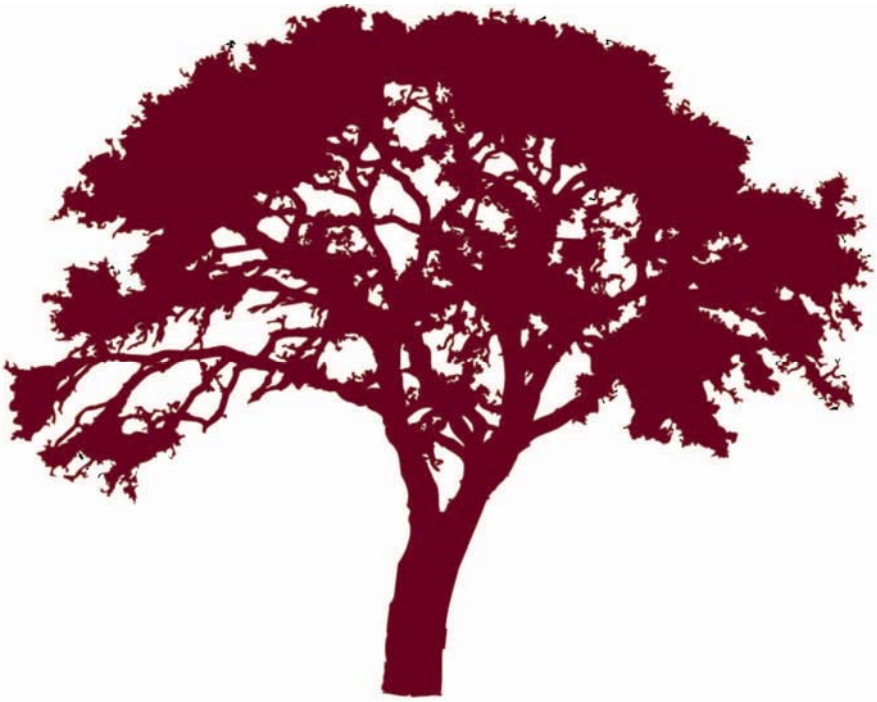
# City of Oakland
# Office of the City Auditor

August 1, 2012

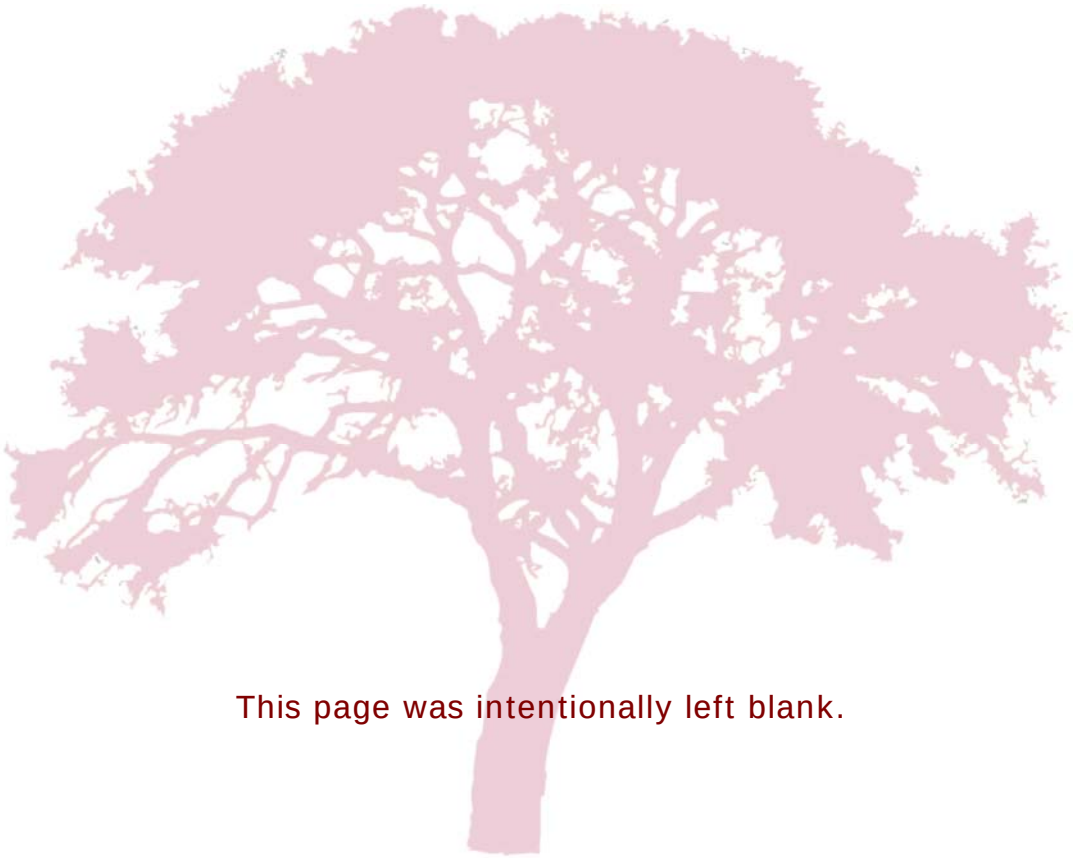
# Police Technology Performance Audit: FY 2006-07 Through 2010-11

***Oakland Police Department (OPD) spent at least $1.87 million on never used or underused technology; neither OPD nor DIT has provided effective planning, oversight, or financial management for OPD's technology systems.***



City Auditor
Courtney A. Ruby, CPA, CFE

PERFORMANCE AUDIT



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CITY OF OAKLAND

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August 1, 2012

OFFICE OF THE MAYOR
HONORABLE CITY COUNCIL
CITY ADMINISTRATOR
CITIZENS OF OAKLAND
OAKLAND, CALIFORNIA

**RE: POLICE TECHNOLOGY PERFORMANCE AUDIT FY 2006-07 Through FY 2010-11**

Dear Mayor Quan, President Reid, Members of the City Council, City Administrator Santana, and Oakland Citizens:

Oakland is experiencing a public safety crisis, and yet the City does not have adequate funds to staff Oakland's police force. Compounding these problems, technology is a crucial aspect of Oakland's public safety strategy and this audit reveals some systems, are not being managed effectively and consequently have drawn down Oakland's very limited financial resources without significant benefit to the citizens of Oakland.

Attached is the Police Technology Performance Audit, which reviewed OPD's purchasing and management of its technology during fiscal years 2006-07 through 2010-11, including the support services provided by the Department of Information Technology (DIT). The audit has revealed that the City spent taxpayer dollars without appropriate due diligence to ensure it was purchasing technology that met Oakland's public safety needs.

Positively, the Administration has agreed to implement the audit's recommendations and to address the many issues identified within the audit. However, the nearly $2 million identified in wasted spending cannot be returned – instead, Oakland must, once again, learn from its mistakes and attempt to move forward, with less resources and greater obstacles.

This audit has revealed that at least $1.8 million of the City's technology spending was spent on systems that were never used ($1.3) or underused ($0.5 million). While many factors contributed to this waste, these failures can generally be ascribed to vendors going out of business and poor communication and coordination between DIT and OPD.

For the systems the audit sampled, the audit showed that OPD did not thoroughly evaluate Oakland's technology needs, such as comprehensively identifying services, hardware, and software or the reliability of vendors. The audit showed that OPD failed to track its systems after purchase, consequently requiring the Office of the City Auditor to create an inventory of OPD's technology systems and their associated costs. This lack of knowledge of its own technology systems is unacceptable for any City department and brings increased concerns for a city struggling to initiate an effective public safety strategy.

Depleted financial resources, systemic violence and poverty are just some of the many challenges to public safety that Oakland cannot directly control. However, successfully managing and coordinating its technology systems are certainly within the City's control.

It is my hope that this report more clearly informs the City Administration, City Council, and City employees on deficiencies in the purchasing and management of OPD's technology and that these issues be dealt within an expedient time frame.

Respectfully submitted,

COURTNEY A. RUBY, CPA, CFE
City Auditor

cc Howard Jordan, Police Chief
Ken Gordon, Information Technology Director
Scott Johnson, Assistant City Administrator

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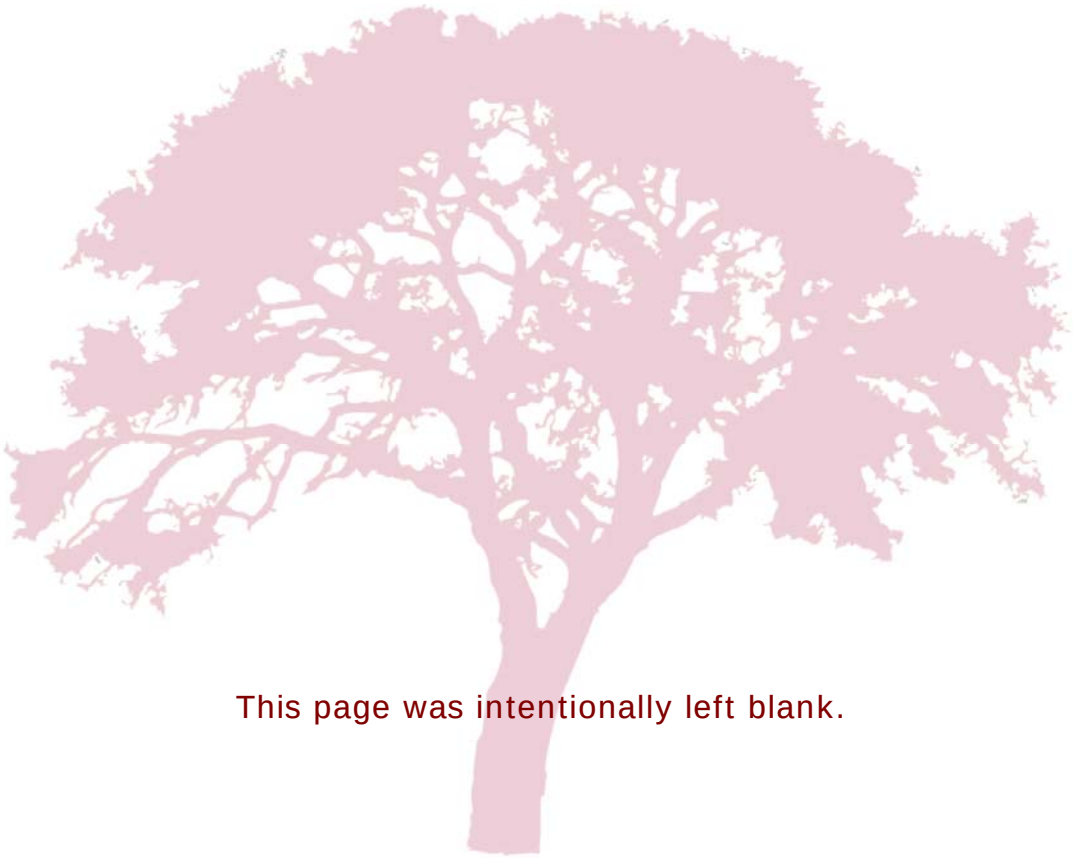

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# REPORT SUMMARY

## POLICE TECHNOLOGY PERFORMANCE AUDIT: FY 2006-07 THROUGH 2010-11

## OVERVIEW

**Oakland Police Department (OPD) spent at least $1.87 million on never used or underused technology; neither OPD nor DIT has provided effective planning, oversight, or financial management for OPD's technology systems.**

### Objective

The Office of the City Auditor conducted a performance audit to evaluate OPD's purchasing and management of its technology, including the support services provided by the Department of Information Technology (DIT) between FY 2006-07 and 2010-11. The objectives of the audit were to assess:

- Process for purchasing and maintaining OPD's technology systems
- Effectiveness of OPD's organization in overseeing its technology systems
- Fiscal management of OPD's technology systems

### Key Findings

The findings from the audit include:

- Finding 1.1: OPD spent at least $1.87 million on technology systems that were never used or underused
- Finding 2.1: OPD lacks a formal technology purchasing plan
- Finding 2.2: OPD does not appropriately budget for purchasing and maintenance of its technology systems
- Finding 2.3: OPD does not have a formal strategic technology plan. However, OPD does have an informal plan on which they have made progress
- Finding 3.1: OPD and DIT do not have clearly defined roles and responsibilities
- Finding 3.2: Communication between OPD and DIT is poor
- Finding 3.3: Neither OPD nor DIT has a complete inventory of all OPD technology systems
- Finding 3.4: OPD does not comprehensively track technology spending
- Finding 3.5: Neither OPD or DIT maintain all technology contracts and documentation (as required)
- Finding 3.6: OPD staff does not have formal background or adequate training in technology and project management

## Key Recommendations

To address the audit's findings, the report includes several key recommendations:

OPD should:

- Periodically evaluate all of its technology systems to ensure that the City is receiving its desired benefits from the systems. If the desired benefits are not being met, OPD should determine the reasons this is occurring and propose changes to the systems and/or its management, as appropriate
- Consider obtaining performance bonds for all new technology contracts that ensure either a refund or completion of the contract if the vendor goes out of business
- Prior to purchasing a system, ensure that there is a comprehensive evaluation of all services, software, and hardware necessary for the system to function properly
- Adopt an overall, strategic technology purchasing plan that aligns future technology purchases with its strategic goals and needs
- Develop a multi-year budget for technology spending that includes expected purchases, implementation costs, and maintenance
- Develop a training plan to ensure staff receive the skills needed to manage technology projects in conjunction with DIT

OPD and DIT should:

- Develop and implement service-level-agreements to establish mutual expectations, roles and responsibilities, deliverables, and performance expectations for each project in development or technology being supported
- Improve communication about OPD technology projects so that it is timely, comprehensive, and clear. Communication should include information regarding available funding, expenditures, priorities, roles and responsibilities, timelines, and project status. If OPD and DIT are unable to improve communication, they should bring the City Administrator into the process as a facilitator
- Work together to establish a comprehensive inventory of all OPD technology systems and projects. This inventory should be regularly updated
- Work with OPD Fiscal to establish a process that captures and tracks all technology expenditures and compares budget to actual
- Regularly review all OPD technology expenses and use total spending as a guide for future technology budgeting and planning
- Comply with Administrative Instructions (AI) 141, AI 4311, and AI 150 by:
    - Retaining and filing all technology contracts and documentation in accordance with the Records Retention Schedule
    - Filing all contracts with the City Clerk's Office
    - Periodically monitoring and evaluating contractors' performance

## Introduction

Technology is a crucial aspect of public safety. Effective law enforcement technology can help save lives as well as solve and prevent crimes. For example, police officers rely on radio technology to hear dispatched emergency calls. Police officers and dispatch staff rely on the computer aided dispatch system to track calls in the queue, and they rely on the records management system to record all police calls and police reports. On a daily basis, patrol officers depend on a field-based reporting system to track all of their reports. Each of these technologies is essential to everyday policing and requires ongoing maintenance and management.

Based on the importance of police technology to public safety and the fiscal impact of technology purchases, the Office of the City Auditor (Office) decided to conduct a police technology performance audit. Considering the City of Oakland's (City) budget cuts and financial constraints, Oakland Police Department (OPD) Management should ensure that it is efficiently managing and spending City funds on effective technology systems. This performance audit reviews OPD's management of technology purchasing, including the support services provided by the Department of Information Technology (DIT).

## Background

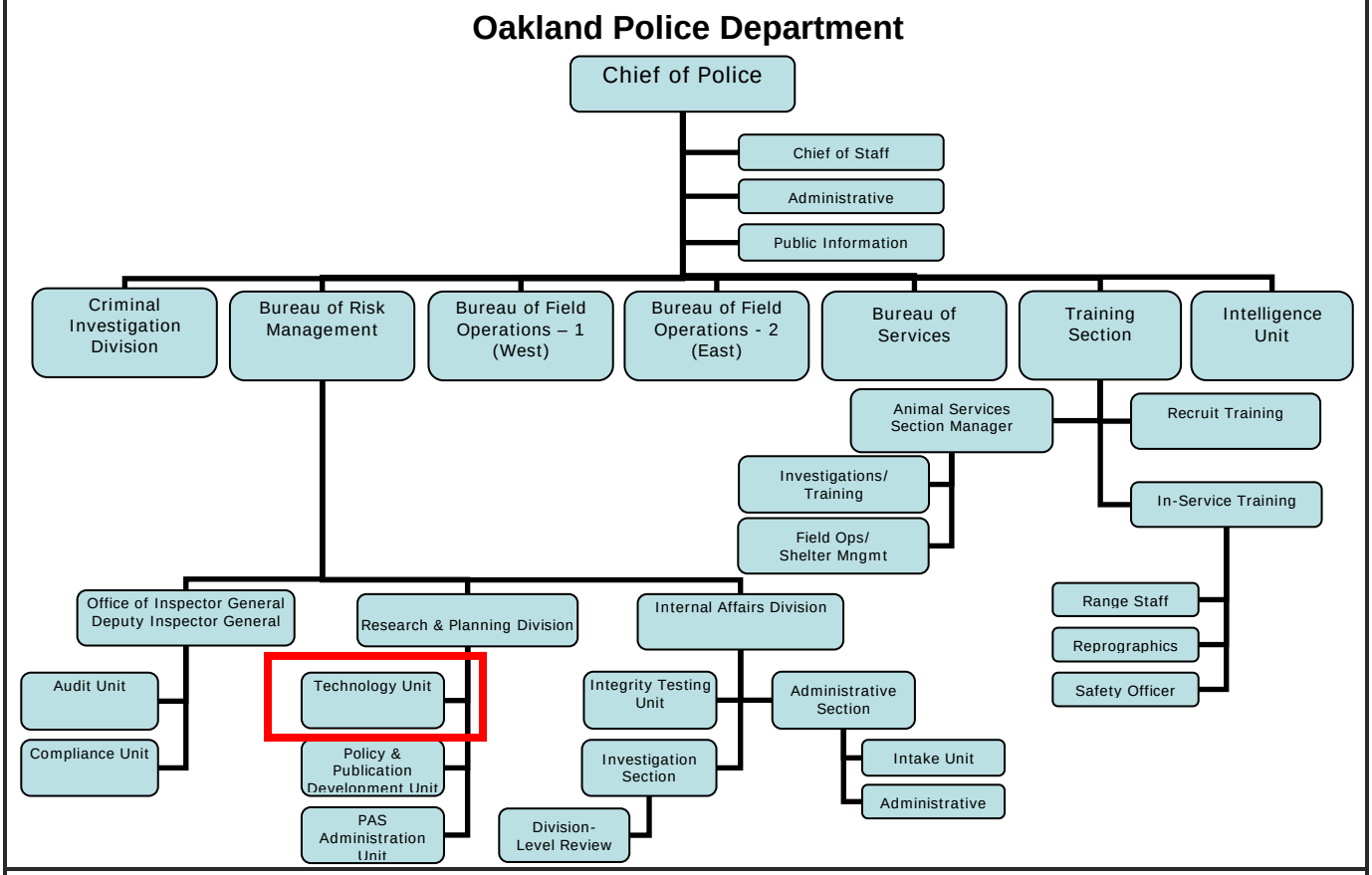
### Management of Police Technology

Both OPD and DIT are responsible for acquiring, maintaining, and supporting police technology.

OPD Management

Management of OPD technology is decentralized within OPD. Some larger technology projects are managed by the OPD Information and Technology Unit of the Research and Planning Division (OPD IT). However, OPD also has technology projects, including some large projects that are managed by staff in other OPD divisions. EXHIBIT 1 shows the current organization of OPD.

## EXHIBIT 1: OPD Organizational Chart




Source: OPD Management, July 2011

The OPD IT unit is currently under OPD's Bureau of Risk Management and is staffed with one captain, two police officers and one police services technician (PST). According to the Research and Planning Division's 2010 Annual Report, the objectives of the OPD IT unit are to:

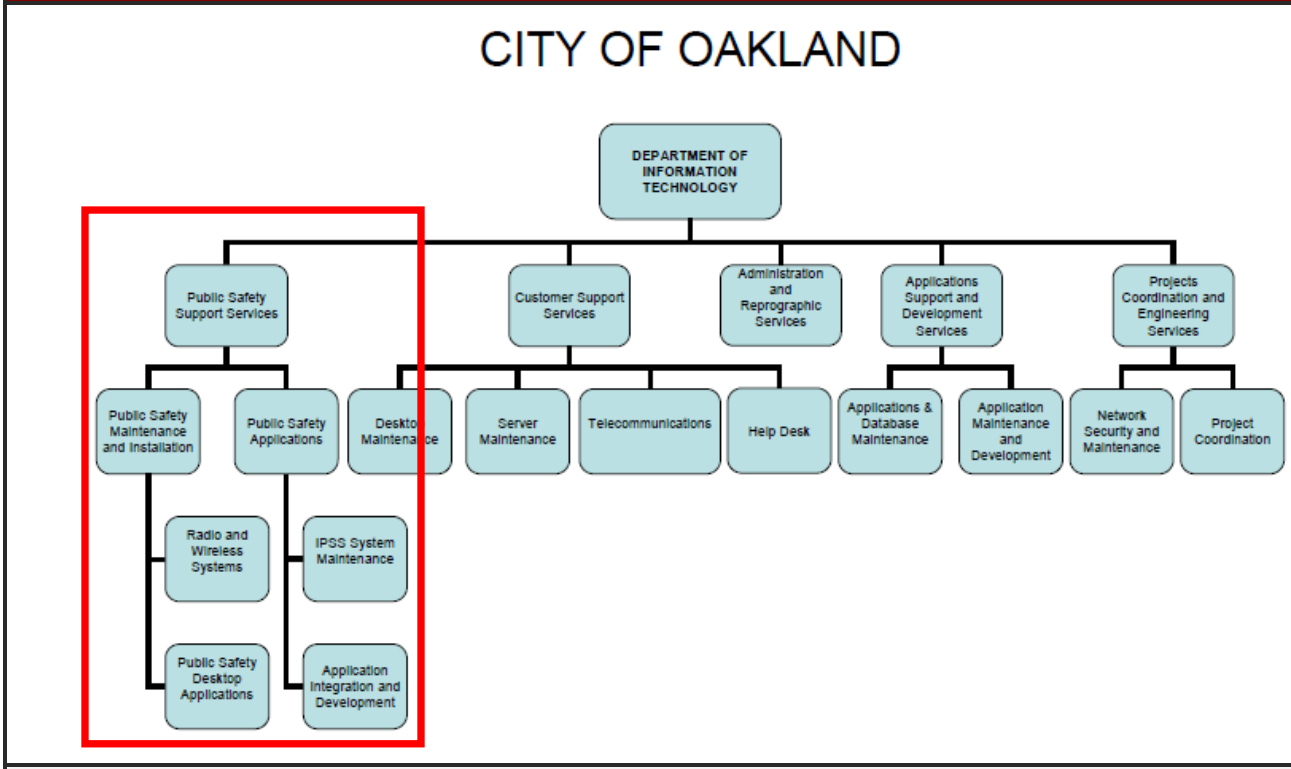
- Collaborate with DIT
- Successfully support and/or implement technology projects
- Evaluate and test new technology products that improve services and/or processes for the department's employees
- Publish and/or review technology related Requests for Proposals (RFP)
- Assist with the review of RFP responses and create evaluation criteria
- Coordinate site visits, reference checks, and/or final vendor selection
- Assist in the negotiation of technology related contracts
- Assist with the procurement of new technology related hardware and software
- Provide asset management services for the department's computer laptop inventory

Department of Information Technology, Public Safety Support Services

DIT has a core service titled Public Safety Support Services that provides support to OPD and Oakland Fire Department (OFD). DIT manages some of OPD's major technologies, such as the Radio Communications System P25 and the Computer Aided Dispatch (CAD) System. Refer to the APPENDIX for additional information on each of these systems. Both systems are also used by OFD. EXHIBIT 2 shows the organization of DIT.

Public Safety Support Services has 14 full-time positions and is organized by core services that provide support for OPD and OFD applications, maintenance and installations, radio and wireless systems, integration, and development. Four of the 14 staff are located on-site in the Police Administration Building to help with OPD's daily operational needs. The Public Safety Division Manager, with the support of other DIT staff, assists with OPD technology purchases, implementation, and ongoing maintenance. City-wide budget cuts decreased DIT's staffing resources by approximately 24 percent between fiscal year (FY) 2007-08 and 2010-11.

**EXHIBIT 2: Department of Technology Organizational Chart**



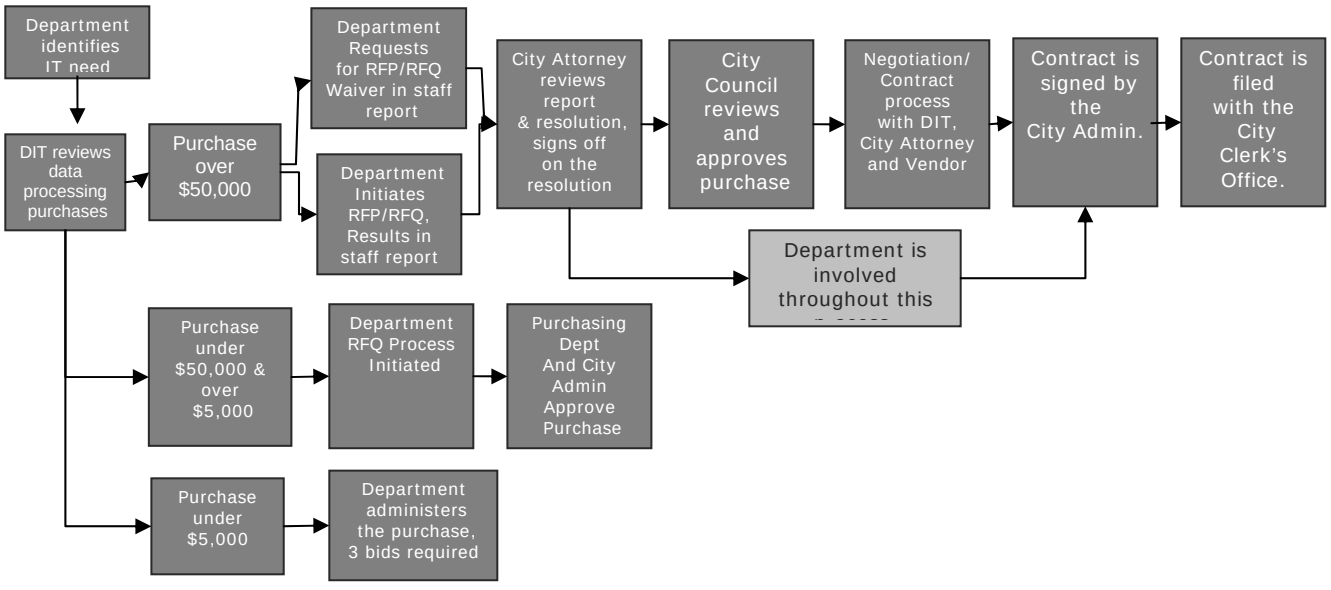

Source: DIT Management, May 2012

Technology Purchasing Process

Although there are various project owners for OPD's technology projects, the chart in EXHIBIT 3 details the City's general purchasing process. The department identifies their particular technology need and then works with DIT to develop technical specifications and ensure that the technology purchase is appropriate for the City's infrastructure. According to the City's Administrative Instruction (AI) policy, Centralization of Responsibilities for Activities Related to Information Technology (AI 1006), all information technology related staff reports must be reviewed by DIT. However, the AI does not specifically state when DIT's review should occur, with the exception of data processing equipment or services purchases, which must be submitted to DIT for review before it is submitted to the City Administrator.

According to the municipal code 2.04.020, if the technology purchase is more than $50,000, the purchase must be approved by City Council through a request for proposal (RFP) process, unless it is deemed by City Council that it is in the City's best interest not to conduct an RFP. The City Attorney's Office reviews all purchasing related city council resolutions and the corresponding agenda staff reports and signs off on the resolutions. If the purchase is less than $50,000, the Request for Qualification (RFQ) or RFP process is initiated by the department. If the purchase is less than $5,000, the department may administer the RFP process themselves, but still must obtain at least three bids. An informal competitive process is not required for purchases under $500.

**EXHIBIT 3: City's Technology Purchasing Process[1]**




Source: Developed by the City Auditor's Office based on City Administrative Instructions and the City Municipal Code

[1] Flowchart does not include the City's purchasing process for professional services contracts.

## Objectives, Scope & Methodology

Audit Objectives

The objectives of the audit were to:

- Assess the process in place for purchasing and maintaining technology systems
- Assess how OPD is organized to provide oversight and management of technology systems
- Evaluate the fiscal management of technology systems

Audit Scope

The scope of the audit includes OPD technology systems that were purchased or were currently in use during fiscal years 2006-07 through 2010-11.

Audit Methodology

To assess OPD's management of technology purchasing and maintenance, OPD IT, OPD Fiscal Management and staff, DIT Management, Department of Contracting and Purchasing, and Office of the City Attorney Management were interviewed. The audit also reviewed relevant policies, procedures, and financial documentation.

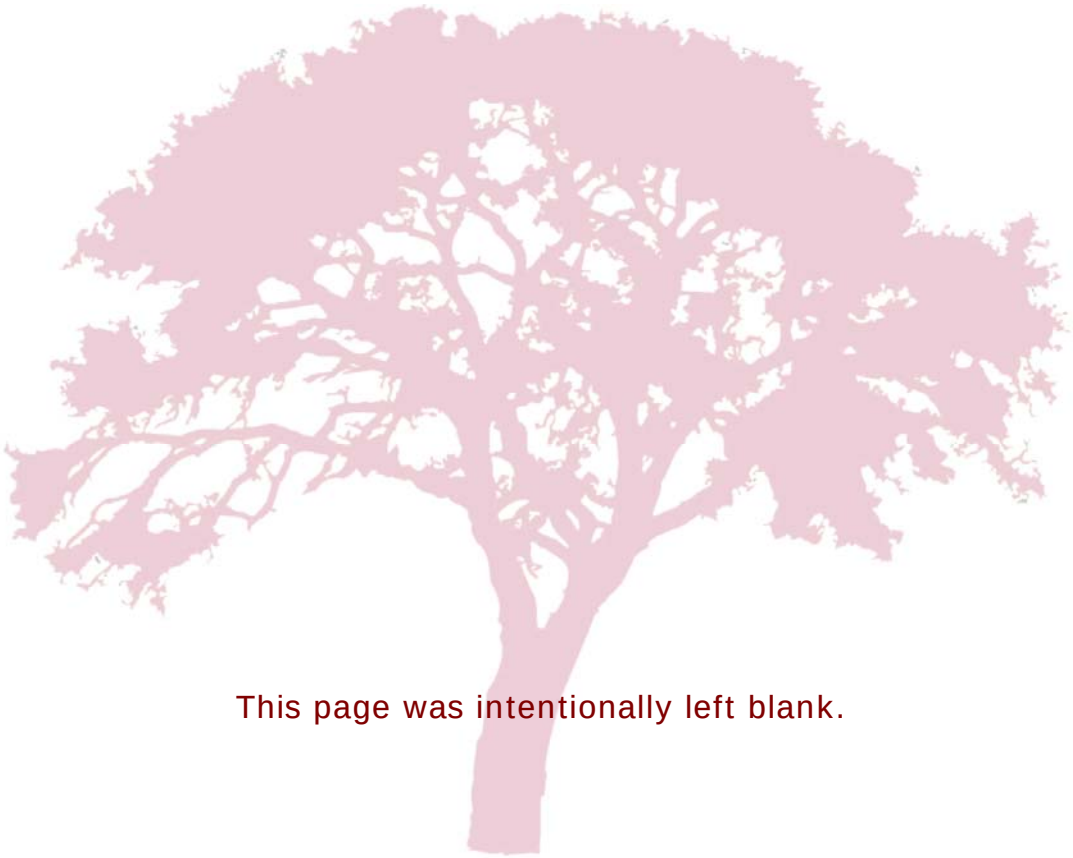
To assess how OPD is organized to provide oversight and management of technology systems, the Office met with OPD Management, staff and DIT Management. The audit reviewed relevant organizational charts and annual department and staffing reports.

To evaluate the fiscal management of technology systems, the audit reviewed financial reports for all technology expenditures from both the general fund and grant funds. A judgmental sample of ten technology systems over $50,000 was selected to evaluate:

- Purchasing process used for those systems
- Amount spent on each system
- Systems' current use

One out of the ten systems selected was not yet purchased; therefore, the audit reviewed the progress of the RFP process. A judgmental sample of two additional systems was selected that appeared to be inefficient; they were reviewed as case studies. The audit did not test the purchasing processes for these two systems. Refer to the APPENDIX for a listing of the sampled technology systems.

The Office performed this performance audit in accordance with the generally accepted government auditing standards (GAGAS). These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the audit's findings and conclusions based on the audit's objectives. We believe that the evidence obtained provides a reasonable basis for the audit's findings and conclusions based on the audit objectives.



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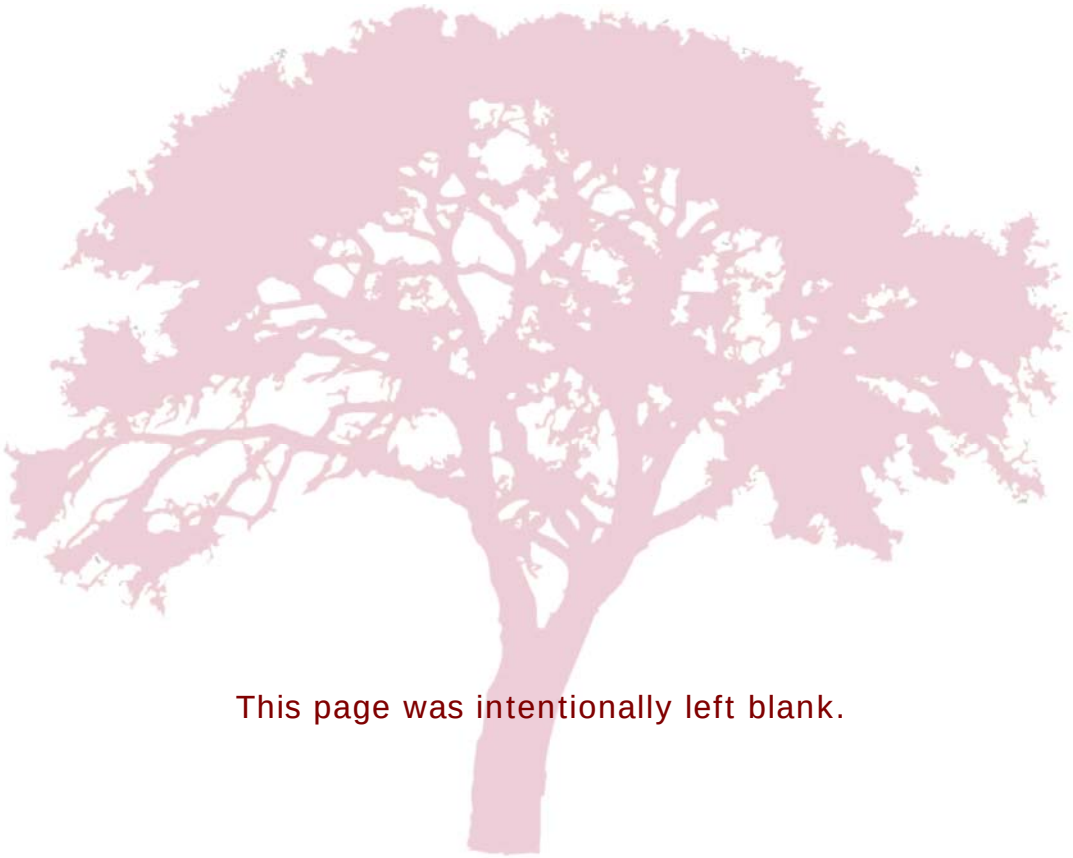
# AUDIT RESULTS



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# CHAPTER 1 — OPD SPENT AT LEAST $1.87 MILLION ON NEVER USED OR UNDERUSED TECHNOLOGY

## Finding 1.1

*OPD spent at least $1.87 million on technology systems that were never used or underused.*

OPD Technology Systems

OPD underused ShotSpotter and never used E-Citation, Evalis, In Car Video Management System (ICVMS), nor Systems, Applications and Products (SAP). OPD spent at least $1.87 million on these technology systems between FY 2006-07 and FY 2010-11. Out of the 12 technology systems included in the audit sample, the audit found four systems were never used and one system was underused. EXHIBIT 4 shows OPD's expenditures on these technology purchases. According to DIT, staffing and budget cuts are partially responsible for the cancellation or underuse of the above technology systems.

EXHIBIT 4: Never Used or Underused OPD Technology Systems

| Technology Systems | Underused | Never Used | Actual Expenditures in Oracle[2] |
|---|---|---|---|
| ShotSpotter | X | | $488,347 |
| E-Citation | | X | $81,866 |
| Evalis | | X | $65,103 |
| ICVM System | | X | $1,196,171 |
| SAP | | X | $37,446 |
| **TOTAL** | **1** | **4** | **$1.87 million** |

Source: Various records provided by OPD, DIT, and Oracle financial records

ShotSpotter

OPD spent at least $488,347 for the ShotSpotter system between FY 2006-07 through FY 2010-11 but did not use the system, as intended, during this five year period. According to OPD's City Council staff agenda report in 2007, ShotSpotter is a technology system that allows the City to:

- Detect and respond to gunfire incidents within 10-15 seconds, without a citizen calling 911
- Record weapons discharge events for instant replay
- Archive gunshot locations

In addition, the report stated that use of the system in other cities has been proven to reduce illegal weapons possession and gunfire as much as 60 percent in some target areas.

[2] Expenditures were queried from Oracle based on limited information provided about the vendor for the software application. Additional services, software, or hardware may also have been purchased with different vendors for the system. Thus, Oracle totals are estimated based on limited information provided by OPD and DIT.

Despite having spent almost half a million dollars on the ShotSpotter system, the system was underused for multiple reasons. According to OPD, ShotSpotter was not being used to its highest capability during those five years for the following reasons:

- Only one computer dedicated to reporting ShotSpotter alerts
- No dispatcher stationed at that computer to read the alerts
- Inconsistent alerts resulting from non-gunshot noise recordings
- Inconsistent dispatching to officers
- Verification for emergency calls only
- Non-use by officers for investigation
- Cost/benefit analysis discouraged increased use and staffing resources
- Discontinuation of system maintenance due to budget constraints

As a result of resource constraints, limited equipment, perceived value, and technical inaccuracies in the system, ShotSpotter was underused by OPD. In 2007, according to OPD, approximately one year after implementing ShotSpotter, the system had recorded more than 2,800 gunshot alerts; OPD had made four arrests for firearm related crimes and five arrests for unrelated crimes while investigating ShotSpotter alerts. It is the audit's conclusion that these statistics would have likely been higher if ShotSpotter had been used to its highest capability.

In September 2011, OPD evaluated ShotSpotter to determine what additional functionalities would be needed for ShotSpotter to function at its highest capability. City Council approved an upgrade to ShotSpotter, including funding for system maintenance. According to a September 2011 staff agenda report, the "New Service Model" for ShotSpotter includes, but is not limited to:

- Additional capability to deploy gunshot detection directly to patrol vehicles, greatly improving both officer response-time and the service's force multiplier impact
- Repair or replacement of sensors for more accurate alerts

The cost for the ShotSpotter upgrade is approximately $84,000 and is in addition to the amount that was previously spent on ShotSpotter.

After the upgrade is fully implemented, OPD should continue to evaluate ShotSpotter, as well as its other technology systems, to ensure that the City is receiving its desired benefits from the system. If the desired benefits are not being met, OPD should determine the causes and propose changes to the system(s) and/or its management, as appropriate. For example, OPD should evaluate the overall cost of the system in comparison to the system's overall benefits, including but not limited to the number of arrests for firearm related crimes, gun fire reduction, number of other arrests while investigating ShotSpotter alerts, and OPD's response times. Continued evaluation of its systems will help OPD ensure that it is properly managing its investments and assets and will hopefully help OPD further achieve its public safety goals.

E-Citation

OPD spent at least $81,866 on the E-Citation system between FY 2007-08 and FY 2008-09 but never used it. E-Citation is an application that automates the issuing of citations by police officers to improve operational efficiency. The application enables:

- Electronic citations issued in the field to interface with the City's records management system
- Transfer of citation data to the California Superior Court's systems (CASP and SoftFile)
- Electronic capture of racial profiling data to help achieve compliance with the Negotiated Settlement Agreement (NSA)[3]

According to OPD, the system was not functioning effectively during the testing phase. OPD also stated that the E-Citation vendor went out of business before the product could be implemented. However, OPD did not adhere to the City Attorney's recommendation to secure a performance bond for the E-Citation contract. The performance bond would have prevented the City from losing $81,866 in payments to the vendor. OPD should consider obtaining performance bonds for its technology contracts, which will ensure a refund or a completion of the contract if the vendor goes out of business.

Evalis

In March 2007[4], OPD spent at least $65,000 on CRISNet's Evalis system as part of the Department's efforts to comply with the NSA's personnel management system requirements[5]. Evalis is a computerized relational database management system that identifies at-risk behavior activities of officers. However, the system was never used because additional services and software were needed to effectively run Evalis, and the original vendor went out of business.

After OPD purchased Evalis from CRISNet, Motorola bought CRISNet, and the City amended its existing contract with Motorola to include the Evalis system. OPD stated two separate reasons why the system was never used:

- Motorola decided not to support the Evalis system
- While Motorola is capable of supporting the system, the additional technology software and support that is needed to make the system functional is too expensive

Regardless, the result is that OPD lost at least $65,000 on the Evalis system.

Further, because OPD still needed to comply with NSA requirements, it worked with DIT to internally develop a system called Internal Personnel Assessment System (I-PAS) to meet its needs. The I-PAS system was used to fulfill the NSA requirement to track stop data. According to OPD, I-PAS needs to be replaced.

[3] In January 2003, the City entered into a NSA to resolve allegations of police misconduct raised by plaintiffs in the lawsuit Delphine Allen v. City of Oakland, otherwise known as the "Riders" case. NSA Task #34 relates to the tracking of stop data to detect any cases of racial profiling.
[4] CRISNET was selected as the vendor for the personnel information management system in 2004. However, according to OPD, the project for the system did not begin until 2006 and according to Oracle, payment was not made to Motorola for Evalis until 2007.
[5] NSA Task #41 relates to the Personnel Assessment System.

Depending on the contract, OPD might be entitled to receive a refund from Motorola for the Evalis system.

In Car Video Management System (ICVMS)

OPD spent at least $1.2 million on ICVMS during FY 2007-08; however, the system was never used because:

- System did not work as expected
- Additional services and hardware were needed to effectively run it
- Vendor went out of business

ICVMS is a system that records police officer interactions with citizens and helps to protect officers from fabricated allegations and false complaints. The video recordings from ICVMS can also be used as training tools[6].

According to OPD, the ICVMS project was not successful because of poor project planning and management, which included poor research and analysis on system functions and needs, as well as a lack of training and staffing resources. In addition, prior to full deployment of the system, the vendor filed for bankruptcy and OPD was not able to fully implement the system. According to OPD, it used some of the hardware equipment from the IVCMS for the installation of the VieVu lapel cameras, which were implemented in 2011. As a result, OPD spent at least $1.2 million on the ICVMS system, which was never used. OPD needs to ensure that prior to purchasing a system, it thoroughly evaluates all the services, software, and hardware that is necessary for the system to function properly.

Systems, Applications and Products (SAP)

In December 2010, OPD spent at least $37,446 on the SAP system, which has not yet been used. SAP provides query capability for extracting required data and information from mission critical databases. The SAP system was purchased to replace the old system, Hummingbird.

In July 2011, OPD stated that the implementation of SAP was put on hold due to a lack of funding. Due to the lack of proper budgeting, planning, and communication for the SAP system, OPD purchased a system that it has not used for more than a year and cannot be used until OPD allocates additional funding for the system. According to OPD, the vendor hired to install SAP needs an additional $60,000 to complete the project. DIT plans to have the vendor complete the project once additional funding is identified. Currently, OPD is still using its old system, Hummingbird, which is currently out of warranty.

## Recommendation

We recommend OPD:

- Periodically evaluate all of its technology systems, including ShotSpotter, to ensure that the City is receiving its desired benefits from the systems. If the desired benefits are not being met, OPD should determine the reasons this is occurring and propose changes to the systems and/or its management, as appropriate

[6] NSA Task #32 required OPD to "explore" video technology. However, according to OPD, it was determined to be in compliance with Task #32 as of March 2004.

- Consider obtaining performance bonds for all new technology contracts that ensure either a refund or completion of the contract if the vendor goes out of business
- Work with the City Attorney to determine if the $65,000 spent on the Evalis system can be recouped
- Prior to purchasing a system, ensure that there is a comprehensive evaluation of all services, software, and hardware necessary for the system to function properly

## Conclusion

OPD spent at least $1.87 million on never used or underused technology. At least $1.38 million was spent on systems that were not used, and at least $488,347 was spent on a system that was underused. The ShotSpotter system was underused for five years before OPD evaluated the system to determine what improvements were needed to achieve the desired results and propose a solution. The E-Citation, Evalis, ICVMS, and SAP systems were purchased by OPD but not used. When the vendors for three of the above noted systems went out of business, the City had no, or limited, recourse to collect the funds they had already paid to the vendor.

OPD needs to strengthen its processes and management of purchasing and maintaining technology systems to help ensure that it is effectively managing its investments and assets. Strengthening OPD's technology purchasing and management will also hopefully assist the Department to further achieve its public safety goals. One way that OPD can help protect its technology investments is by obtaining a performance bond for all new technology contracts. According to the City's municipal code 2.04.050, "Whenever the City Administrator deems it advisable in the purchase of supplies, City Administrator may require the furnishing of a faithful performance bond in an amount equal to at least 25 percent of the contract price." Although a performance bond is not required, a performance bond would prevent the City from losing money in the event of a vendor going out of business by ensuring a refund or a completion of the contract. OPD lost money on five of the 12 systems reviewed by the audit; for three of these systems this was, in part, because the vendors went out of business.

| **RECOMMENDATIONS: Chapter 1** | |
|---|---|
| **We recommend that OPD:** | |
| Recommendation #1 | Periodically evaluate all of its technology systems, including ShotSpotter, to ensure that the City is receiving its desired benefits from the systems. If the desired benefits are not being met, OPD should determine the reasons this is occurring and propose changes to the systems and/or its management, as appropriate |
| Recommendation #2 | Consider obtaining performance bonds for all new technology contracts that ensure either a refund or completion of the contract if the vendor goes out of business |

| | |
|---|---|
| Recommendation #3 | Work with the City Attorney to determine if the $65,000 spent on the Evalis system can be recouped |
| Recommendation #4 | Prior to purchasing a system, ensure that there is a comprehensive evaluation of all services, software, and hardware necessary for the system to function properly |

# CHAPTER 2 OPD'S TECHNOLOGY PLANNING IS INADEQUATE.

## Summary

OPD's technology planning is inadequate. For example, it does not have:

- Technology purchasing plan
- Budget
- Adopted strategic technology plan

## Finding 2.1

### *OPD lacks a formal technology purchasing plan.*

OPD does not have a formal purchasing plan for its anticipated technology needs. The audit found that some of OPD's technology purchases were "demand-driven" – not based on OPD's strategic needs. As it relates to system maintenance, neither OPD nor DIT has a complete list of OPD equipment and systems nor a recommended replacement schedule. Without a plan to replace hardware and software, the Department will not be able to effectively manage its systems. According to OPD, it does not have a formal technology purchasing plan due to the lack of funding and staffing resources, as well as constantly shifting priorities.

According to the Government Accountability Office's (GAO) Executive Guide for Measuring Performance and Demonstrating Results of Information Technology Investments, leading organizations improve information technology by aligning IT to support business missions, goals, or objectives.

While OPD does not have an overall strategic purchasing plan, OPD has recently approved a replacement proposal for approximately 220 old laptops for the patrol cars. The proposal includes a timeline and budget.

## Recommendation

We recommend that OPD:

- Adopt an overall, strategic technology purchasing plan that aligns future technology purchases with its strategic goals and needs

## Finding 2.2

### *OPD does not appropriately budget for purchasing and maintenance of its technology systems.*

OPD and DIT do not have a formal, approved budget for its technology purchases, with the exception of the budget for the radio communications system. According to DIT's maintenance report, an estimated $845,366 per year in maintenance fees does not get budgeted in the general fund for OPD's critical systems. OPD does not always appropriately budget for annual maintenance and additional system costs. As a result, some systems are not used to their full capacity. For example, OPD obtained City Council's approval for:

- $500,000 to be spent on the purchase and implementation of ShotSpotter for the first year only, not the ongoing maintenance of approximately $53,000 and the cost of upgrades. Inappropriate budgeting and planning for maintenance may have had an impact on ShotSpotter being underused for five years

- $35,000 to be spent on SAP; however according to OPD, the cost of implementing the system is an additional $60,000 on top of the purchase cost. In part, due to the lack of appropriate budgeting for implementation costs, SAP has not been fully implemented and cannot be used until additional funding is allocated for the system

Further, by not strategically budgeting for routine replacement of its computers and other equipment, OPD may face additional obstacles for funding its technology needs. One of the additional obstacles is that grant funds, which OPD has used to purchase many of its technology systems, cannot be used for routine replacement of computers and other equipment. Without a formal, approved technology budget, OPD has had to replace obsolete computers and equipment on a case-by-case basis.

According to OPD, limited resources as well as shifting priorities make it difficult to dedicate a budget for technology replacement and maintenance. According to DIT, some maintenance contract renewals do not get done due to the lengthy process to renew a contract.

A technology plan would help OPD strategically identify technology projects once resources become available. According to *IT Budgeting and Decision Making: Maximizing Your Government's Technology Investments*, municipalities can use budgeting and IT governance to get the best possible return on IT spending. Furthermore, the Government Finance Officers Association (GFOA) recommends that governments consider budgeting for results and outcomes as a practical way to achieve program goals. GFOA recommends the following steps:

- Determine how much money is available
- Prioritize results
- Allocate resources among high priority results
- Conduct analysis to determine what strategies, programs, and activities will best achieve desired results
- Budget available dollars to the most significant programs and activities
- Set measures of annual progress, monitor, and close the feedback loop
- Check what actually happened
- Communicate performance results. Internal and external stakeholders should be informed of the results in an understandable format

The Department of Justice's Guide[7] states that many police departments assume someone else is doing their budgeting for them and are not aware that they should doing their own budgeting. The guide also recommends that the budget include all direct, indirect, reoccurring, and one time costs.

[7] US DOJ Community Oriented Policing Services Law Enforcement Tech Guide: How to plan, purchase and manage technology A Guide for Executives, Managers, and Technologist.

## Recommendation

We recommend OPD:

- Develop a multi-year budget for technology spending that includes expected purchases, implementation costs, and maintenance

## Finding 2.3

*OPD does not have a formal strategic technology plan. However, OPD does have an informal plan on which they have made progress.*

According to OPD, the 2010 Strategic plan developed by the former Chief of Police was never formally adopted and communicated to staff[8]. Despite not being formally adopted, OPD has made substantial progress on the technology objectives included in the plan. The following exhibit is the status of OPD's implementation of its technology objectives:

**EXHIBIT 5: Informal 2010 OPD Strategic Plan-Status of Technology Related Objectives[9]**

| Section | Action | Time Frame | Status |
|---|---|---|---|
| Strategic Objective 2.2: Provide Timely Response to Calls for Service and Effective Police Presence in Neighborhoods | | | |
| 2.2.1 | Implement Police Optimization System (PROS) | Within One Year | Completed |
| 2.2.10 | Implement Automatic Vehicle Location (AVL) | Within One Year | In Progress |
| Strategic Objective 3.2: Increase the Level of Openness and Accessibility of the OPD and OPD Personnel | | | |
| 3.2.5 | Implement VieVu | Within One Year | Completed |
| 3.2.7 | Explore the use of current state-of-the-art technology to better communicate with the Community (twitter, facebook, blogs, texting, internet, up-to-date OPD website, etc.) (Sharepoint) | Within One Year | In Progress |
| Strategic Objective 5.1: Provide Clear Direction and Open Communication Within the OPD, and Encourage Teamwork and Shared Accomplishment | | | |
| 5.1.4 | Develop an ongoing web based employee suggestion capability that allows employees to provide feedback identifying themselves or remaining anonymous | Within One Year | Not implemented |
| 5.1.8 | OPD Intranet Site - There is a second (replacement) one proposed within the SharePoint Project | Within One Year | Completed |
| Strategic Objective 5.4: Effectively Use Information and Technology to Improve OPD Management, Operations, and Performance | | | |
| 5.4.1 | OPD Steering Committee | Within One Year | Not implemented |
| 5.4.2 | Evaluate, acquire, and effectively implement technology | Mid-Term 2-3 Years | In Progress |
| 5.4.3 | Service Level Agreements | Within One Year | Not implemented |
| 5.4.4 | Establish Research and Planning | Long Term 4-5 years | In progress |
| Source: OPD 2010 Strategic Plan and OPD Management | | | |

[8] On April 11, 2012, OPD's staff report to City Council stated that the 2010 OPD Five-Year Strategic Plan was adopted. However, during the audit, we were informed that the plan was never formally adopted.

[9] This table includes only technology related objectives from the informal strategic plan. There are other non technology related objectives in the plan.

OPD's informal strategic plan addresses several technology management best practices, including implementing a steering committee and using service level agreements. Furthermore, the strategic IT goals and objectives were developed based on strategic department goals outlined in the strategic plan, including goals related, but not limited to crime reduction, operational improvements, and calls for service response times. However, OPD can further improve its strategic plan by ensuring that:

- All technology objectives are specific and measurable. Objectives 3.2.7 and 5.4.2 are vague and do not provide specific direction or objectives
- The strategic plan is formally adopted and communicated to all appropriate staff, which may be all staff since OPD's technology management is decentralized
- An objective is added regarding the creation of a strategic technology purchasing plan
- The plan is reviewed, tracked, and updated on a regular basis. The frequency of the review should be documented in the plan

## Recommendation

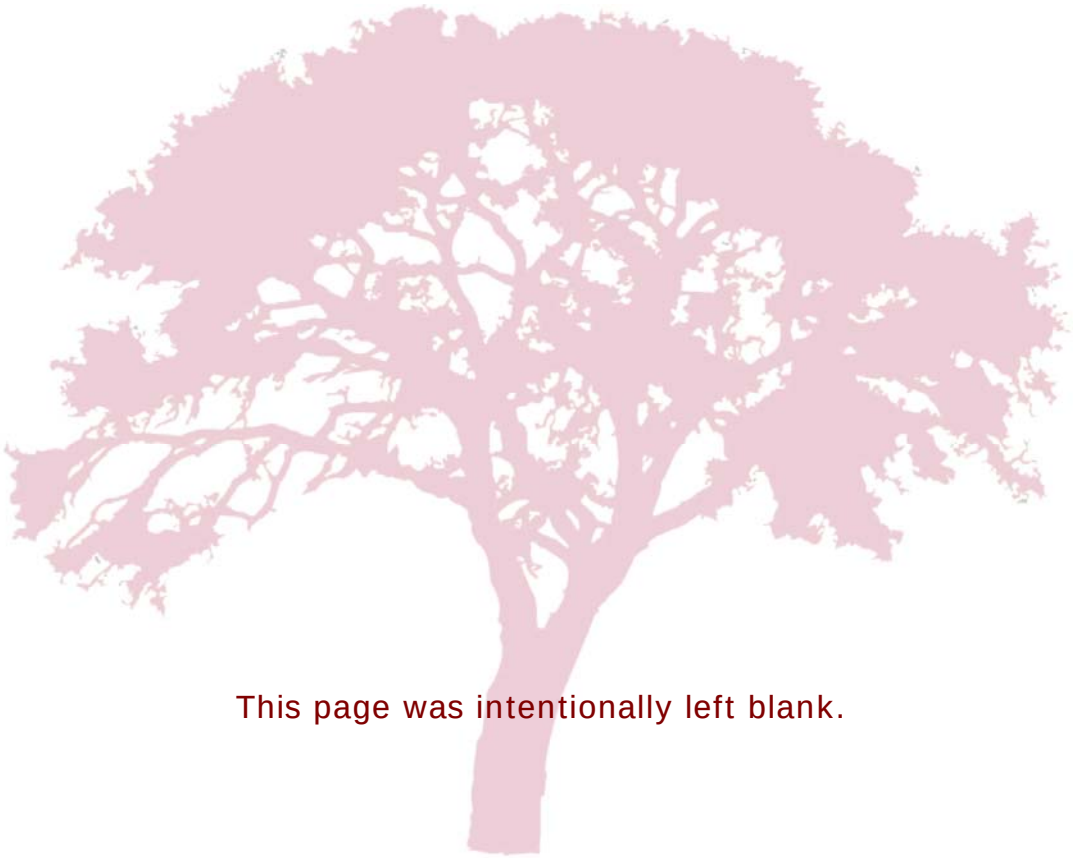
We recommend that OPD:

- Improve its strategic plan by ensuring that all technology objectives are specific and measurable and that the plan is formally adopted and communicated to all appropriate staff, which may be all staff since OPD's technology management is decentralized. Add an objective to create a strategic technology purchasing plan. Further, the strategic plan should be reviewed, tracked, and updated on a regular basis. The frequency of the review should be documented in the plan

## Conclusion

OPD does not have effective strategic and financial oversight over its technology systems resulting in a lack of budgeting and management reporting. OPD has an informal department-wide strategic plan that includes technology objectives; however, this plan was never fully adopted and communicated to staff. In addition, OPD does not have a technology purchasing plan based on strategic objectives. Developing, adopting, and communicating a strategic technology purchasing plan will help provide guidance for OPD and DIT when evaluating new technologies and determining how limited grant funds can be used. A purchasing plan would also help OPD better manage grant deadlines to ensure effective use of all grant funds. Budgeting and management reporting are key components of technology management and ensure that future expenditures for new purchases, maintenance, and upgrades are planned.

| RECOMMENDATIONS: Chapter 2 | |
|---|---|
| **We recommend that OPD:** | |
| Recommendation #5 | Adopt an overall, strategic technology purchasing plan that aligns future technology purchases with its strategic goals and needs |
| Recommendation #6 | Develop a multi-year budget for technology spending that includes expected purchases, implementation costs, and maintenance |
| Recommendation #7 | Improve its strategic plan by ensuring that all technology objectives are specific and measurable and that the plan is formally adopted and communicated to all appropriate staff, which may be all staff since OPD's technology management is decentralized. Add an objective to create a strategic technology purchasing plan. Further, the strategic plan should be reviewed, tracked, and updated on a regular basis. The frequency of the review should be documented in the plan |



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# CHAPTER 3 OPD AND DIT DO NOT PROVIDE EFFECTIVE OVERSIGHT AND FINANCIAL MANAGEMENT OF OPD'S TECHNOLOGY SYSTEMS.

## Summary

OPD and DIT do not provide effective oversight and financial management of OPD's technology systems. OPD and DIT do not:

- Have clearly defined roles and responsibilities regarding ownership and management of OPD's technology
- Effectively communicate
- Have a complete inventory of all technology systems
- Comprehensively track technology spending
- Have adequate record keeping and training

## Finding 3.1

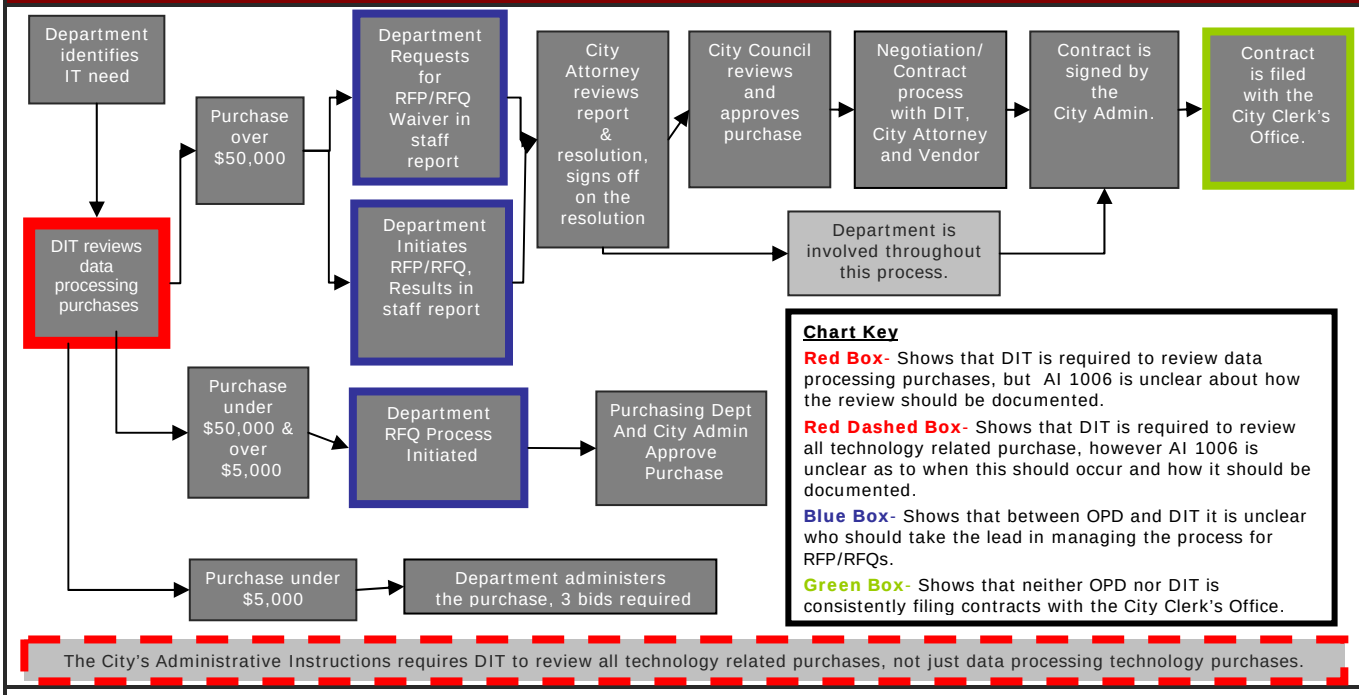
### *OPD and DIT do not have clearly defined roles and responsibilities.*

The ownership of OPD's technology systems, as well as the roles and responsibilities for planning and budgeting, implementing, managing, and evaluating the systems are not always clear between OPD and DIT. Limited staffing resources may have impacted the clarity of roles and responsibilities between OPD and DIT. The audit found three areas as examples of unclear roles and responsibilities.

- Unclear roles and responsibilities over the RFP/RFQ process: as can be seen in the blue boxes in EXHIBIT 6, there are unclear roles and responsibilities between OPD and DIT regarding who is responsible for running the RFP/RFQ process. One example of unclear roles and responsibilities over an RFP process is with OPD's Computer Aided Dispatch system (CAD). The CAD system contract expires in 2012, and OPD and DIT are behind schedule in issuing a timely RFP to replace the system. It appears that DIT is not initiating the RFP process in a timely manner, as requested by OPD. In response to DIT not initiating the RFP process, OPD tried to move the process forward by conducting its own research and vendor outreach. As a result of unclear roles and responsibilities over the RFP process, the CAD contract may expire without a timely replacement, and OPD's preliminary research and outreach to vendors may impact the integrity of the RFP process once it is initiated.
- Unclear roles and responsibilities over system ownership and implementation: ownership over the SAP system, including planning and budgeting for implementation was unclear. Although DIT purchased the SAP system with OPD's approval, it was unclear who would manage the project, including planning and budgeting. One result of the unclear ownership was that the SAP system was purchased, but not used.
- Unclear roles and responsibilities regarding DIT's review of technology purchases: as can be seen by the red boxes in EXHIBIT 6, it is unclear when DIT should review technology purchases other than data

processing equipment. The City's Administrative Instruction (AI) 1006 is clear about when DIT's review of data processing equipment should take place, but it is not clear when DIT's review of all other technology purchases should occur or how the review should be documented as having occurred, as shown by the dashed lined red box in EXHIBIT 6. Without defining how evidence of DIT's review should be documented, it is not easy to determine whether the purchasing process was appropriately followed.

**EXHIBIT 6: Gaps and Weaknesses in OPD's Technology Purchasing Process**




Source: Developed by the City Auditor's Office based on City Administrative Instructions and the City Municipal Code

One way for OPD and DIT to establish clearer roles and responsibilities is through documented service-level-agreements. OPD is currently not using service level agreements with DIT, although it was a best practice listed in the prior OPD Chief's strategic plan; the plan was never formally adopted by OPD[10].

At a minimum, service-level-agreements should clearly define mutual expectations, roles and responsibilities, deliverables, and performance expectations for each project in development or technology being supported. According to Information Systems Audit and Control Association (ISACA), the following are best practices for service level agreements:

- Services expressed in business terms
- Definitions of terminology
- Formal approvals from all parties
- Clear service level objectives (e.g. availability, reliability, performance) and corresponding measures

[10] Refer to Finding 2.3 for information on the former Chief's strategic plan.

- Nonperformance clauses defining consequences of unfulfilled commitments (e.g. warnings, escalation procedures, and financial penalties)
- Limitations and customer responsibilities

Clearly defined service level agreements with DIT may help ensure more efficient and effective technology purchases, implementation, and management, and may further help OPD achieve its public safety goals.

## Recommendation

We recommend that OPD:

- Consult with the City Attorney's Office about how prior vendor outreach for the CAD contract may impact the RFP process going forward
- Work with DIT and the City Administration to clarify when DIT should review all technology purchases and how DIT should document evidence of its review. Going forward, consistently obtain evidence of DIT review on technology purchases
- Develop and implement service-level-agreements with DIT to establish mutual expectations, roles and responsibilities, deliverables, and performance expectations for each project in development or technology being supported

## Finding 3.2

*Communication between OPD and DIT is poor.*

Communication between OPD and DIT is lacking. While there is evidence of communication between the two departments, through e-mails and meetings, the communication appears to be ineffective. Communication about technology projects and priorities should be timely, comprehensive, and clear. Better communication will help OPD ensure that grants are used strategically on technology projects, OPD's technology objectives, priorities, and timelines are met, and technology planning, budgeting, and management are effective.

The following are some examples of ineffective communication that occurred between OPD and DIT:

- DIT claims that OPD has not defined its technology priorities, while OPD claims that DIT has not provided OPD a list of all open OPD technology projects, as OPD requested
- OPD claims that DIT did not inform them of $1.2 million in Oakland Fire Department (OFD) grant funds for the new Computer Aided Dispatch (CAD) system until three months before at least one of the grants expired. Since OPD and DIT did not come to a conclusion about a vendor before the three months, one $500,000 grant had to be used for other purposes instead of being used, as intended, for the new CAD system. As a result, OPD and DIT are not able to use those grant funds for the CAD system and will need to use funds from other sources. OFD is currently evaluating the availability of the remainder of $1.2 million (approximately $700,000) to determine if the funds can still be used for the CAD system

- According to OPD IT, in June 2011, OPD requested that DIT initiate the RFP process for the new CAD vendor; however, as of November 2011, the RFP process had not been started
- According to OPD, DIT purchased SAP to replace the Hummingbird system. Although OPD approved the purchase, OPD stated that it did not manage the system implementation. According to OPD, it was not aware of the details of the contract and was not aware that the SAP vendor did not complete the system implementation due to a lack of funding

There are likely many factors contributing to the poor communication between DIT and OPD. One of these factors may be the limited staffing resources in DIT and OPD. It is also possible that the number of DIT project managers assigned to manage OPD's technology systems and projects may not be properly aligned with OPD's technology needs.

## Recommendation

We recommend that OPD and DIT:

- Improve communication about OPD technology projects so that it is timely, comprehensive, and clear. Communication should include information regarding available funding, expenditures, priorities, roles and responsibilities, timelines, and project status. If OPD and DIT are unable to improve communication, they should bring the City Administrator into the process as a facilitator
- Initiate the RFP process for the new CAD system
- Follow up with OFD on the potential $700,000 in grant funds that may still be available to use on the new CAD system
- Work with the City Administrator's Office to determine the appropriate number of DIT project managers that should be assigned to OPD

## Finding 3.3

### *Neither OPD nor DIT has a complete inventory of all OPD technology systems.*

Neither OPD IT nor DIT has an inventory of all OPD's technology systems. According to OPD, this is because technology management within OPD is decentralized. However, having a complete understanding of an entity's assets, in this case OPD's technology systems, is key to ensuring that those assets are properly safeguarded. Without a comprehensive list of its technology systems, it is the audit's conclusion that OPD and DIT cannot effectively and strategically plan for future technology maintenance, life cycles, and needs – nor can they monitor and ensure effective management and security of all systems.

Because OPD and DIT do not have an inventory of OPD's technology systems, the auditors compiled a preliminary inventory based on OPD's staff agenda reports, information obtained from DIT staff, e-mails, and meeting minutes. Based on this preliminary inventory list, OPD has approximately 55 technology systems and/or projects.

## Recommendation

We recommend that OPD and DIT:

- Work together to establish a comprehensive inventory of all OPD technology systems and projects. This inventory should be regularly updated with information, including but not limited to: system version number, license number, number of users, as well as maintenance and upgrade schedules

## Finding 3.4

*OPD does not comprehensively track technology spending.*

Complete police technology spending is not being tracked by OPD or DIT. We requested a report on police technology spending and did not receive a comprehensive report from either OPD or DIT. OPD technology purchases are recorded in many different financial tracking accounts. Only one of those accounts is designated for technology, "Minor Computer Hardware." Without a clear or comprehensive method for tracking technology spending, it is unlikely that OPD is able to effectively budget or manage its technology costs. Clear and accurate tracking and reporting of technology expenditures allows decision makers to better manage financial resources and make more informed decisions, as well as allows management to safeguard assets.

Because neither DIT nor OPD could provide a total purchase price or documentation for the various OPD technology projects, the auditors compiled an approximate technology inventory of OPD systems by reviewing various documents provided by OPD and DIT. According to this inventory, OPD had approximately 55 technology systems and/or projects between FY 2006-07 and 2010-11.

OPD's inconsistent planning and budgeting for technology projects and unclear roles and responsibilities between OPD and DIT may have resulted in OPD not comprehensively tracking its technology expenditures.

## Recommendation

We recommend that OPD and DIT:

- Work with OPD Fiscal to establish a process that captures and tracks all technology expenditures and compares budget to actuals
- Regularly review all OPD technology expenses and use total spending as a guide for future technology budgeting and planning. Evidence of the review should be consistently documented and retained

## Finding 3.5

*Neither OPD nor DIT maintain all technology contracts and documentation, as required.*

Key documentation for OPD's technology systems is not consistently maintained, as required. The audit requested key documentation for nine technology systems, including contracts, statements of work, invoices, and purchase orders. However, neither OPD nor DIT provided all of the requested documentation. Furthermore, not all of the contracts for the systems reviewed were on file with the City Clerk's Office. EXHIBIT 7 details the testing results of the purchasing documentation.

| EXHIBIT 7: Purchasing Documentation Testing Results | |
|---|---|
| **Documentation Requested** | **Documentation Provided to the Office (Number of Systems)** |
| Contracts | 3 |
| Contracts on File with the City Clerk's Office | 1 |
| Statement of Work | 4 |
| Invoices (complete) | 1 |
| Purchase Order History (complete) | 1 |
| Source: Developed by the Office from documentation provided by OPD, DIT and Office of the City Clerk. | |

City-wide Records Management Program (AI 141) requires City agencies to print and file all writings relative to their department's function that are produced, received, owned, or used by their agency that are required to be kept by law or contain administrative, fiscal, legal, or historical value to the City. The AI also states that all documents should be maintained in accordance with the approved City's Records Retention Schedule. Furthermore, Contracts for Formal Purchases (AI 4311) and a 2006 City Administrator's Procedure Memo specifically state that all contracts should be filed with the City Clerk's Office. EXHIBIT 6 in section 3.1 of this audit shows this step in the purchasing process. The step is highlighted in green to show that the step is not being consistently followed.

The auditors requested the key documents noted above from OPD IT, OPD Fiscal, and DIT. At the end of the audit, OPD IT noted that various staff in other OPD divisions may have additional documentation for the systems included in the audit sample since OPD's technology management is decentralized. However, OPD Fiscal is OPD's central financial management division and should maintain records on all financial transactions.

Due to the lack of documentation, the audit cannot conclude on whether or not OPD is also complying with Professionalized or Service Contracts AI (AI 150). AI 150 states that department management must take the initiative to establish controls and follow up procedures for monitoring contracts. This should include, but not limited to the following:

- Reviewing the contractor's quarterly reports
- Reviewing the contractor's invoices for accuracy and thorough documentation
- Evaluating the work performed by the contractor at the completion of the services

## Recommendation

We recommend that OPD and DIT:

- Comply with AI 141 by retaining and filing all OPD technology contracts and documentation. Files must be retained according to the timelines approved in the Records Retention Schedule
- Comply with AI 4311 and the 2006 City Administrator's Procedure Memo by ensuring all contracts are filed with the City Clerk's Office

- Ensure that technology contracts are periodically monitored and evaluated in accordance with AI 150, which includes review of contractors' quarterly reports and invoices for accuracy and thorough documentation and evaluation of the work performed by the contractor at the completion of the services

## Finding 3.6

*OPD staff does not have formal background or adequate training in technology and project management.*

OPD IT does not provide formal technology training for its staff. According to OPD IT, its staff receives some informal training from DIT and technology vendors, but staff have not received any training in project management. Other OPD division directors responsible for managing OPD's systems or technology projects may similarly lack appropriate training in technology and project management. One risk of not having adequate training is that technology systems may not be operated to their full capability due to the lack of staffs' knowledge and proficiency. Furthermore, a project may be purchased or implemented without ensuring that all key project management steps, such as compatibility testing, are complete and all appropriate controls securing the technology and its data are in place. In response to this audit, OPD stated that it sent some of its staff to project management training.

## Recommendation

We recommend that OPD:

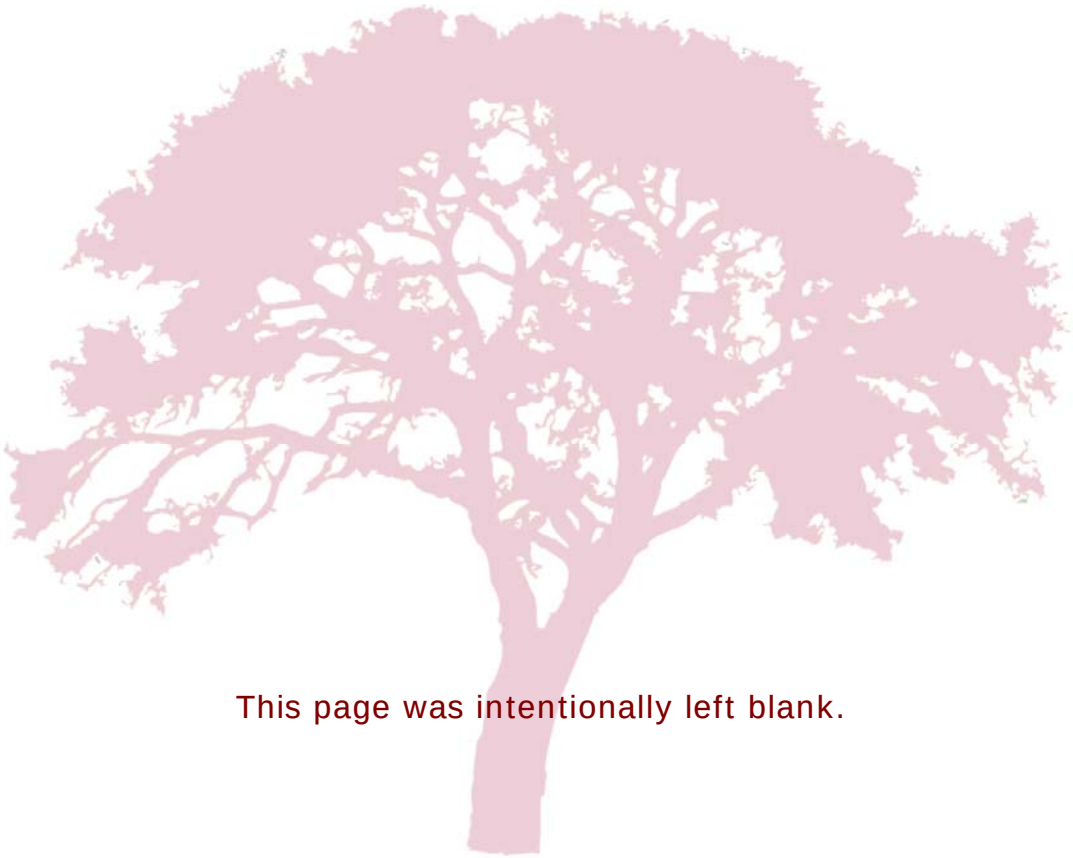
- Conduct a skills assessment of staff to determine additional training that is needed for OPD IT and other OPD division staff who are currently managing OPD technology
- Develop a training plan to ensure that staff receive the skills needed to manage technology projects in conjunction with DIT

## Conclusion

The roles and responsibilities regarding OPD's technology management are not clearly defined. Communication between OPD and DIT is ineffective. Neither OPD nor DIT has a complete inventory of OPD's technology systems, and OPD does not comprehensively track technology spending. Neither OPD nor DIT is complying with the City's policies regarding purchasing, contracts, and record retention. In addition, OPD has not provided appropriate training for its staff that are responsible for managing its technology systems and projects. As a result, not all of OPD's technology systems are being efficiently managed.

| RECOMMENDATIONS: Chapter 3 | |
|---|---|
| **We recommend that OPD:** | |
| Recommendation #8 | Consult with the City Attorney's Office about how prior vendor outreach for the CAD contract may impact the RFP process going forward |
| Recommendation #9 | Work with DIT and the City Administration to clarify when DIT should review all technology purchases and how DIT should document evidence of its review. