



# Final Audit Follow-Up

Period Ending March 31, 2020  
Report #2011 | September 28, 2020

## Audit of the Cloud Migration & Upgrade to PeopleSoft Systems

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**Summary from Original Report #1706 (Issued April 7, 2017):** This audit was conducted to evaluate and report on management's efforts to transition the City's PeopleSoft Financials and Human Resources systems to a "cloud" environment and subsequently upgrade those two major systems. The specific audit objectives included the following: (1) determine if the vendors associated with the upgrade project (Project) were selected in accordance with best practices and if contracts executed with those vendors were appropriate, adequate, and in the best interests of the City; (2) determine if payments to Project vendors were reasonable, appropriate, supported, properly approved, and in accordance with controlling contractual provisions; (3) identify best practices relating to cloud computing and determine if the migration of the two PeopleSoft systems to a cloud environment was conducted in accordance with those practices; and (4) determine and report on the overall status of the Project, to include successes and challenges.

Based on our audit work, we concluded:




- For the most part, City staff followed industry best practices during the migration of the two PeopleSoft systems to the cloud environment.
- Efforts to upgrade those two City systems to current versions after the transition to a cloud environment were suspended due to challenges resulting from a lack of clarity and specificity in certain contractual terms and conditions regarding roles and responsibilities of City and contractor staff.
- Payments made to the contracted vendors in connection with the transition to the cloud environment and subsequent upgrade efforts were generally appropriate and correct.
- Enhanced project planning and scheduling as well as stronger negotiation and contractual restrictions would likely have reduced those costs. Furthermore, while applicable contracts were executed with legitimate vendors for the needed services through authorized processes, it likely would have been more beneficial to the City if vendors had been selected using a direct solicitation of proposals through a competitive process.
- Lastly, hosting costs associated with the transition and upgrade efforts are expected to exceed initial City projections.

**Current Status of Action Plan Steps:** In this follow up we are providing an update on management's progress in addressing the seven action plan steps not previously completed by management. A total of 24 action plan steps were established by management in response to our audit recommendations in audit report #1706. Of those 24 steps, 17 were completed in follow-up reports #1903 and #2001. As of September 10, 2020, the remaining seven steps were due for completion; all seven were completed or resolved during this follow-up period. This report is the third and final follow-up on this audit. The status of the seven remaining action plan steps is discussed in the table below. <sup>1</sup>

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<sup>1</sup> The numbering sequence of the action plan steps is based on the steps provided by management in the original audit and only those steps which were outstanding at March 31, 2020 are included.

| Action Plan Steps  | Status as of March 31, 2020  |
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| <p>1. The Procurement Policy (Commission Policy 242) will be revised to specify a period of time that must have passed since an employee's employment with a potential vendor before that employee will be allowed to participate in evaluations and/or selections of proposals for City business from that previous employer.</p> <p><i>(Management's initial estimated completion date: 9/30/2017)</i></p> | <p><b>Complete.</b> At the September 9, 2020, Commission Meeting, an updated Procurement Policy was approved by the City Commission. Included in the Procurement Policy changes is a clause prohibiting a City employee from participating in a competitive selection process which includes a responding vendor for whom that City employee worked within the previous two years. </p>   |
| <p>11. For future City IT projects of the nature addressed in the audit, vendor/contractor invoices will be (1) stamped as to date of receipt and (2) timely reviewed and paid by appropriate staff.</p> <p><i>(Management's initial estimated completion date: 9/1/2017)</i></p>  | <p><b>Complete.</b> As noted in a previous follow up (see Audit Report #2001, page 31), management established a process to document the date invoices are received. During this follow-up period, Technology and Innovation (T&amp;I) paid the cloud hosting and cloud management invoices timely and in compliance with the City's prompt payment policy. </p>  |
| <p>14. For future City IT projects of the nature addressed in the audit, efforts will be made to better plan and schedule onsite work by contracted employees such that contractors do not incur re-scheduling costs that are reimbursed by the City.</p> <p><i>(Management's initial estimated completion date: 1/1/2018)</i></p>   | <p><b>Complete.</b> The City recently upgraded the City's telephone system. To assist with the upgrade, the City retained Presidio, an information technology consulting company. As part of managing the telephone upgrade project, management worked with Presidio to ensure onsite work was planned and scheduled in such a way to minimize incurring additional costs. </p>  |
| <p>16. For future migrations of City systems to a cloud environment, appropriate load testing will be performed to ensure the applicable environment can efficiently and effectively process the expected volume of transactions and activity.</p> <p><i>(Management's initial estimated completion date: 9/1/2018)</i></p>  | <p><b>Complete.</b> As noted in step 14 above, the City recently upgraded its telephone system. While the telephone system upgrade was a similar project to the one resulting in the migration of the PeopleSoft systems to the cloud, there were key differences that made load testing an inappropriate test to determine if the telephone system could effectively process the expected telephone activity. As such, rather than load testing a performance assessment was conducted to determine if the newly installed telephone system could process the anticipated volume of telephone calls. Management's conclusion based on that assessment was that the City's new telephone system was able to efficiently and effectively process the City's expected call volume. </p> |

