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# **Performance Audit of CEO/Office of Information Technology Recommendations Follow-Up**

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**Final Report (#131401)**

November 5, 2013

Office of the Performance Audit Director  
County of Orange, California

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## Office of the Performance Audit Director

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333 W. Santa Ana Blvd., Santa Ana, CA 92701

November 5, 2013

Honorable Board of Supervisors:

Transmitted herewith is the follow-up to the three performance audit reports on the CEO/Office of Information Technology (CEO/IT) completed in 2009-2010. This follow-up report focuses on CEO/IT's progress in implementing the 48 audit recommendations.

Overall, CEO/IT has made commendable progress. The audit team is able to close 27 of 48 (56%) recommendations and is expected to close the remaining 21 recommendations over the next 6-12 months.

We have discussed our findings with Mahesh Patel, Chief Information Officer. We would like to acknowledge and thank the management and staff in CEO/IT who assisted us in completing this follow-up audit.

Respectfully submitted,

Philip Cheng  
Performance Audit Director

cc: Mike Giancola, County Executive Officer  
Mahesh Patel, Chief Information Officer

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# Executive Summary

In 2009, the Board of Supervisors requested that the Office of the Performance Audit Director (Office) audit the efforts and activities of the County Executive Office/Office of Information Technology (CEO/IT). The audit results were presented in three reports, covering five tasks:

- 1) Document and Verify Current IT Resource Allocations
- 2) Review CEO/IT Proposed Business Model (IT Strategic Plan)
- 3) Review CEO/IT Operational Readiness
- 4) Review CEO/IT Performance Measurement
- 5) Evaluate CEO/IT Communications.

Overall, CEO/IT has made significant progress in implementing the audit's recommendations. As of the date of this report, CEO/IT has completed 27 of the 48 recommendations (56%) and plans on completing the remaining 21 recommendations (44%) over the next 6-12 months. The greatest challenge faced by CEO/IT in implementing the audit recommendations has been the upcoming transition to a managed services IT model, which has taken several years to plan and develop. The majority of the recommendations that have not yet been implemented are those that will be addressed during and following the transition to the new model.

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## I. Introduction

Supervisors Bates and Nguyen, in response to the Board of Supervisors' postponement of the approval of the County Information Technology Strategic Plan in March 2009, requested that the Office of the Performance Audit Director (Office) audit the efforts and activities of the County Executive Office/Office of Information Technology (CEO/IT). To manage its sizeable scope, the audit was broken down into five tasks, which were presented in three reports:

<b>Task I</b>	Document and Verify Current IT Resource Allocations	First Report (Dec. 15, 2009)
<b>Task II</b>	Review CEO/IT Proposed Business Model (IT Strategic Plan)	Second Report (Mar. 2, 2010)
<b>Task III</b>	Review CEO/IT Operational Readiness	Third Report (Jun. 9, 2010)
<b>Task IV</b>	Review CEO/IT Performance Measurement	
<b>Task V</b>	Evaluate CEO/IT Communications	

The primary conclusions from the 2009-2010 performance audit of CEO/IT were:

- Information Technology (IT) at the County of Orange is an immense budgetary expense that requires increased scrutiny and a more robust framework for tracking and reporting costs.
- The IT Strategic Plan developed by CEO/IT for the County of Orange does not achieve its intended purpose of serving as an actionable roadmap for Countywide IT operations and investments over the next five years.
- The IT infrastructure services that are most valued by agencies/departments (e.g., network, security, telephone) are generally well provided by CEO/IT. This is quite an accomplishment in an organization with the size and complexity of the County of Orange, and it is a testament to the skill and work ethic of many CEO/IT employees.
- There are many critical opportunities for improvement within CEO/IT. Given the scale of these challenges, meaningful progress cannot be made without a strong commitment from CEO/IT leadership to adjust its approaches to Countywide IT strategic planning, IT project/portfolio management, performance measurement, and external/internal communications.

Across the three reports, the Office made 48 recommendations for improvement. Overall, CEO/IT concurred or partially concurred with 39 (81%) of the recommendations and did not concur with 8 (17%) of the recommendations, as shown in the following table:

<b>Audit Recommendation</b>	<b>Concur or Partially Concur<sup>1</sup></b>	<b>Do Not Concur</b>	<b>Requires Further Analysis<sup>2</sup></b>	<b>Total</b>
Number	39	8	1	48
Percentage	81%	17%	2%	100%

This follow-up review focuses on CEO/IT's progress in implementing the performance audit's 48 recommendations. The following table summarizes CEO/IT's progress as of the date of this follow-up report:

	<b>Completed</b>	<b>In Progress</b>	<b>Total</b>
<b>Task I</b>	6	0	6
<b>Task II</b>	3	12	15
<b>Tasks III-V</b>	18	9	27
	<b>27</b>	<b>21</b>	<b>48</b>
	<b>56%</b>	<b>44%</b>	<b>100%</b>

Although only 56% of recommendations have been completed to date, as will be discussed in more detail later in this report, CEO/IT is on track to complete the majority of the remaining recommendations over the next eight months.

## II. Significant Improvements

Following the performance audit of CEO/IT, the County Executive Officer appointed a new Chief Information Officer<sup>3</sup> (CIO). With this change in leadership, CEO/IT has made significant progress in implementing the audit's recommendations and in making other improvements to the County's information technology.

Noteworthy progress made by CEO/IT to implement the audit's recommendations and to improve its operations overall includes, but is not limited to:

- The establishment of a revised IT Governance Model, with clear roles and responsibilities, through which CEO/IT has accomplished activities such as the development of strategic priorities for countywide IT.
- A greater focus on providing a high level of customer service to agencies/departments through initiatives/activities such as improved

<sup>1</sup> "Partially Concur" includes recommendations that CEO/IT management did not explicitly concur with in 2009-2010 but have since taken implementation actions to complete the recommendations.

<sup>2</sup> "Requires Further Analysis" is CEO/IT management's response to Task I, Recommendation #5.

