal government's strategy for the use of cloud services.	Management agrees.
2	We recommend the IT Vice President and Chief Information Office update processes to document risk mitigation actions conducted in support of future IT projects.	Management agrees.