

# OFFICE OF AUDITS & ADVISORY SERVICES



## IT BILLING FOLLOW-UP AUDIT

### *FINAL REPORT*

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# County of San Diego

**TRACY M. SANDOVAL**  
DEPUTY CHIEF ADMINISTRATIVE OFFICER/  
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**JUAN R. PEREZ**  
CHIEF OF AUDITS

May 19, 2015

TO: Mikel Haas, Chief Information Officer  
County Technology Office

FROM: Juan R. Perez  
Chief of Audits

FINAL REPORT: IT BILLING FOLLOW-UP AUDIT

Enclosed is our report on the IT Billing Follow-up Audit. We have reviewed your response to our recommendations and have attached them to the audit report.

The actions taken and/or planned, in general, are responsive to the recommendations in the report. As required under Board of Supervisors Policy B-44, we respectfully request that you provide quarterly status reports on the implementation progress of the recommendations. The Office of Audits & Advisory Services will contact you or your designee near the end of each quarter to request your response.

Also attached is an example of the quarterly report that is required until all actions have been implemented. To obtain an electronic copy of this template, please contact Franco Lopez at (858) 505-6436.

If you have any questions, please contact me at (858) 495-5661.

JUAN R. PEREZ  
Chief of Audits

AUD:FDL:aps

Enclosure

c: Tracy M. Sandoval, Deputy Chief Administrative Officer/Auditor and Controller  
Damien Quinn, Group Finance Director, Finance and General Government Group  
Andrew McDonald, Group IT Manager, Finance and General Government Group

## INTRODUCTION

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**Audit Objective** The Office of Audits & Advisory Services (OAAS) completed a follow-up audit of the Information Technology (IT) Billing Audit issued in May 2011. The objective of the audit was to verify whether prior findings and recommendations, as outlined in OAAS Report A10-029, had been addressed and implemented. Additionally, the audit assessed the design and operating effectiveness of the County's new IT chargeback system iTrack.

**Background** The objective of the 2011 audit was to verify the accuracy and integrity of charges incurred relative to the IT Telecommunications Service Agreement (Agreement). The 2011 audit identified four findings and four recommendations, as listed in Appendix A.

At the time of the original audit, Northrop Grumman Information Technology (NGIT) was the contractor for the Agreement. As of May 2011, Hewlett Packard's Enterprise Services (HP) assumed NGIT's obligations as the contractor. Total iTrack charges billed to the County during FY 2013-14 amounted to \$145M, as outlined in Exhibits B and C.

Since the 2011 audit, County departments have improved monitoring of iTrack billing information and the CTO has taken a number of actions to strengthen IT billing controls including:

- Implementing a new billing system (iTrack) in January 2014.
- Providing iTrack training to departments.
- Providing guidance to departments over billing review frequency and responsibility for maintenance of data in iTrack.

**Audit Scope & Limitations** The follow-up audit scope included a review and verification of the implementation status of the four recommendations identified in the 2011 audit. OAAS evaluated billing data from June 2013 to December 2014. Additionally, new network access resource units (RUs) implemented in July 2014 were reviewed to ensure billing was in accordance with the Agreement.

This audit was conducted in conformance with the International Standards for the Professional Practice of Internal Auditing prescribed by the Institute of Internal Auditors as required by California Government Code, Section 1236.

**Methodology** OAAS performed the follow-up audit using the following methods:

- Reviewed recommendations and corresponding findings identified in the 2011 audit.

- Interviewed management and staff of the County Technology Office (CTO) who were responsible for the implementation of audit recommendations.
- Validated through observation, inspection of records, and data analysis whether recommendations had been implemented and the original findings addressed.
- Reviewed network access RUs to ensure they were billed in accordance with HP Problem Resolution Request HP/COSD-112 Network Access Units (PRR-112).

## AUDIT RESULTS

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### Summary

The CTO has made progress in strengthening the controls over IT Billing since the 2011 audit. Out of the four prior recommendations, the CTO has implemented one and partially implemented three recommendations as shown in Appendix A.

