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Review of the County's ERP System Implementation

April 2016

*Internal Audit Report Authorized by the
Maricopa County Board of Supervisors*

The County is implementing an Enterprise Resource Planning (ERP) System. This project will update and improve the County's financial, procurement, and performance budgeting software.

Report Highlights

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Project Management controls are strong;
resource constraints remain a key risk.

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Project costs adhered to the contract pricing;
minimal changes have been made to the project
timeline.

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The vendor, CGI, has produced high quality
project deliverables.

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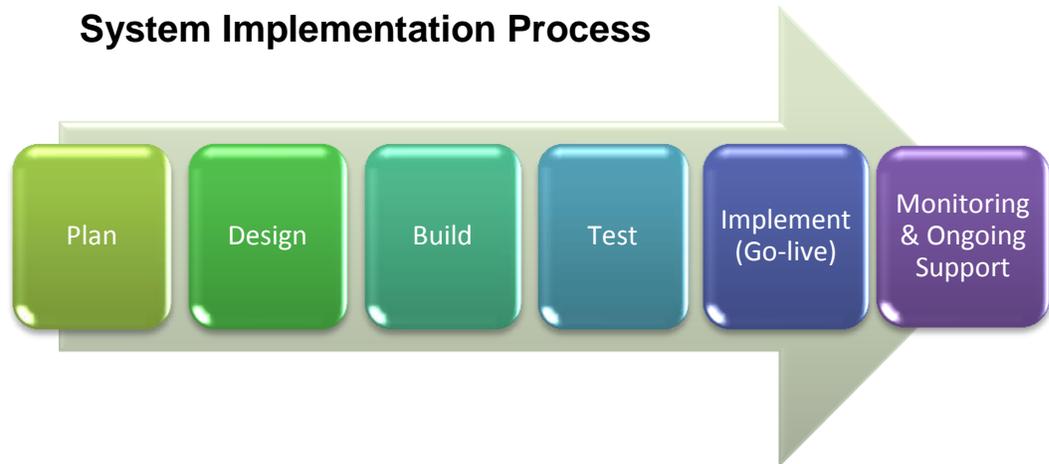
Project testing is underway; the project team will
monitor the status of critical, go-live items.

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A strong training plan is in place.

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Background The County is implementing its first Enterprise Resource Planning (ERP) System. The ERP software is based on Advantage 3.10 financial, procurement, and performance budgeting software provided by CGI Technology and Solutions Inc. (CGI). CGI is the County's current financial system provider. The County used the previous financial system, Advantage 2.X, for almost 20 years. The ERP system is scheduled to go live July 1, 2016. A large system implementation is complex and involves many steps as illustrated below.



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- Objectives** To determine that:
- Project timelines and costs incurred to date are in line with contract and budget estimates.
 - Controls over project deliverables are sufficient to ensure the system functions according to the County's business requirements.
 - Client testing, integrated system testing, user acceptance testing, performance testing, and readiness assessments are adequately planned.
 - Controls are sufficient to ensure training will meet the County's requirements.

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- Scope** Our work focused on the pre-implementation of the ERP system, as of February 2016. We reviewed controls over project testing, training, and project deliverables. To perform this review, we interviewed the project management team members, and reviewed the following documents:
- CGI contract and Service Organization Control report
 - Invoices and payment documents
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- Project communication tools
 - Upgrade Analysis and Fit Gap Analysis documents
 - Status, Defect, and other project tracking logs
 - Testing templates and scripts
 - Training courses and lesson plans
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Standards This review was approved by the Board of Supervisors and was conducted in conformance with International Standards for the Professional Practice of Internal Auditing. The specific areas reviewed were selected through a formal risk-assessment process.

Auditors Stella Fusaro, Audit Manager, CIA, CGAP, CRMA, CFE
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This report is intended primarily for the information and use of the County Board of Supervisors, County leadership, and other County stakeholders. However, this report is a public record and its distribution is not limited.