<sup>3</sup> In November 2010, with the departure of the former CIO, the current CIO took over as Acting CIO; the current CIO was formally appointed in August 2011.

communications (e.g., CIO newsletters), more consistent use of customer appraisal forms for enterprise IT projects, and annual workshops on Internal Service Fund 289 rate calculations.

- The development of a new IT service delivery model (i.e., managed services) that is anticipated to yield cost savings to the County and provide a high level of service.
- Successful launch of a new County eGovernment website, a project that was executed on an accelerated timeline and required the active participation and cooperation of all County agencies/departments.
- Enhanced requirements for Information Systems Requests, including more detailed business cases that require identification of measurable outcomes for proposed project initiatives, and a detailed review process by a Project Review Board.

### III. Continuing Improvement Opportunities

The greatest challenge faced by CEO/IT in implementing the 48 audit recommendations has been the upcoming change in the County's IT service delivery model. Soon after the completion of the performance audit reports in 2009-2010, CEO/IT embarked on the development of a proposal for transitioning the County to a "managed services" IT delivery model, which outsources service delivery to a provider that is contracted to deliver a defined outcome or level of service.<sup>4</sup>

The transition to such a model required several years and many resource hours dedicated to developing a Request for Proposal for each of the two scopes of work (i.e., one for data center services and one for network/data services) and awarding the contracts. Since the development of an IT Strategic Plan would logically follow the transition to the new model, audit recommendations that were directly related to CEO/IT's strategic plan have not been completed. Over the past few years, CEO/IT has worked with agencies/departments to identify IT strategic priorities, but because a formal strategic plan has not yet been developed, the following recommendations are considered in progress:

- Revise the strategic planning methodology to include important logical steps that ensure proper alignment and clarity. (Task II, Recommendation #1A)
- Revise the Plan to include a discussion of significant IT industry trends that would be directly relevant to improving the County of Orange IT environment. (Task II, Recommendation #2)

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<sup>4</sup> In the past, the County's IT service delivery has aligned with a "staff augmentation" model where the County contracted with a provider for additional staff resources.

- Revise the Plan to include all major IT frameworks that are currently being used, or could be useful, in the Orange County IT environment. (Task II, Recommendation #3)
- Include a section in the revised IT Strategic Plan that discusses implementation and next steps for the Plan and assigns ownership for the Plan; identify performance measurements for each IT Strategic Goal. (Task II, Recommendation #4)
- Clearly identify and localize strategic planning roles within CEO/IT. Work with agencies/departments to ensure that CEO/IT strategic planning activities are valuable to and consistent with agencies'/departments' own strategic planning efforts. (Tasks III-V, Recommendation #8)

CEO/IT anticipates that these strategy-related recommendations will be completed by June 2014, shortly after the transition to the new IT managed services model.

## IV. Follow-Up Summary

The following tables summarize the status of each of the 48 audit recommendations.

### Task I

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
1	CEO/IT should work with County agencies/departments to develop a budget to actual database to track all information technology costs in the County. The analysis of this information needs to be conducted at least annually, the results of which should be formally presented to the Board of Supervisors. Any cost-related performance measures identified through this process should be incorporated in the County's ongoing Balanced Scorecard initiative.	Concur with recommendation. CEO/IT has developed a proposal for adding specific budget Object Codes for IT expenditures within the County budgeting process such that actual expenditures to budget can be tracked by specific categories, either at a departmental level or in aggregate. This proposal has been discussed with both CEO/Budget and Auditor-Controller staff. This effort will be given a high priority and the proposal seeks to leverage existing investments (CAPS+) and processes to accomplish its objectives.	Completed	Quarterly countywide IT spend reports to IT Executive Council and Board staff were reviewed. Reports include measures such as IT Spend per Employee for Orange County vs. overall State & Local Governments. CEO/IT has been tracking spend by IT Objects that were established in FY 11/12 (categories such as Communications & Phone Charges, Hardware & Software Maintenance, Hardware & Software Leases/Licenses, and Minor Equipment). Since the County has not continued its Balanced Scorecard Initiative, the recommendation to incorporate cost-related performance measure in the Balanced Scorecard initiative is not applicable at this time.