IT billing controls should continue to be strengthened in the areas of underutilized assets and services, work request billing, storage billing, network billing and dispute settlement.

### Finding I:

#### **Further Improvement of County Department Monitoring and Maintenance of iTrack Billing Information is Needed**

A review of charges assigned to both separated employees and telecommunication usage identified several discrepancies as outlined below.

**Charges Allocated to Separated Employees** – From July 2013 to August 2014, 1,181 separated employees in iTrack incurred charges of \$3.8M for assets and services.<sup>1</sup> To assess the extent that these charges may represent inaccurate assignment information or avoidable costs, a sample of 30 separated employees was selected for review:

- 18 (60%) separated employees were incorrectly assigned to assets or services that incurred iTrack charges due to outdated records. These charges were actually incurred by different active employees.
- 3 (10%) separated employees were charged for assets and services that remained active for more than a year after their separation pending arrival of a new employee.

**Telecommunication Usage** – As recommended in the 2011 audit, HP produces a monthly report that assists the County in identifying underutilized phone lines for potential deactivation. Since HP only bills the County for calls outside the County's phone network, the monthly report includes only analog phone line usage, not usage for other

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<sup>1</sup> Separated employees include terminated, retired, or transferred employees separated during FY 2012-14. The elapsed time since employee separation within the population ranged from 2 to 24 months.

phone types such as voice and VoIP. However, without a report that includes all phone types, department review may not identify all phone lines that require deactivation.

An OAAS analysis of monthly phone usage charges identified 3,659 phone lines with limited or no usage that incurred \$1.1M in charges from January 2014 to August 2014.<sup>2</sup> Specifically, these lines had limited or no outbound calls external to the County's internal phone network. A sample of 30 lines was selected for testing to determine if the phone lines were still required. Departments confirmed that 18 of the 30 lines (60%) were no longer needed:

- 7 (39%) phone lines belonged to general lines (e.g., conference room, multi-user, and fax lines) that were no longer utilized.
- 11 (61%) phone lines belonged to employees who had separated or transferred from their department and were no longer utilized.

Departments are responsible for assessing the appropriateness of charges, detecting overcharges, and identifying cost avoidance opportunities in iTrack. However, these responsibilities require extensive analysis by department personnel that have been assigned IT billing review as an auxiliary task, making it difficult for departments to effectively monitor all iTrack costs.

**Recommendation:**

To assist departments in assessing the appropriateness of charges, detecting overcharges, and identifying cost avoidance opportunities in iTrack, the CTO should:

1. In periodic iTrack user group meetings that the CTO is already conducting, continue to communicate to County departments the importance of monitoring iTrack charges and maintaining accurate data in iTrack.
2. Modify the monthly usage report to include all phone lines in the underutilized telecommunication reports for department review.

**Finding II:**

**The Work Request Billing Process Needs Improvement**

The Project Closure Agreements (PCA) of five sampled Work Requests (WR) completed during FY2013-14 did not support the respective costs or schedules outlined in iTrack or related Minimum Acceptable Service Levels (MASLs). Specifically, the following issues were noted in the five WRs reviewed:

- Four WR PCA costs did not reconcile to actual iTrack charges incurred.

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<sup>2</sup> Limited usage was assessed as less than 80 seconds of use during the period.

- One WR PCA budgeted amounts were not accurately reported in MASL 81 - Work Request Budget Performance.

Additionally, these five WR PCA close dates differed from close out dates reported in MASL 82 – Work Request Schedule Performance.

After correcting the above inaccuracies, recalculation of MASLs 81 and 82 resulted in the same pass results as originally reported by HP. However, based on the results of the sampled WRs tested, the WR close-out process is still subject to reporting discrepancies and does not ensure accurate PCA reporting, which is used by the County to measure WR related MASLs. PCA, MASL and iTrack details should reconcile. Without more effective WR billing controls, preventing or detecting inaccurate billings will remain difficult and time consuming.

