



INTERNAL AUDIT DEPARTMENT
COUNTY OF ORANGE

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BOARD OF SUPERVISORS' DIRECTIVE
“Reconnaissance Review”
of the
CIO's IT Cost Allocations

Per Board Directive on April 18, 2006, Internal Audit has conducted an Informal Advisory Review (IAR) of the CIO's IT Cost Allocation Methodology and Rates. *This is not an audit. We are not expressing an opinion on the CIO's allocation of IT costs or rates.*

PROJECT NUMBER: 25102

REPORT DATE: Wednesday, MAY 10, 2006

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Board of Supervisors' Directive
“Reconnaissance Review”
of the
CIO's IT Cost Allocations

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Transmittal Letter

Report No. 25102

Wednesday, May 10, 2006

TO: Members, IT Working Group:
Lou Correa, Supervisor, First District
Eric Norby, Chief of Staff, Fourth District
David Sundstrom, Auditor-Controller
Thomas Mauk, County Executive Officer
Satish Ajmani, Deputy CEO/CIO
Nick Berardino, General Manager, OCEA

FROM: Peter Hughes, Ph.D., CPA, Director
Internal Audit Department

SUBJECT: Board Directive: "Reconnaissance Review" of the CIO's IT Cost Allocations

As requested by Supervisor Correa at the Board of Supervisors meeting on April 18, 2006, IAD is pleased to present an Informal Advisory Review (IAR) of the CIO's IT Cost Allocations.

As the Internal Audit Director, I submit a monthly audit status report to the Board of Supervisors (BOS) where I detail any material and significant audit findings and special projects released in reports during the prior month. Accordingly, the results of this review will be included in a future status to the BOS.

Should you have any questions, please do not hesitate to contact me.

Other recipients of this report:

Members, Board of Supervisors
Members, Audit Oversight Committee
Foreperson, Grand Jury
Darlene Bloom, Clerk of the Board
Mary Ellen Fuelleman, Division Manager, CIO/Finance and Contracts

**Board Directive: “Reconnaissance Review”
of the CIO’s IT Cost Allocations**

EXECUTIVE SUMMARY

Background

Based on Supervisor Correa’s directive at the April 18, 2006 Board of Supervisor meeting, the Internal Audit Department (IAD) was requested to perform a “reconnaissance study,” i.e. an Informal Advisory Review (IAR) of the CIO’s allocation of Information Technology (IT) costs and rates. The IAD was directed to provide the results of its review to the IT Working Group within 2 weeks of the start of their fieldwork. Our first day of fieldwork was April 25, 2006.

Scope

The goal of our Informal Advisory Review (IAR) was to perform a preliminary survey to provide a basis for recommending whether or not a review or audit would be beneficial. Our IAR was high level as it considered the material accuracy and equity of the IT cost allocation to the County as a whole, rather than reviewing for accuracy or equity to a specific department or situation. We reviewed various supporting spreadsheets provided by the CIO but did not audit or validate the underlying data as this was not intended to be a detailed review or audit.

As this was not an audit, we are not expressing an opinion on the CIO’s allocation of IT costs and rates. If we were to perform additional auditing procedures, other matters in this regard might have come to our attention.

Work Performed by IAD

We conducted interviews with key CIO staff responsible for managing the data center and calculating the IT cost allocations and rates. We also reviewed relevant documentation as we deemed applicable. Documents reviewed included the Agenda Staff Report for the FY 06-07 IT Billing Rates, the CIO’s written policies and procedures for the ISF billings, the FY 06-07 detailed budget for the cost pools, the CIO’s spreadsheets calculating the projected FY 06-07 mainframe charges to the departments, the CIO’s direct labor and position variance analysis for the ACS contract as of March 31, 2006, as well as other documents and spreadsheets.

Results

The CIO has established policies, documentation, and processes that it follows when allocating IT costs. The more mature technology and services (i.e. the mainframe environment) generally have a more stable cost allocation history, whereas the allocation of costs for newer technology and services (i.e. server environment) is subject to revision by the CIO. The CIO has self-identified and is making revisions to some of the cost allocations to be more responsive to its current operating environment. The revisions should provide improved accuracy, equity, and transparency.