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
2	CEO/IT should compile the full costs for all ongoing CEO/IT-driven Key IT Projects and report this information via the IT Quarterly Report process.	Partially Concur with Recommendation. CEO/IT will report on subsequent implementation phases for a project. However, ongoing costs would be included in the operational budget. Once implemented, any system, whether it is CAPS+, Cerner, ATS, PTMS or eGov, will have an ongoing operational cost component for the life of the system. These costs were not intended to be reported on in the Quarterly Status Report as the purpose of the report was to report on the health of a project during design and implementation. An alternative approach to monitoring ongoing costs for key systems is to follow a programmatic model such as that for CAPS+ where all costs are budgeted for and managed through Agency 014 which was established specifically for CAPS.	Completed	As part of the Information Systems Request form, the implementation costs, as well as the projected ongoing costs, are required. This information is not presented on the IT Quarterly Reports, but are reflected in the annual budget process and the data are available to the Board of Supervisors, if desired.
3	CEO/IT should follow all sole source procurement policy requirements, including ensuring that every Justification Form is reviewed and signed. In addition, Deputy Purchasing Agent review should not be delegated back to department management for approval, but referred to the County Purchasing Agent for review, if necessary.	Concur with recommendation. As stated above, the CEO/IT Contracts Manager who is a Deputy Purchasing Agent now reviews and approves all sole source contract documentation to ensure compliance with policy requirements. This process was covered during internal procurement training that occurred for Office of the CIO staff in January 2009 and highlighted in a formal procurement manual.	Completed	Copies of Sole Source Justification Forms from January 2009 to the present were reviewed and it was confirmed that all forms have been signed. Current practice is for the CEO/IT Contracts Manager who is a Deputy Purchasing Agent to review and approve all sole source contract documentation to ensure compliance with policy requirements.
4	The County Purchasing Agent, in consultation with the CEO and County Counsel, should recommend to the Board of Supervisors a specific dollar threshold above which sole source equipment/software leases require Board approval.	Concur with recommendation. The County Purchasing Agent will provide a recommendation to the Board.	Completed	Policy changes were implemented in the July 2012 version of the Contract Policy Manual (CPM). Non-real estate capital leases are now included under Service Contracts where approval by the Board of Supervisors shall be required for all sole source service contracts that exceed a total annual amount of \$50,000 or a two (2) year consecutive term, regardless of dollar amount.
5	CEO/Purchasing, with County Counsel assistance, should negotiate a re-write of this portion of the ACS contract.	Requires further analysis. CEO/IT will review the language with County Counsel to determine its intent and make changes as appropriate while ensuring compliance with CPM thresholds.	Completed	The language in the County's contract with ACS was modified in July 2010 to make it clear that ACS is not to "obtain software or equipment for the use and benefit of the County which would be required to be competitively bid under the County of Orange policies and procedures." There is no longer an additional clause that states "or Contractor shall acquire the software or equipment as if it had been acquired under the direction and supervision of, or under the authority of, the County."
6	CEO/IT Purchasing and the initiating agency/department should ensure that all sole source procurement policy requirements are followed, including ensuring that every Justification Form is reviewed and signed. In addition, Deputy Purchasing Agent review should not be delegated back to the soliciting department but referred to the County Purchasing Agent for review, if necessary.	Concur with recommendation. As stated above, the CEO/IT Contracts Manager who is a Deputy Purchasing Agent now reviews and approves all sole source contract documentation to ensure compliance with policy requirements. This process was covered during internal procurement training that occurred for Office of the CIO staff in January 2009 and highlighted in a formal procurement manual.	Completed	Copies of Sole Source Justification Forms from January 2009 to the present were reviewed, and it was confirmed that all forms have been signed. Current practice is for the CEO/IT Contracts Manager who is a Deputy Purchasing Agent to review and approve all sole source contract documentation to ensure compliance with policy requirements.

Task II

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
1A	Recommendation 1A: Revise the strategic planning methodology to include important logical steps that ensure proper alignment and clarity.	Do not concur. A logical methodology has been followed and encompasses the activities in the alternative approach proposed in the Performance Auditor's report including an assessment of the current state and the development of IT Strategic Goals.	In Progress	An IT Strategic Plan that includes a logical strategic planning methodology will be developed following the completion of the IT Sourcing transition. The target date for completion of this recommendation is June 2014.
2	Revise the Plan to include a discussion of significant IT industry trends that would be directly relevant to improving the County of Orange IT environment.	The technical blueprint that is part of the Strategic Plan already addresses industry trends. These are further elaborated upon in the documents related to Enterprise Architecture and Domain Architecture.	In Progress	An IT Strategic Plan that includes a discussion of significant IT industry trends directly relevant to improving the County of Orange IT environment will be developed following the IT Sourcing transition, with a completion target of June 2014.
3	Revise the Plan to include all major IT frameworks that are currently being used, or could be useful, in the Orange County IT environment.	The Plan already considered major IT Frameworks from Zachman as well Decision Support / Data Modeling framework which were used in developing Enterprise Architecture, Domain Architecture, and a high level enterprise data model for Decision Support.	In Progress	An IT Strategic Plan that includes all major frameworks currently being used or could be useful to the County of Orange IT environment will be developed following the IT Sourcing transition, with a completion target of June 2014.
4	Include a Countywide IT-specific vision and mission statement in the Plan. Use these statements as foundational elements in the development of IT Strategic Goals, Strategies and individual Initiatives/Projects.	Please see response above and to Recommendation 1A.	In Progress	The Countywide IT Governance Model, approved by the Board on March 1, 2011, includes an IT-specific mission ("Provide quality, innovative, fiscally responsible and secure Information Technology solutions that support the business needs of the County of Orange as a whole now and into the future"), as well as IT goals. A vision has yet to be developed but should be included in the future development of an IT Strategic Plan (commencing in early 2014, with an anticipated completion in June 2014).
5	Working with County agencies/departments, define roles and responsibilities for CEO/IT and agency/department IT operations, seek approval of these roles from the Board of Supervisors, and clearly communicate these roles to all IT stakeholders.	As stated above in the response to Finding 5, the CIO determined that a Federated model would be most effective with highly decentralized, autonomous agencies. Specific division of responsibilities are defined depending on the specific needs of an agency. The specific roles are defined in a number of ways depending on the circumstance. For operational support of servers, specific services are defined through Memoranda of Understanding between agencies and CEO/IT. Other specific services are defined through the quarterly client demand meetings where changes in service needs are addressed. Finally, for large projects, specific responsibility matrices are developed which define the roles for CEO-IT, the Agency/Department, and any vendors on the project. Should the County's organizational business model change, the CIO will respond accordingly.	Completed	An IT Governance Model was approved by the Board on March 1, 2011. The model details the roles and responsibilities of the various governing bodies, including the IT Executive Council, the Technology Council, Enterprise Architecture Group, and IT Investment Review Board.
6	Include a discussion of the County's use of IT contractors/ outsourcing strategy in a revised version of the IT Strategic Plan.	A discussion of current and future sourcing models will be incorporated into the next version of the 3 Year Tactical Plan.	In Progress	Two scopes of work have been approved by the Board of Supervisors for a managed services IT model. A sourcing strategy for Data Center Services (Scope 1) and Voice and Data Network Services (Scope 2) resulted in the development of an RFP for managed services for these areas. Scope 1 was approved by the Board on May 14, 2013 and will begin in September 2013. Scope 2 was approved by the Board on September 10, 2013. CEO/IT is also working with HRS and CEO/Budget to address risks related to long-term contract staffing. These strategies will be included in the new Strategic Plan (target completion date of June 2014).