| Action Plan Steps   | Status as of March 31, 2020  |
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| <p>17. For the Project addressed in this audit, consideration will be given to developing a formal plan to guide City staff in the event the City leaves the current cloud provider.</p> <p><i>(Management's initial estimated completion date: 7/30/2018)</i></p>  | <p><b>Complete.</b> T&amp;I developed a comprehensive plan to guide the City in the event the City leaves the current cloud provider and relocates the PeopleSoft Human Resource and Financial software systems to a new cloud hosting company or returns the systems "in-house" (i.e., on City servers). </p>  |
| <p>20. A comprehensive City policy on cloud computing will be established and adopted that will include:</p> <ul style="list-style-type: none"> <li>• Review appropriate independent IT audit reports to determine if the applicable cloud environment (includes data centers) is reasonably secure and protected. Those reports will be obtained and used during the vendor selection process and reviewed as appropriate.</li> <li>• Consideration will be given to implementing geoblocking measures for the current and future cloud environment.</li> <li>• Appropriate log management practices will be implemented.</li> </ul> <p><i>(Management's initial estimated completion date: 3/31/2018)</i></p> | <p><b>Complete.</b> A policy on cloud computing, Administrative Policy and Procedure #402, was implemented in August 2020. That policy includes, for example, requirements related to reviewing independent IT audit reports, consideration of implementing geoblocking, and requiring a determination as to who (the City or the cloud hosting vendor) is responsible for log management. </p>   |
| <p>23. Efforts to identify and implement ways to reduce cloud hosting and management costs associated with the two migrated PeopleSoft systems will continue.</p> <p><i>(Management's initial estimated completion date: 1/1/2018)</i></p>  | <p><b>Resolved.</b> During this follow-up period, the City's cloud hosting costs increased by an average of \$3,000 a month. Management attributed the increase to additional security prevention and monitoring enhancements necessary to ensure the City's data continues to be properly protected in the cloud environment. The City's PeopleSoft Systems hosted in the cloud are continually being upgraded and changing thereby requiring more resources. Management reported it is not expecting cloud hosting costs to decrease in the future; accordingly, this step is considered resolved. </p> |

## CONCLUSION

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Management established 24 action plan steps to address the audit recommendations in the original audit (Report #1706). Seventeen of the action plan steps were noted as having been completed in audit follow-up reports #1903 and #2001. The remaining seven steps were due for completion by March 31, 2020. Based on actions taken by management this follow-up period, we concluded five of those seven steps were completed or resolved, and the two remaining steps need additional attention from management to help ensure their completion. This is our third follow up to the Audit of the Cloud Migration and Upgrade to PeopleSoft Systems.

We thank the Technology and Innovation and Procurement staff for their cooperation and assistance during this follow-up audit.

## APPOINTED OFFICIAL'S RESPONSE

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We have reviewed the City Auditor's Follow-Up Report on the Cloud Migration and Upgrade to PeopleSoft Systems Audit and are pleased to see that 22 of the 24 action plan steps identified in the audit report have been completed. Additionally, the remaining two action plan steps were addressed and have been completed. We would like to thank the City Auditor's staff for their time and effort on this audit and follow-up.

## STATEMENT OF ACCORDANCE

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The Office of the City Auditor's mission is to provide the City Commission an independent, objective, and comprehensive auditing program of City operations; to advance accountability through the provision of assurance and advisory services; and to actively work with Appointed Officials in identifying risks, evaluating controls, and making recommendations that promote economical, efficient, and effective delivery of City services.

We conducted this audit follow-up in accordance with the International Standards for the Professional Practice of Internal Auditing and Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit follow-up to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our objectives. We believe the evidence obtained provides a reasonable basis for our conclusions based on our audit objectives.

Please address inquiries regarding this report to the Office of the City Auditor at (850) 891-8397.

<http://www.talgov.com/transparency/auditor.aspx>

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