**Recommendation:**

The CTO should ensure that HP implements effective controls that ensure iTrack, PCA and MASL reported numbers are accurate and corroborate with one another. Examples of controls include, but are not limited to:

- Requiring PCAs provide a section for outlining detail iTrack line items billed corroborating reported incurred costs.
- Verifying that MASL reported numbers are supported by PCAs.

**Finding III:**

**The Storage Billing Process Needs Improvement**

In 2012, the CTO assessed the impact of incorrectly billed storage on the County and resolved overcharges identified in the 2011 audit. However, HP standards for storage billing were not updated to reflect the operating environment and a periodic storage billing review process was not implemented as previously recommended. Review of HP's billing support files for each of 10 storage units sampled from the August 2014 billing identified incorrectly billed or unsupported storage.

- 6 servers had unbillable storage directories that contained operating system (OS) files and backup data.
- 3 servers (Mainframe, AS 400 and Immutable) are billed at full capacity and not actual usage. HP indicated this was the standard method of billing these storage types.
- 1 Oracle server sampled could not be assessed because billing details were not available. HP indicated that storage directory details for this server are not prepared for the monthly billing cycle.

Limits for the amount of storage billed are specified in the HP Storage Billing Process Document (COSD-D0013) which outlines that storage billing is based on the lesser of 120% of actual utilized storage or allocated storage space. These limits were not consistently applied in all storage units in the sample. Additionally, general business practice

specifies that storage that is not part of usable capacity (i.e., OS files, data replication, and back-up storage) is not billable to the County. However, these practices are not outlined in COSD-D0013 which has not been updated since March 2009 to consider current business practice and other storage platforms HP maintains for the County (i.e., Mainframe, AS 400 and Immutable).

**Recommendation:** The CTO should work with HP to:

1. Update the HP Storage Billing Process Document (COSD-D0013) to outline the acceptable billing methods for all County storage platforms (i.e., Wintel, UNIX, Mainframe, AS400, and Immutable).
2. Establish a reporting and review process with sufficient detail to assess billable and unbillable storage. This includes making storage billing transparent and reviewable for departments by providing directory details necessary to assess against the updated HP Storage Billing Process Document (COSD-D0013).

**Finding IV:**

**Network Access Billing Agreement Terms Need Updating**

In July 2014, the End User Data Jack, Remote Access and Mobility Virtual Private Network RUs were replaced with five new network access RUs as outlined in PRR-112:

- Static Wired Access
- Wired/Wireless Network Access
- Remote Network Access
- Mobile Network Access
- Failover Internet Infrastructure

Implementation of the new RUs resulted in a decrease of 3,058 billable units and reduced costs by over \$78K for the month of July 2014. Review of August 2014 iTrack billing verified that all units billed were supported and disabled accounts were appropriately excluded. However, issues were identified with billed expired accounts and the billing rate thresholds for the new network RUs:

- As outlined in Table 2, out of 301 expired accounts billed in August 2014, 148 were identified that have not been used since at least 2013 (17 and 131 not used since 2012 and 2013, respectively). These 148 accounts incurred charges of \$12,329 (\$1,431 and \$10,898 incurred in 2012 and 2013, respectively) in August 2014 and will continue to be billed monthly until disabled by the owning County department.

**Table 2: Expired Accounts by Group Billed in August 2014**

<b>Quantity and Costs by Year Expired</b>				
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>Total</b>
CSG		4	35	39
FGG	8	48	14	70
HHS A	5	58	88	151
LUEG		9	8	17
PSG	4	12	8	24
<b>Total Quantity</b>	<b>17</b>	<b>131</b>	<b>153</b>	<b>301</b>
<b>August 2014 Cost of Expired Accounts</b>				
CSG		\$ 312	\$ 2,755	\$ 3,068
FGG	\$ 671	\$ 3,770	\$ 1,151	\$ 5,592
HHS A	\$ 448	\$ 5,014	\$ 7,278	\$ 12,741
LUEG		\$ 795	\$ 659	\$ 1,455
PSG	\$ 312	\$ 1,006	\$ 660	\$ 1,979
<b>Total Costs</b>	<b>\$ 1,431</b>	<b>\$ 10,898</b>	<b>\$ 12,504</b>	<b>\$ 24,833</b>