It is our point of view that retention of an outside consultant would be beneficial and advantageous at this time in order to assist the CIO prepare for some of the revisions scheduled to be effective for FY 07-08. The best use of an outside consultant would be to provide additional benchmarking and best practice suggestions for consideration including cost allocation methods for newer technologies, such as server based applications and server virtualization.



DETAILS

Introduction

The CIO's Information Technology (IT) services cost (including the data center) is accounted for through an ISF (Internal Service Fund) and recovers the total costs of operations with monthly charges to its users and customers. The ISF does not make a profit and does make an effort to end the year without either a significant deficit or overage.

The CIO has to balance many factors when managing the data center and IT costs including:

- the quality and responsiveness of service provided
- encouraging the use of new technology (which is changing at a rapid pace) to improve efficiencies and at the same time requires changes to costs allocation methodologies
- departments' need for predictability of costs
- certain long term fixed costs associated with the data center
- overall growth of information technology needs in the County.

It is a judgment call regarding the balance amid a) the costs expended for a precise cost allocation, and b) the equitable distribution of costs among the users, and c) the predictability of rates for departmental budgeting. However, at a minimum, the CIO must comply with the various Federal and State regulations for the IT cost allocations including Federal OMB Circular No. A-87, the State of CA Handbook of Cost Plan Procedures for CA Counties, and the County of Orange Accounting Manual Policy No. B-2.

Support for Results

Based on interviews and analysis of documentation we were provided, some of the key factors that influenced our recommendation include the following.

- 1) The CIO/Finance staff had numerous schedules and Excel spreadsheets they utilized to capture and allocate IT costs. To us this indicates a defined and prudent process for capturing data and allocating costs. The CIO has a written policy for IT billings that includes reference to the various State and Federal cost allocation rules it must comply with.
- 2) During our interviews, CIO/Finance staff were knowledgeable and had command of the subject matter. There was an understood chain of command and supervisory review of the cost allocation calculations. CIO staff were cooperative and provided us with all requested information and documentation.



- 3) Periodically the State performs a field review of the County's overall Cost Allocation Plan coordinated through the Auditor-Controller. About 5 years ago, the State met with CIO staff and reviewed the CIO's methodologies for compliance with State and Federal regulations. The State accepted the CIO's methodology with no required changes. While the CIO's current operating environment may now differ, this does give some insight to a past track record as the current CIO/Finance staff are the same as when the State conducted its review. Additionally, each year if there are changes to its cost allocation methodologies, the CIO submits its revised written policies for the ISF billings to the Auditor-Controller.
- 4) The CIO works to control the costs of IT and the data center. We saw evidence of personnel reductions when the functions they provided were no longer needed. Examples include:
 - a) The ACS contract originally called for 225 positions as of June 1, 2000. The current ACS staffing is 179 positions as of March 31, 2006.
 - b) Last year, 5 positions were eliminated due to reduced printing needs.
 - c) About 3 months ago, a market study was conducted for the ACS salary rates; some rates went up and some went down. This market study is conducted annually and salary ranges are adjusted to correspond to the results.
 - d) Currently, the new CIO is conducting a "bottom to top" needs review of all ACS positions.
- 5) The CIO works to improve its cost allocations. The CIO has self-identified several areas where costs allocation methods can be revised. Examples include:
 - a) Mainframe: About 3 years ago, the CIO changed the mainframe allocation base from prior year usage to a 5 year rolling average in order to smooth costs and add more predictability for the departmental budgeting.
 - b) ISF Fund: In FY 01-02, the CIO changed the data services fund from a general fund to an internal service fund, to better track and allocate costs with transparency.
 - c) Service Level Agreements (SLA): The CIO is currently working on SLAs for departmental servers located at the data center. The goal of the SLAs is to provide more predictable levels of services/costs and to give customers more transparent choices regarding the level and consequent cost of service provided. Departments that the CIO is working with to develop SLAs include the A-C, DA, Child Support Services, Board of Supervisors, Treasurer-Tax Collector, RDMD, Probation, PA/PG, and the Public Defender.
 - d) Network Access/IP Rate: Originally the rate was about \$10/connection/month. The current rate is about \$30/connection/month. The CIO has determined that to be more equitable, costs should be allocated based on usage (rather than per connection). The CIO will purchase and install equipment that will measure the bandwidth used by each department and in FY 07-08 will allocate costs based on usage.