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
7	Conduct a thorough assessment of the current County of Orange IT environment with respect to Services, Organization, and Governance to identify both strengths and weaknesses. Use this assessment to build a target (desired) IT environment and as the basis for developing IT Strategic Goals, Strategies, and Initiatives/Projects.	Do not concur. Specific detailed assessments were conducted for the Data Center and server management and Countywide Network and Voice Infrastructure outside of the Strategic Plan Development project. Other "holes" in the IT capability in the County were identified earlier and separate studies were initiated for Geographic Information Systems (GIS) and Electronic Document Management Systems (EDMS). The recent IT Sourcing Strategy identified an approach for sourcing of "Utility" Services through a managed services model. The scope includes managed services for voice and data networks Countywide, including an uplift to a converged voice and data network, and managed services for data center services that are within the scope of services currently provided by CEOIT to Agencies/Departments. This approach is consistent with a model that focuses on specific outcomes and service levels at a fixed price with the appropriate incentives to providers. An appropriate Organizational Design which follows industry best practices will be further refined based on a managed services sourcing model.	In Progress	CEO/IT provided the SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis performed during governance workshops in October 2010, which was reviewed by the auditor. Further analysis and assessments of County IT (e.g., IT Services) will be conducted as part of the development of an IT Strategic Plan (projected completion in June 2014).
8	Develop additional IT Strategic Goals that address the County's IT needs/deficiencies (including those of internal customers), consider consolidating existing external-facing Goals, and ensure that all Goals are aligned to an IT-specific Mission/Vision.	Volume IV: Tactical Plan, provides specific Enterprise and Domain Architecture goals / plans to address these needs. Strategic Goals were further elaborated and resulted in Guiding Principles for Enterprise Architecture and Domain Architecture.	In Progress	CEO/IT provided the updated Information Systems Request (ISR) Business Case Form which requires agencies/departments seeking funding and approval for all projects >= \$150,000 to develop and submit a business case. The submittal of this form helps establish IT priorities. The development of IT Strategic Goals will be part of the planned development of the Countywide IT Strategic Plan to commence in early 2014, with a target completion date of June 2014.
9	Note: Original audit misnumbered the recommendations, skipping #9			
10	Develop specific Applications-related strategies that are aligned with IT Strategic Goals and address the County's Applications deficiencies/needs.	This has already been addressed. Applications-related strategies are addressed at two levels. The first is related to the practice of Applications Development, Maintenance and Support. These are being addressed by the Applications and Data Architecture Group comprised of applications development staff from Agencies and CEO/IT. The second is related to development of strategies for specific line-of-business applications. These are governed by the business function and decisions related to them are generally left to Agencies/Departments based on business need and funding availability. Any initiative over \$150,000 must be justified through the Information System Request (ISR) process and Annual Budget approval process. The ISR process could be further modified to address requirements for appropriate alignment.	In Progress	CEO/IT developed an Application Inventory site on SharePoint in collaboration with Internal Audit, which will be used in the development of an Application Portfolio Management strategy as part of the IT Strategic Plan (target completion date of June 2014).
11	Align Data-related strategies to the County's Data deficiencies and business needs. Modify the data model included in the Plan to be more specific to the County of Orange.	This will be an ongoing process driven by the business needs of the Business Communities of Interest that have been established.	Completed	Activities related to this recommendation are ongoing and driven by the Business Community, and, thus, is being considered completed. The topic is covered in the CIO's ongoing meetings/discussions with the CEO Executive team and Department Heads. Timing of implementing data-related strategies will continue to be driven by business need and funding.

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
12	Develop specific strategies to address important Countywide IT infrastructure issues.	This is the current practice. See response to Finding 12 above. On an ongoing basis, CEO-IT evaluates the performance and capacity of infrastructure and takes the necessary action to upgrade or enhance capabilities. Such actions have included Wide Area Network upgrades, Storage system upgrades, and Data Center power upgrades.	In Progress	CEO/IT has already identified and funded infrastructure investments for the County Data Center. The transition to the new managed services IT model will also address infrastructure issues. For example, Scope 1 will address storage upgrades and Scope 2 will address necessary voice and network infrastructure upgrades. It is anticipated that this recommendation will be completed 31 months (April 2016) from award of Scope 2, which was approved by the Board on September 10, 2013.
13	Revise the Plan to include important strategies related to IT Services and Organization, and demonstrate how IT Governance strategies align with IT Strategic Goals.	Do not concur. However, we will be assessing the Managed Services delivery model and changes to the role of CEO-IT and that of agencies vis-a-vis the service provider.	In Progress	A Countywide IT Governance Model and the delineation between CEO/IT and agency/department roles and responsibilities was developed and approved by the Board March 1, 2011. Furthermore, the Board approved contracts with two vendors (SAIC and Xerox for data center services and voice/data network services on May 14, 2013 and September 10, 2013, respectively) for transition to a managed services IT model. The transition will involve a restructuring of the IT organization, and following the transition, CEO/IT plans on commencing an initiative to evaluate IT centralization opportunities - one of the strategic priorities identified during the County's strategic planning process in 2012. The target completion date for this recommendation is June 2014.
14	Articulate Enterprise Architecture as a goal for the County, discuss the current state of EA at the County, and include specific strategies for how the target EA will be implemented in Orange County.	As stated above, the best way to describe EA at the County at the time of the development of the Plan was "non-existent". Development of a target EA can incur significant expense and CEO-IT's approach has been to leverage specific business driven projects for EA. One such example has been to enable the use of Team Foundations Server for managing source code for the PTMS and eFBN applications. Another example is for the Public facing infrastructure where a Portal, Search Engine and Content Management have been implemented.	In Progress	In October 2011, CEO/IT facilitated training workshops on Enterprise Architecture with participation across agencies/departments. Following its transition to a managed services IT model, CEO/IT will continue to address Enterprise Architecture as a priority and as part of the County IT Strategic Plan development (target completion date of June 2014).
15	Develop a methodology to guide and prioritize IT investment decisions and current IT resource allocations, leveraging the efforts of the existing Project Review Board.	Such a process is in place. See response to Finding 15 above: The Performance Auditor's report cites examples of initiatives such as 311 Customer Service Center, Emergency Mass Notification and Business Continuity as having no linkage to IT -specific mission, goals and strategies. The reason for this is quite clear in that they serve specific business purposes unlike other initiatives that may be more technology focused such as network upgrades or storage system replacements. (p. 34) With respect to having a methodology for prioritizing initiatives, such a process has been in place since 2007 as part of the annual Information Systems Request (ISR) process and includes the Project Review Board comprised of the County Budget Director, Agency/Department IT Directors, Agency/ Department business management and CEO-IT management. They review all IT project budget requests over \$150,000 and recommend those that meet specific criteria for consideration in the next Fiscal Year's budget. The Project Review Board was a direct result of the governance framework established in the IT Strategic plan. Previously, only CEO-IT staff were on the review committee.	Completed	CEO/IT provided the updated Information Systems Request (ISR) Business Case Form which requires agencies/departments seeking funding and approval for all projects >= \$150,000 to develop and submit a business case. The submittal of this form through the Board-approved IT Governance process establishes IT investment decisions and priorities.