- The new network RU billing method (as outlined in PRR-112) is not supported by the current terms of the Agreement. New network RU billing rates were structured around baseline volume thresholds of 95% to 105%, with billing rates adjusting in 2.5% increments based on volume (e.g., 95% to 97.5% and 92.5% to 95%). However, all other RUs in the Agreement have billing rates and terms structured around baseline volume thresholds of 90% to 110%, with billing rates adjusting in 10% increments based on volume. As such, billing terms outlined in the Agreement cannot be applied to the new network RUs.

Departments are responsible for maintaining expired accounts by either renewing or disabling accounts, as appropriate. Additionally, PRR-112 terms create a billing methodology that is not supported by the current Agreement.

**Recommendation:**

1. The CTO should:
  - In periodic user group meetings, communicate to departments their responsibility for maintaining expired accounts and the impact these have on billing.
  - Modify the Agreement via a revision to PRR-112 to include language that identifies Network Access RUs different banding structure; clarify how active, expired and disabled accounts impact volumes and; clearly define the report(s) to be used to establish counts under the Network Access RUs.
2. The iTrack Group Contacts should ensure their departments maintain expired accounts to prevent overbilling

**Finding V:****iTrack/Chargeback disputes Not Resolved Timely**

As of December 15, 2014, there were 1,941 outstanding disputes that have been in process for at least 60 days as outlined in Table 3. HP indicated these are due in part to personnel turnover that created a backlog of resolved disputes that need to be cleared from iTrack.

**Table 3: iTrack Disputes as of December 15, 2014**

<b>iTrack Disputes Outstanding Aging</b>		
<b>Disputes Aging</b>	<b>Number of Disputes</b>	<b>Amount Disputed</b>
60-90 days	1,374	\$ 158,243
90-120 days	421	\$ 49,407
120-180 days	97	\$ 5,659
180+ days	49	\$ 18,629
<b>Totals</b>	<b>1,941</b>	<b>\$ 231,938</b>

The Agreement contains a timeline for dispute resolution procedures which are meant to resolve disputes within two months of HP notification before escalation and arbitration is pursued. Additionally, dispute procedures state that disputes over 60 days old should be given an escalated priority. While there is negligible fiscal cost to advance payment of disputed items, on-going follow-up activities by department IT billing reviewers represents a greater fiscal impact of untimely dispute resolution.

**Recommendation:**

The CTO should implement a process that ensures HP resolves and clears disputes within the timeline allowed in the Agreement and dispute resolution procedures.

## Office of Audits &amp; Advisory Services

Compliance

Reliability

Effectiveness

Accountability

Transparency

Efficiency

VALUE

## **DEPARTMENT'S RESPONSE**



# County of San Diego

**MIKEL HAAS**  
CHIEF INFORMATION OFFICER  
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**MAY 18 2015**  
OFFICE OF AUDITS &  
ADVISORY SERVICES

**SUSAN GREEN**  
ASSISTANT CHIEF INFORMATION OFFICER  
(619) 515-4337

May 15, 2015

Ref: 15-IA-389

TO: Juan Perez  
Chief of Audits

FROM: Mikel Haas, CIO  
County Technology Office

DEPARTMENT RESPONSE TO AUDIT RECOMMENDATIONS: IT Billing Follow-Up Audit

**Finding I: Further Improvement of County Department Monitoring and Maintenance of iTrack Billing Information is Needed, Specific to Charges Allocated to Separated Employees and Review of the Telecommunication Usage Report**

**OAAS Recommendation:**

To assist departments in assessing the appropriateness of charges, detecting overcharges, and identifying cost avoidance opportunities in iTrack, the CTO should:

1. In periodic iTrack user group meetings that the CTO is already conducting, continue to communicate to County departments the importance of monitoring iTrack charges and maintaining accurate data in iTrack.