- e) **Shared Services:** New technology such as shared servers and shared software have created opportunities for efficiencies and cost savings. However, these new technologies don't always lend themselves to existing traditional mainframe cost recovery methods. The CIO has determined the need to implement a network connect time rate to allocate services (such as OnBase, timekeeping, etc) that are run on shared hardware. The CIO plans to develop equipment/methodology to allocate costs based on usage beginning in FY 07-08.

Suggestions

During our reviews, we often identify suggestions that enhance an existing process and improve the overall effectiveness of the process. The new CIO and the IT Working Group appear to be already working on many of these suggestions.

- 1) **Strengthen Auditor-Controller Involvement:** The IT Working Group should consider requesting the Auditor-Controller to direct his Cost Studies Unit to annually review and approve the CIO's IT cost allocations prior to the IT rates being submitted to the Board of Supervisors for approval. It is our understanding that this Best Practice process was in place prior to the bankruptcy.

The Auditor-Controller's Cost Studies Unit is staffed with professional accountants who oversee and coordinate the annual Countywide Cost Allocation Plan submitted to the State. The Auditor-Controller is also responsible for preparing written policies for Countywide billing rates and indirect costs (i.e. County of Orange Accounting Manual (CAM) Policy No. B-2). Section 1.2.7 of CAM Policy No. B-2 states that Board Resolution No. 68-566 "Authorizes the Auditor-Controller to compute or review and approve all billing rates charged by County departments ..."

- 2) **Enhance Communications:**

- In better communicating the rate development process and inherent difficulties in predicting exact costs, the CIO can begin to build understanding by including budgeting and other partners in this process. This could include continuing the CIO's periodic presentations to the Financial Managers Forum and the Information Systems Managers Forum.
- When decisions are made to improve a cost allocation methodology, this decision is strategic and should have buy-in and commitment to from all customers or parties to this agreement. We suggest that when strategic decisions are made by the CIO, such issues as the duration of the decision, entry and early departure costs, and strategic abandonment should be clearly spelled out and communicated to its customers.
- From a proactive view, more communication between CIO/Operations Staff and CIO/Finance Staff regarding newly introduced services/technology because cost pool development and allocation methods are evolving during the initial phase-in period (i.e. proof of concept).



- 3) Initiate Benchmarking: We have had discussions with CIO personnel and this topic of benchmarking can be difficult because the same environments for cost comparisons may not exist. However, such a process is valuable. We suggest the CIO find comparable environments and then make the necessary mathematical adjustments to put the data on an “apples to apples” basis. An additional benefit of this exercise is a good possibility of picking up some best business practices that might have applicability at the County.
- 4) Develop Mainframe Strategy: Our understanding is that at this time, the strategy for the mainframe is coalescing for the next three to five years. The CIO should continue with its efforts in this area.
- 5) Develop Long Term Strategy for Data Center Facility: Development of a long term strategy for the data center facility is also needed. The “co-location” study currently being overseen by the new CIO will provide feedback to allow the CIO to develop a strategy.
- 6) Remedy Data Entry Coordinator in Building 12: The person identified as the data entry coordinator in the basement of Building 12 is currently a cost allocation problem that has been self-identified by ACS and brought to the attention of the County by the CIO. This position no longer provides IT support services under the CIO. Presently, this position provides support services to the County tenants of Building 12 (such as processing deliveries at the loading dock and security of the adjacent parking lot) at the direction of the County. The issue should be assigned to a Working Group consisting of representatives of RDMD/Facilities Operations and the tenants of Building 12 for immediate resolution.