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
16	Include a section in the revised IT Strategic Plan that discusses implementation and next steps for the Plan and assigns ownership for the Plan; identify performance measurements for each IT Strategic Goal.	See Response to Finding 16 above: The 3-Year Tactical Plan provides a proposed timeline for both Tactical Agency and Department IT Projects as well as for Tactical Enterprise Architecture Projects. Measurements for success or failure are required for the ISR process as business cases are detailed further for budget approval. Ongoing status is provided to the Board via the Quarterly IT Project Status Report. Plan ownership clearly belongs to the CIO who will update and refresh the Plan working with stakeholders and using the Governance Process.	In Progress	The development of an IT Strategic Plan (completion target of June 2014) will discuss implementation and next steps for the plan and assign ownership for the plan, as well as identify performance measurements for each IT Strategic Goal.

### Tasks III-V

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
1	Implement Task II audit report recommendation #5: "Working with County agencies/departments, define roles and responsibilities for CEO/IT and agency/department IT operations, seek approval of these roles from the Board of Supervisors, and clearly communicate these roles to all IT stakeholders." It would be most efficient for CEO/IT to resolve this issue prior to the release of the IT Sourcing RFP.	Concur. Continuing clarification and evolution of the federated model will be helpful to all parties.	Completed	An IT Governance Model was approved by the Board on March 1, 2011. In addition to detailing the roles and responsibilities of the various governing bodies, the document also details the roles and responsibilities generally of the CIO and agency/department IT managers/directors.
2	As the County's central IT organization, CEO/IT should undertake a focused effort to (1) clarify that agencies/departments are CEO/IT's primary customers throughout its organizational documents, and (2) comprehensively identify and analyze agency/department business needs and IT operations.	Concur. This was undertaken in the development of the IT Strategic Plan and is in place for Agencies that we serve. Respecting the autonomy of Agencies, assessments and other engagements focused on their IT operations are conducted as requested. The new CEO/IT organization that will be developed as a result of a transition to a Managed Services IT Sourcing model will reflect a greater focus on client relationship management.	In Progress	As part of its transition to a managed services IT model, CEO/IT is proposing an organizational change that includes a Client Relationship Management function that focuses on addressing agency/department business needs. CEO/IT provided, and the auditor has reviewed, the proposed future IT organization that includes a Client Relationship Management function. The transition, and the establishment of this function, is estimated to be completed by June 2014 (Scope 1 awarded to SAIC on May 14, 2013; Scope 2 awarded to Xerox on September 10, 2013)
3	(a) Streamline the existing organizational structure, and (b) identify a small number of topical (not organizational) areas that can be developed as "Centers of Excellence" (e.g., Project Management, Vendor Management).	Partially concur. As a result of the change in the IT Sourcing model where the County will no longer have direct responsibility for managing contractor IT staff and will be focused on managing service levels, outcomes, contract performance and client relationship management, the CEO/IT organization will be re-designed at the appropriate time per the "retained organization design" activities that have already been defined in the IT Sourcing project plan.	In Progress	As part of its transition to a managed services IT model, CEO/IT will be restructuring its organization. CEO/IT provided, and the auditor has reviewed, the proposed transition organization and future IT organization. The transition is estimated to be completed by June 2014.
4	The CISO should report exclusively to the CIO.	Concur. Although the current position holds dual responsibilities, the CISO function reports directly to the CIO.	Completed	The County Information Security Officer (CISO) now reports exclusively to the CIO.