**Action Plan:** The CTO will continue to stress to the County departments the importance of monitoring iTrack charges and maintaining accurate data via iTrack in quarterly meetings and via other forms communications with the iTrack users such as newsletters.

**Planned Completion Date:** Implemented

2. Modify the monthly usage report to include all phone lines in the underutilized telecommunication reports for department review.

**Action Plan:** There is a cost associated with the retrieval of the additional data specified in the Recommendation. The report at the department level would include active and inactive (terminated or transferred) staff telephones and other vacant telephones. To ensure better

management of telecommunication expenses, the CTO will work with the departments to develop instructions on how to examine the ITrack Telecommunications data. The instructions to the department will include at a minimum the following:

- Monitor and maintain Network Access reporting, as telephones are primarily assigned to end users.
- Maintain proper single & multiline labeling in iTrack to account for end user assignments and special circumstances.

**Planned Completion Date:** December 31, 2015

**Contact Information for Implementation:** Julian Shelby, Technology Manager

### **Finding 2: The Work Request Billing Process Needs Improvement**

**OAAS Recommendation:** The CTO should ensure that HP implements effective controls that ensure iTrack, PCA and MASL reported numbers are accurate and corroborate with one another. Examples of controls include, but are not limited to:

- Requiring PCAs provide a section for outlining detail iTrack line items billed corroborating reported incurred costs.
- Verifying that MASL reported numbers are supported by PCAs.

**Action Plan:** The CTO and HP have implemented controls to ensure that ITrack, PCA and MASL reported numbers are accurate. This includes comparing the three sources against each other and confirming that the MASL Dashboard matches the PCA. HP has implemented a Quality Assurance Review in their project closure process and the results are then reviewed by CoSD. Discrepancies are reviewed together and reconciled before the PCA is finalized.

**Planned Completion Date:** Implemented

**Contact Information for Implementation:** Jim Leonard, Technology Manager

### **Finding 3: The Storage Billing Process Needs Improvement**

**OAAS Recommendation:** The CTO should work with HP to:

- Update the HP Storage Billing Process Document (COSD-D0013) to outline the acceptable billing methods for all County storage platforms (i.e., Wintel, UNIX, Mainframe, AS400, and Immutable).
- Establish a reporting and review process with sufficient detail to assess billable and unbillable storage. This includes making storage billing transparent and reviewable for departments by providing directory details necessary to assess against the updated HP Storage Billing Process Document (COSD-D0013).

**Action Plan:**

**Recommendation 1:** The CTO agrees with OAAS recommendation and will actively engage HP to update COSD-D0013 to reflect the current billing methods for the various storage platforms as agreed upon by HP and the County. Once approved, the COSD-D0013 will be disseminated to the departments via the Group IT Managers.

**Recommendation 2:** The CTO will assess and determine the feasibility of HP generating reports that will provide the level of detail required to verify billable and unbillable storage for purposes of making storage billing more transparent.

**Planned Completion Date:** December 30, 2015

**Contact Information for Implementation:** Mavette Sadile (619) 531-4505

**Finding 4: Network Access Billing Agreement Terms Need Updating**

**OAAS Recommendation:**

1. The CTO should:
  - In periodic user group meetings, communicate to departments their responsibility for maintaining expired accounts and the impact these have on billing.
  - Modify the Agreement via a revision to PRR-112 to include language that identifies Network Access RUs different banding structure; clarify how active, expired and disabled accounts impact volumes and; clearly define the report(s) to be used to establish counts under the Network Access RUs.
2. The iTrack Group Contacts should ensure their departments maintain expired accounts to prevent overbilling

**Action Plan**

**Recommendation 1:**

1. The CTO agrees with OAAS recommendation and will:
  - Utilize the Monthly ITrack Load email notification to communicate departments' responsibility in maintaining the accuracy of network access accounts. All ITrack end users receive the monthly email.
  - Utilize the Quarterly User Group Meeting to communicate department's responsibility in maintaining the accuracy of network access accounts. Group and department representatives are present at this meeting. A Quarterly User Group is already schedule for 06/12/15 and 09/04/2015.
2. The Agreement has been modified via revision to PRR-112, effective 4/22/2015. The revised PRR clarified the banding structure and calculation for Network Access.

**Recommendation 2:** The CTO agrees with OAAS recommendation and will send a quarterly reminder to Group ITrack Users recommending a department review of the 83A to ensure accuracy. A reminder will go out in the months of September, December, March, and June.

**Planned Completion Date:** July 30, 2015

**Contact Information for Implementation:** Mavette Sadile (619) 531-4505

**Finding 5: ITrack/Chargeback disputes Not Resolved Timely**

**OAAS Recommendation:** The CTO should implement a process that ensures HP resolves and clears disputes within the timeline allowed in the Agreement and dispute resolution procedures.

**Action Plan:** HP is currently in the process of updating the disputed items in ITrack with a resolution status. Upon completion of this effort, the disputed total amount will be reduced from \$231K to \$27.3K.

HP is currently in the process updating the dispute resolution procedures in order to identify and resolve disputes more timely.

**Planned Completion Date:** August 2015

**Contact Information for Implementation:** Hugo Gutierrez, HP Enterprise Services, 858-674-8597 or Dorothy Gardner, CTO 619-531-5361.

If you have any questions, please contact Dorothy Gardner at (619) 531-5361 or myself at (619) 531-5570.

Regards,



Mikel Haas  
Chief Information Officer

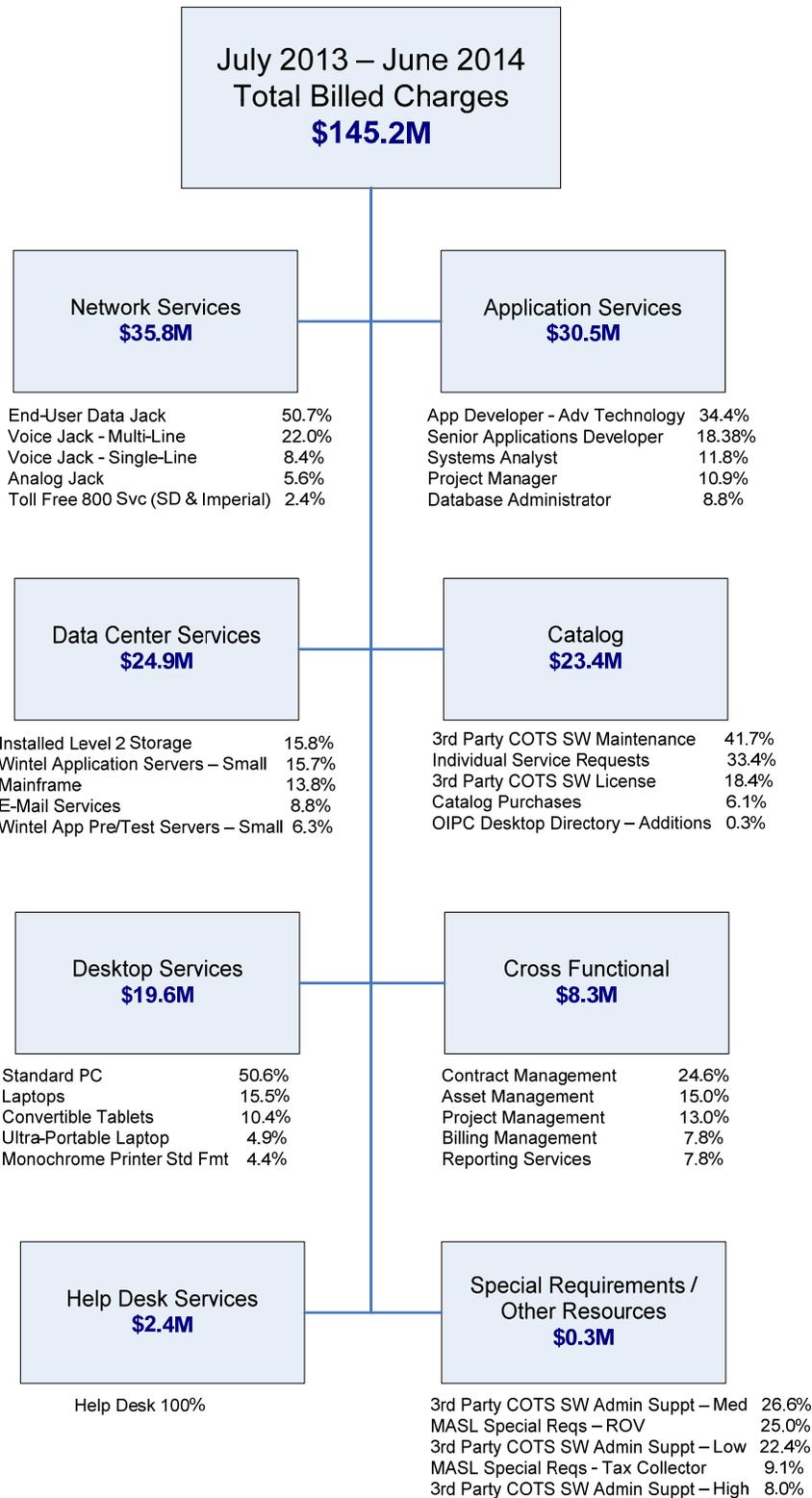
CC: Susan Green

**APPENDIX A****Implementation Status of Prior Audit Recommendations**

<b>Original Finding</b>	<b>Original Recommendation</b>	<b>Implementation Status As of December 2014</b>
1. Improvement in County Departments' Monitoring and Maintenance of IT Billing Information in Chargeback is Needed	<p>The CTO should work with the Auditor and Controller and the IT Governance Structure to establish, for Countywide implementation, IT billing monitoring policies and procedures. These should include, but are not limited to:</p> <ol style="list-style-type: none"> <li>1. Review frequency;</li> <li>2. Evaluation of asset utilization and deactivation of unused assets and services; and</li> <li>3. Expectations and responsibility for system maintenance.</li> </ol>	Implemented
2. Avoidable Telecommunication Charges	<p>The CTO should work with NGIT to produce a periodic report that will assist the County in identifying unutilized and underutilized phone services that can then be reviewed by the Departments for potential deactivation. Guidance for the availability and use of the report should be included in the policies and procedures discussed in Recommendation I.</p>	Partially Implemented (See Finding I)
3. Storage Incorrectly Billed	<p>The CTO should work with NGIT to:</p> <ol style="list-style-type: none"> <li>1. Assess the impact of incorrectly billed storage across all units billed to the County and dispute overcharges as appropriate; and</li> <li>2. Establish a reporting and review process with sufficient detail to assess billable and unbillable storage. These controls may include, but are not limited to: <ol style="list-style-type: none"> <li>a. Standardization of directory labels that discern billable from unbillable activity for the Contractor; and</li> <li>b. Implementation of periodic review of detailed storage reports from the Contractor.</li> </ol> </li> </ol> <p>Guidance for the availability and use of the report should be included in the policies and procedures discussed in Recommendation I.</p>	Partially Implemented (See Finding III)
4. Historical Resolution of Disputes Was Not Timely	<p>At the end of test work, the CTO provided a draft of dispute resolution procedures. The CTO should implement these draft procedures to ensure all disputes are resolved in a timely manner in accordance with dispute resolution procedures and timeline requirements outlined in the Agreement. The County should also consider withholding payment of any invoice, or amount thereof, that the County, in good faith, disputes is due.</p>	Partially Implemented (See Finding V)

**APPENDIX B**

**FY 2013-14 iTrack Charges by Framework with Top 5 Resource Units**



**APPENDIX C**

**FY 2013-14 iTrack Charges by Group with Top 5 Resource Units**