We have reviewed this information with project management. The Action Plan was approved by the Project Steering Committee¹ in April 2016. If you have any questions about this report, please contact Stella Fusaro, Audit Manager, at 602-506-1777.

¹ The Project Steering Committee includes Sandi Wilson, Deputy County Manager; Shelby Scharbach, Assistant County Manager; David Stevens, Chief Information Officer; and Wes Baysinger, Chief Procurement Officer.

Audit Results

Issue #1: Project Management

Observation: We reviewed key project planning documents. These documents provide a clear framework for understanding roles and responsibilities that are critical to the project's success. They include the scope, timeline, methodology, project team member responsibilities, and the potential risks associated with the project.

We noted that the County established a project team consisting of various County and CGI employees. The management structure and organization clearly defined the personnel responsible for the project in each key functional area (Office of Enterprise Technology, Office of Management and Budget, Department of Finance, and Office of Procurement Services). Steering Committee and CGI responsibilities were also defined.

The project has a dedicated project manager; however, the County opted to have a number of key operational team members work on the project in addition to completing their regular day-to-day duties. The risk created by the increased staff workload was acknowledged early in the project. We noted that this issue remains a high-risk item that could impact the success of the project.

Conclusion #1A: Key project planning documents provide a clear framework for project responsibilities, and identify key risks.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #1B: Conflicts between project team members' regular operational duties and project implementation tasks may create resource constraints that could affect the project.	
Recommendation	ERP Project Team Action Plan
1B-1 Where possible, assign dedicated resources for project tasks.	Concur – in progress Where possible, teams are looking for ways to assign tasks to fewer dedicated resources. This cannot be implemented across the board due to current County staffing constraints. Also where possible, the project team is leveraging project personnel savings to hire contract resources temporarily for critical tasks. Target Date: Ongoing

Issue #2: Project Communication

Observation: The project team has undertaken a number of measures to facilitate communication of project decisions and status. We reviewed the various communication tools, including: the ERP Management Dashboard, the Project Steering Committee Update Slides, and the Office of Enterprise Technology (OET) status summaries. We noted that some project team members indicated that they were not kept apprised of decisions affecting them.

Conclusion #2A: The project team has implemented a variety of communications tools to keep members and stakeholders informed of project status.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #2B: Communication between team members could be improved.	
Recommendation	ERP Project Team Action Plan
2B-1 Implement a bulletin system to inform team members and stakeholders of project status and priorities.	<p>Concur – will implement with modification</p> <p>The project team will continue to refine its project communication and updates. The ERP Project Team will continue to post project status to the ERP Program website utilized to communicate program developments county wide and send direct project communication to the existing Advantage user community through email. Scheduled training sessions will also be leveraged to communicate project status.</p> <p>Target Date: 6/30/16</p>

Issue #3: Project Cost and Timeline

Observation: We interviewed the project manager and budget personnel, and reviewed invoices and payment documentation. We noted that contract provisions, costs, timelines, and deliverables are being closely tracked and approved by: the project team, the Office of Management and Budget (OMB), and OET. Fees paid to date were paid in accordance with the agreed-upon contract amounts. Deliverable timelines were generally adhered to, and the contract was minimally amended to reflect changed timelines.

Conclusion #3A: The project team is closely monitoring contract provisions, costs, timelines, and deliverables.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #3B: Project costs to date match the contracted amount; minimal changes were made to the project timeline.	
Recommendation	ERP Project Team Action Plan
None	N/A

Issue #4: Project Plan Changes

Observation: We reviewed the contract and project plan and noted that a robust project plan is in place. The plan captures detailed tasks by ID number, task name, percentage complete, responsible party, assigned resources, duration, and start and finish dates. However, we noted that although project plan changes were discussed with stakeholders, changes were made directly to the project plan. Changes should be subject to a formal change management process, and should be logged.

Conclusion #4A: Project plan changes were not formally documented.	
Recommendation	ERP Project Team Action Plan
4A-1 Formally document project plan changes including change requests, reasoning, discussion points, and approvals.	<p>Concur – with modification</p> <p>Key project changes have been documented in project change requests and signed off by the Project Executive Steering Committee. A project change log will be initiated for smaller items. Significant changes to the plan were coordinated and communicated with stakeholders, including a formal re-baseline of the plan.</p> <p>Target Date: 6/30/16</p>

Issue #5: Project Deliverables

Observation: We reviewed the required project deliverables outlined in the contract.² We found that they appear to be very thorough, and accurately reflect the details of the project requirements from both a business and a technological perspective.

Additionally, system defects are being appropriately logged and tracked to resolution, and conversion plans and results appear to be progressing according to plan. We noted that only one critical configuration issue was identified to date; it was closed prior to our review of the log. There were ten serious issues noted as open; however, these items appear to be progressing, and resolutions should be reached on schedule. The contract outlines a strong plan for addressing any defects identified in the software deliverables.

The effective management of these deliverables and logging devices has allowed the project to proceed on time; the projected go-live date appears achievable.

Conclusion #5A: CGI appears to be adhering to the terms of the contract and has produced high quality deliverables.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #5B: Controls over defects are strong.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #5C: The projected go-live date appears achievable.	
Recommendation	ERP Project Team Action Plan
None	N/A

Issue #6: Project Interfaces and Reports

Observation: We interviewed project team members, inspected status tracking documents, and noted that responsibilities were clearly assigned and tracked.

The Interfaces Status Tracker includes a prioritized list of interfaces for each key module. The tracker indicates that there are several items still in progress and tasks

² Key contract deliverables included: Upgrade Analysis Document, Fit Gap Report, Technical Assessment, Requirements Traceability Matrix, Testing Plan, Defect Log, and Conversion Strategy.

waiting for design, development, and testing. This was confirmed by CGI. Project team members report concerns with the status of tasks related to designing and developing interfaces and reports, and the ability to complete these tasks on time. This portion of the project is critical to the success and timing of the implementation.

We also reviewed the Report Issue Log and noted that twelve items were open, in progress, or awaiting closure status. The remaining forty-seven items were in the closed or rejected status.

Conclusion #6A: Project team members have concerns with the design and development status of interfaces and reports and the ability to complete them on time.	
Recommendation	ERP Project Team Action Plan
6A-1 Closely monitor the status of interfaces and reports critical to go-live and reallocate resources or request additional assistance, as necessary, to meet the established deadlines.	<p>Concur – in progress</p> <p>ERP project management recognizes the importance of interfaces and reports to overall project success. Project team is meeting twice weekly on outstanding interface tasks to help ensure completion. Similar efforts are underway for reporting. This coordinated effort includes resources from all stakeholders and CGI.</p> <p>Target Date: 6/30/16</p>

Issue #7: Project System Security Controls

Observation: We interviewed project team members and reviewed the security workflow plan documentation. We determined that the plan appears to appropriately address the expected access considerations associated with an implementation. The documentation showed that the project team has begun filling out the security and workflow design template. This is a work-in-progress, and the project team members state that they plan to test the configurations during user acceptance testing.

CGI is responsible for many of the internal controls related to security. The contract requires that CGI provide the County with its Service Organization Control Report (SOC 1). SOC 1 is a system review by an external auditor that assesses CGI’s internal controls. It also identifies the controls the County should have in place, called complementary user entity controls. We found that project team members from the Department of Finance obtained and reviewed the CGI SOC 1. However, the project team members were not able to provide documentation that they 1) reviewed the relevant complementary County controls noted in the report, and 2) verified that the controls are in place.

Conclusion #7A: Security and workflow planning is sufficient and is underway.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #7B: The project team has not documented a review of CGI's SOC 1 complementary user entity controls.	
Recommendation	ERP Project Team Action Plan
7B-1 Before cutover, review the SOC 1 report and map the controls that are the County's responsibility to the County's control structure, to reduce the risk of gaps.	<p>Concur – in progress</p> <p>Finance and OET annually review the CGI SOC 1 Report. Finance's response to the SOC1 Report states that CGI's action and response (if any applicable findings) are acceptable to the County. This can only be concluded by reviewing the report in its entirety. The established process has been acceptable to the County's external auditors. In the future, the County will specifically state that we have reviewed the complementary controls, and verified that the controls were in place.</p> <p>Before final cutover, Finance will review the latest SOC 1 report and map controls that are County's responsibility to the County's control structure.</p> <p>Target date: 6/30/16</p>

Issue #8: Project Testing

Observation: We reviewed the test plan, and a sample of tests scripts and results to determine that issues were resolved. We found that the County, in conjunction with CGI, has developed a comprehensive and thorough testing approach for: integrated system testing, user acceptance testing, and performance testing. These tests will increase assurance that the system is performing as expected, and that issues encountered at go-live will be less significant. Unit and integrated system testing is almost complete. User acceptance testing is currently underway. Additionally, County testing products are being developed, and should facilitate the successful execution of user acceptance testing. However, we noted through inspection of limited test scripts, that test results, specifically failures, were not consistently documented in detail. This could result in defects not being identified or resolved promptly.

The project manager stated that the Project Steering Committee will meet early in June to make an informed go/no-go decision based on the critical nature and status of outstanding testing issues.

Conclusion #8A: System test plans appear to be robust; tests are underway.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #8B: Logging of test results could be improved.	
Recommendation	ERP Project Team Action Plan
8B-1 Complete the pre-approved user acceptance testing templates in their entirety with additional focus on any scripts or scenarios that failed.	<p>Concur – will implement with modifications</p> <p>Testing templates were developed and used differently by Finance and Office of Procurement Services. Significant testing has already been completed and it is not practical to go back and re-complete templates. Project team is focused on specific scripts or scenarios that failed. These test cases are being re-tested.</p> <p>Target Date: 6/30/16</p>

Issue #9: Project Readiness Assessment and Cutover

Observation: We reviewed the project readiness assessment, cutover plan, and conversion summary documents for appropriateness. We noted that the County and CGI appear to be in the beginning stages of the readiness assessments and of the cutover to the new system. At the time of our review, most cutover documents were in the creation and review phase.

We reviewed the contract with CGI to determine if the service level agreement for post-implementation support and hosting services is sufficient. We found that the County and CGI have established a thorough service level agreement document that outlines the transition approach and ongoing support.

We noted that some project team members do not intend to do a final, detailed, user-access review to verify the accuracy of user account setup prior to go-live. Conducting one final review of both users and authorities/permissions can ensure that only appropriate, authorized users have access to the live production environment.

Conclusion #9A: System cutover planning is currently underway.	
Recommendation	ERP Project Team Action Plan
None	N/A
Conclusion #9B: A detailed user access review should be conducted prior to go-live.	
Recommendation	ERP Project Team Action Plan
9B-1 Conduct one final comprehensive user access review prior to go-live to ensure no unauthorized user access is present in the system at the time of cutover.	<p>Concur – in progress</p> <p>Finance has been establishing user security roles applicable to the new system. It has always been the intent of Finance to review the security roles prior to or at go-live to ensure segregation of duties.</p> <p>Target date for completion: 6/15/16</p>

Issue #10: New System Training

Observation: We interviewed personnel involved in the training portion of the implementation project to determine if the team designed (1) a thorough and effective training plan, and (2) a method for tracking the progress of end users in completing the training. We also reviewed the various training related materials provided by the project team. We determined that a strong training plan is in place, comprising: instructor-led and computer-based training, training manuals, job aids, and specific task aids. Training will be tracked in the learning management system. We believe that, if implemented as planned and designed, the training program will effectively educate County employees, and should ensure that users are fully prepared to navigate the new system at go-live.

Conclusion #10A: A strong training plan is in place. If implemented as planned, the training should ensure that users are prepared to use the new system.	
Recommendation	ERP Project Team Action Plan
None	N/A