## CEO/IT Audit Recommendations Follow-Up

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
5	(a) Ensure formal knowledge transfer procedures are in place and followed for personnel separations/transfers, (b) Initiate a separation/transfer interview process for any future separations/transfers, to be conducted by the Human Resources Department, in order to capture any common challenges/issues, and (c) Ensure that agency/department customers are always formally notified of relevant staffing changes (both County and contractor) in a timely fashion.	5(a) Concur. 5(b) Concur. We will pass this recommendation to HRD. 5(c) Concur. We will formalize the current practice.	In Progress	CEO/IT has documented operating policies and procedures which allow staff to be cross-trained. CEO/IT also informs staff of relevant staffing changes through email and monthly Technology Council meetings. However, a separation/transfer process has not yet been developed by HRS as of this time. The CIO will be discussing this recommendation with the County Human Resources Officer (CHRO) in October 2013, with a target completion date of June 2014.
6	(a) Formalize and seek Board support for CEO/IT's role in the oversight of Countywide IT activities, which includes the important task of understanding and opining on agency / department IT spending prior to ASRs being heard by the Board, and (b) Report IT Project Review Board scoring to the Board of Supervisors as part of the annual budget process.	6 (a). Concur. We will formalize the current process and seek Board approval for the current Federated model for IT management in the County. 6 (b). Concur. The IT Project Review Board scoring will be reported to the Board of Supervisors.	Completed	An IT Governance Model, approved by the Board on March 1, 2011, formalizes CEO/IT's role in the oversight of Countywide IT activities. CEO/IT also publishes a calendar of ASR review dates, requiring that IT-related ASRs must be submitted to the CIO for internal review. Budget briefings provided to Board staff include a review of IT Project Review Board scoring.
7	Revise the IT Governance structure to (1) establish a "dotted line relationship" between the CIO and the Technology Council and between the CIO and the Business Council, (2) consolidate groups with redundant participants, (3) ensure that the establishment of any separate IT governance groups for individual IT initiatives / projects are for subject matter needs and that these groups link up with the Countywide IT Governance structure, and (4) ensure that all Countywide IT funding and initiatives/projects are thoroughly vetted and agreed upon through the Governance decision-making chain.	7(1). Do not concur. The purpose of governance is not to supplant existing roles and responsibilities such as CEO and Board reviews and approvals. Furthermore, this recommendation contradicts Recommendation 1 above. 7(2). Concur. In Progress. Planning for consolidation is underway. 7(3). Concur. This is the current practice. 7(4). Concur. This is the current practice with the Project Review Board reviewing all IT projects over \$150K.	Completed	An IT Governance Model was approved by the BOS on March 1, 2011. The structure reflects the audit's recommendations (i.e., simplified structure; dotted line relationship between the CIO and Technology Council; a process for ensuring that IT funding and projects/initiatives are thoroughly vetted and agreed upon). Note: there is no longer a Business Council.
8	Clearly identify and localize strategic planning roles within CEO/IT. Work with agencies/departments to ensure that CEO/IT strategic planning activities are valuable to and consistent with agencies'/departments' own strategic planning efforts.	Concur. However, significant Strategic Planning activities are on hold pending Board approval of the County IT Strategic Plan. However, as stated above, tactical activities are being carried out by appropriate CEO/IT managers and governance teams which are the focal point for coordinating Countywide initiatives.	In Progress	The transition to the new managed services IT model is in the early stages. It is anticipated that this recommendation will be implemented during the Retained Organization design phase of the transition, during which strategic planning roles will be identified. This recommendation has a target completion date of June 2014.
9	Develop an Action Plan for managing the Countywide IT Application Portfolio within the context of the County's Federated IT system.	Concur. CEO/IT recognizes the need to do Applications Portfolio management and is working within the appropriate governance groups to chart a course and deliver an action plan.	In Progress	CEO/IT developed an Application Inventory site on SharePoint in collaboration with Internal Audit, which will be used in the development of an Application Portfolio Management strategy. The target completion date for this recommendation is June 2014.
10	CEO/IT should take additional steps to build a sufficient strategic framework and solid organizational foundation in order to achieve successful management of future IT projects/initiatives.	Concur. The Performance Auditor acknowledges that the necessary tools and processes are in place. This will be an ongoing process.	Completed	CEO/IT provided its Project Management Methodology, last updated in 2012. It delineates roles and responsibilities, frameworks/templates, and policies and procedures. A review of the Clarity IT Portfolio Management system also shows that projects are now more comprehensively documented and tracked in the system. Examples of agendas from resource planning meetings and a process flow for resource planning are evidence that CEO/IT approaches the management of projects in a more strategic manner. CEO/IT also now holds "Community of Practice" meetings to review and train personnel on project management best practices, with topics such as developing business cases and scope management.

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
11	<p>Improve the initial stages of IT Project Management (project initiation and planning, business case analysis) to ensure that proposed solutions (1) address clear business needs for all stakeholders, and (2) include agency/department buy-in before proceeding with project implementation.</p>	<p>(1) Concur. Detailed business case development has been in place since FY 2008-2009. We agree this is a very important in determining funding of project investments as we continue to mature the process. (2) Concur. Agency buy-in is critical and is the current practice.</p>	<p>Completed</p>	<p>CEO/IT provided the updated Information Systems Request (ISR) Business Case Form which requires agencies/departments seeking funding and approval for all projects &gt;= \$150,000 to develop and submit a business case. The submittal of this form helps establish IT priorities and that there is a sufficient case made for investing in specific projects. ISRs are reviewed, rated, and prioritized by the IT Investment Council, which includes agency/department representatives. Recommendations from this council are then submitted to the CEO and IT Executive Council for approval. Furthermore, as part of the IT Governance process, countywide or enterprise projects undergo a process, as outlined in the IT Governance Model approved by the Board, whereby the IT Technology Council, composed of all agency/department IT Managers, establishes annual IT Strategic Priorities.</p>
12	<p>Reexamine PMO project management services to develop a clear service catalog that matches the needs of agencies/departments. Consider the use of contractors for intermittent increases in demand, as well as staff reallocation if agency/department demand for these services is not planned to increase in the near term.</p>	<p>The PMO and Solutions Project Management groups have been re-aligned based on Project Demand. The Solutions Project Management group has been dissolved for FY 10-11. To date four contract Project Managers were released or re-assigned within the CTO organization due to lack of Project Demand; in addition, one County project manager was reassigned to support Child Support Services full time. CEO/IT continues to provide technical project management for the deployment of large-scale platforms for ATS, PTMS and CAPS+. A PMO Project Manager is assigned to manage all CEO/IT components of these projects; including infrastructure, platforms, release management and Security Assessments.</p>	<p>Completed</p>	<p>CEO/IT's project management service offering is detailed in its Service Catalog (last updated in January 2013). A policy was also developed to ensure CIO oversight of all IT projects greater than \$1,000,000.</p>
13	<p>Merge BIS management into the PMO and BIS/Information Resource Management staff into Network &amp; Platform Services. BIS/IT Process &amp; Quality Assurance responsibilities should be assumed by the PMO.</p>	<p>Do not concur. However, as a result of the change in the IT Sourcing model where the County will no longer have direct responsibility for managing contractor IT staff and will be focused on managing service levels, outcomes, contract performance and client relationship management, the CEO/IT organization will be re-designed at the appropriate time per the "retained organization design" activities that have already been defined in the IT Sourcing project plan.</p>	<p>In Progress</p>	<p>CEO/IT is developing a business case for its current Application Development and Maintenance service offering, which will address the viability/role/demand for the Business Information Services (BIS) group. The estimated completion date for this recommendation is March 2014.</p>
14	<p>Focus resources on securing adequate core, mission-critical services for agencies/departments, such as Network Platform Services, before pursuing other non-core activities.</p>	<p>Concur. Support of mission critical systems and projects has always been and will continue to be our highest priority. As discussed above, this is what we are doing to accommodate project delays in ATS and PTMS.</p>	<p>Completed</p>	<p>A review of the Clarity IT Portfolio Management system also shows that resources/resource demands are now more comprehensively tracked. CEO/IT has also established bi-weekly resource planning meetings with NPS, Security, Operations, and PMO. Also, since the audit, staff has been moved between divisions to accommodate resource needs and priorities.</p>

CEO/IT Audit Recommendations Follow-Up

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
15	Create a formal policy mandating that the CISO obtain HR or Departmental authority prior to initiating any investigation of County personnel.	Concur. The current policy will be formalized with HRD and the CEO. If any action is required as a result of a subpoena, we will respond accordingly.	Completed	CEO/IT provided a copy of its Forensics Policy (i.e., Security Policy) (OC-SEC-POL-007), effective 11/01/11, that states that 1) end users who suspect inappropriate or criminal activity should contact his/her supervisor and/or Human Resources, and that 2) the supervisor should contact Human Resources (if not already involved) for assistance in cases impacting their employees. The County Information Security Officer (CISO) is involved only when the situation immediately threatens County data integrity.
16	(a) Refresh the Operating Plan at least once a year prior to the budget process. (b) Maximize the efficiency and effectiveness of resource planning meetings by discussing and documenting a set of formal procedures that drive the preparation for and execution of resource planning within CEO/IT. Examples of procedural questions that should be explicitly addressed in the documentation include: - Who are the necessary participants in resource planning meetings? - What information/dashboards need to be reviewed at each meeting? - How should this group interact with the Operating Plan document and how often does the document need to be refreshed? CEO/IT may also want to use the existing governance process or informal discussions with agencies/departments to collaborate on effective resource planning tools/strategies.	Concur. The Operating Plan has been refreshed annually since 2007.	Completed	CEO/IT provided a copy of its Operating Plan (created in FY 10/11 and updated with monthly actuals since FY11/12) that details planned to actual use of resources. It also provided a copy of its process flow for Project Resource Planning (in place for the past year) and holds Weekly Resource planning meetings to ensure adequate Resource Capacity/Demand.
17	Immediately begin tracking actual utilization for County staff, using manual tracking mechanisms (e.g., excel spreadsheets), if needed, and establish simple reports that assist management with workload and resource analysis.	Concur. Policies and processes will be formally in place July 1, 2010.	Completed	Since July 2010, CEO/IT has been using Job Numbers to track hours by specific project and operational job function. A review of the Clarity IT Portfolio Management system also shows that actual utilization is tracked.
18	Establish a formal policy that requires consultation with and approval from the IT Governance structure prior to the use of ISF 289 Retained Earnings.	Do not concur. The use of Retained Earnings is an operational decision and the CEO reviews and approves such uses, prior to inclusion in the budget. However, all retained earnings projects over \$150K go through the ISR process, including review by the Project Review Board and CEO/Budget.	Completed	As part of the IT Governance Model approved by the BOS on March 1, 2011, the IT Executive Council is responsible for reviewing and approving the annual IT operational budget (including the use of ISF 289 Retained Earnings), project funding recommendations, and rates for IT services. CEO/IT also provided a copy of the materials presented to agency/department budget and IT managers that explain the ISF 289 rate setting process.
19	Develop a formal, annual review session of ISF 289 Administrative Overhead costs with agencies/departments.	Do not concur. CEO/IT develops rates based on detailed examination of unit costs, overhead and all proposed expenses using a "zero base budgeting" approach. The rates are reviewed with CEO/Budget and presented to each customer in budget review meetings.	Completed	Starting in 2011, CEO/IT and CEO/Budget have conducted annual workshops with agency/department Budget and IT Managers to explain the ISF 289 rate setting process, which includes an overview of Administrative Overhead costs. In addition, the new IT Governance Model, approved by the BOS on March 1, 2011, delineates that the IT Executive Council reviews IT rates annually.

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
20	CEO/IT and CEO/Budget should implement a policy specific to Agency 038 which presents criteria and dollar thresholds for notifying or obtaining approval from the Board of Supervisors regarding proposed budget transfers between Agency 038 projects.	Do not concur. All budget transfers within Agency 038 follow Auditor Controller and CEO/Budget guidelines consistent with the Countywide budget transfer policy for all Departments. As 038 is a CEO controlled fund, all 038 budget transfer requests from CEO/IT are reviewed by the CEO/Budget Analyst and approved by the CEO Budget Director.	Completed	CEO/IT follows a CEO/Budget policy that material changes to project funding and/or funding for new projects are brought before the Board of Supervisors for approval. A request for any additional budget required for any approved 038 Initiative is submitted to CEO/Budget, and if approved, is presented to the Board in the Quarterly Budget Report.
21	CEO/IT should use the IT Governance structure to collaboratively develop a set of Countywide IT performance metrics and a method/means for aggregating and reporting the results.	Concur. CEO/IT will work to establish standard performance metrics. Consistent with the federated model measuring and reporting on those metrics will be the ongoing responsibility of Agency Directors.	In Progress	The IT Sourcing managed services model provides industry standard performance measures related to IT service delivery. CEO/IT expects that these performance measures will be reported monthly after IT Sourcing transition is completed. The target completion date for this recommendation is June 2014.
22	Develop a more rigorous project performance measurement process that includes the tracking of actual vs. projected benefits (e.g., cost savings and process improvements) in an effort to measure the actual Return on Investment of a project.	Concur. CEO/IT will enforce project post-implementation reviews for its projects. Agency managed projects should be evaluated for benefit by the business unit.	In Progress	Starting in FY 11/12, the Information System Request (ISR) form was updated to include identification of measurable outcomes for proposed project initiatives. In the future, CEO/IT plans on auditing agencies/departments upon completion of IT initiatives to determine if expected outcomes were achieved as part of a project performance measurement process. The estimated completion date for this recommendation is June 2014.
23	Expand the use of post-implementation Customer Appraisals for Enterprise IT projects.	Concur. CEO/IT will expand the use of post-implementation Customer Appraisals for Enterprise IT projects.	Completed	As part of the project closing process, Enterprise IT projects managed by CEO/IT project managers provide project sponsors with a Customer Appraisal form. Completed forms, along with Lessons Learned documents, are maintained in the Clarity IT Portfolio Management system.
24	Review all existing performance metrics in the area of NPS-SLA services, add/consolidate where appropriate, and refine the reporting mechanisms for this data. (see Appendix D for examples)	Service Level Requirements (SLRs) and Performance Dashboards will be the cornerstone of the Managed Services Model. Service Levels and related incentives will be clearly defined and the County will require dashboards for numerous measures including Service Levels, system availability, system performance and system capacity. Given current staffing constraints, performance measures are currently tracked for capacity and availability across several service areas including Network, Security, Storage, email, Virtual Environments, the P595 Platform, Mainframe, Power, Data Center Space, Telephone Services. These are not reported in any dashboard, but an executive report is produced monthly.	Completed	Monthly Availability and Capacity reports are now available online, and CEO/IT has integrated additional tools and processes to improve real time monitoring and problem resolution. These will be further enhanced with the new IT Sourcing vendor.

Rec. #	Recommendation	Management Response	Follow-Up Status	Auditor's Comments
25	Migrate all performance information pertaining to CEO/IT, including Technical Operations, to a "CEO/IT Performance" webpage, consolidate the existing number of CEO/IT performance-related web pages on the County Intranet, and share all relevant CEO/IT performance data with County agencies/departments.	Service Level Requirements (SLRs) and Performance Dashboards will be the cornerstone of the Managed Services Model. Service Levels and related incentives will be clearly defined and the County will require dashboards for numerous measures including Service Levels, system availability, system performance and system capacity. Given current staffing constraints, performance measures are currently tracked for capacity and availability across several service areas including Network, Security, Storage, email, Virtual Environments, the P595 Platform, Mainframe, Power, Data Center Space, Telephone Services. These are not reported in any dashboard, but an executive report is produced monthly.	Completed	Monthly Availability and Capacity reports are now available online. Performance information will be further enhanced with the transition to the new IT Sourcing managed services model. With the transition, CEO/IT will establish additional online and real-time dashboards for agencies/departments to view performance data in greater detail.
26	(a) Conduct benchmarking surveys against other organizations (private and public), to establish a robust set of performance metrics for all major contractors, especially those with critical roles in the delivery of core IT services, and (b) Report the results of these performance measurements to the Board of Supervisors and on the "CEO/IT Performance" web page on at least an annual basis, and incorporate the results into a broader Annual CEO/IT Report.	Concur. The Master Services Agreement of the proposed IT Sourcing model will include contractual requirements for benchmarking along with performance and service level measures. The report recognizes the efforts of the CTO in benchmarking CEO/IT's infrastructure. Additional benchmarks already conducted, include: A review of CEO/IT's Rate development process by MGT Consulting. A comparison of CEO/IT's rates with other Counties. A benchmark of IT staffing as part of the development of the IT Strategic Plan. This was done using a robust database of State and Local Government data. A self-assessment of all processes based on CMM.	In Progress	Financial benchmarking data was collected and reported to the IT Executive Council for years FY 9/10 through FY 11/12. CEO/IT has established key performance measures for the IT Sourcing vendors. These will be reported monthly and can be used to benchmark against other IT Service organizations. The estimated completion of this recommendation is April 2014.
27	Improve CEO/IT communications with internal/external customers by: a. Taking measures to ensure that all communications to the Board and agencies/departments are sufficient, accurate, timely, and clearly articulated for a non-technical audience. b. Using this audit and the guidance of key managers, CEO/IT must first confirm and acknowledge its existing weaknesses and develop simple, concrete action plans that address the myriad of well-documented, critical communications shortcomings. c. Promoting an environment of open communication within CEO/IT, where staff input is both requested and utilized before decisions are made. d. Maintaining an up-to-date CEO/IT website. Consider the value of preparing a summary level annual report that describes CEO/IT operations, performance, and plans for the future.	Concur. CEO/IT will continue to improve its communications both internally and externally. Efforts are under way to update the CEO/IT website. Finally, CEO/IT has produced a "Progress Report" that is attached to this response. This report will be produced annually and will include performance metrics and a financial report in the future. We welcome further feedback on the report.	Completed	Since the 2009-2010 performance audit, CEO/IT has made a number of improvements to CEO/IT communications, including: 1. Regular IT governance meetings with agencies/departments 2. Distribution of a CEO/IT Service Catalog 3. Distribution of a quarterly CEO/IT newsletter that is also available via the CEO/IT public website 4. Distribution of a quarterly Cyber Security newsletter published by the CISO 5. Monthly EA briefings

## V. Conclusion

Overall, CEO/IT has made commendable progress in implementing the 48 recommendations from the performance audit. The majority of the remaining recommendations are anticipated to be completed by June 2014 following the transition to the new managed services IT model, and there are plans to implement other recommendations at the appropriate times.

Through this follow-up process, the audit team is able to close 27 of 48 (56%) recommendations and is expected to close the remaining 21 recommendations over the next 6-12 months.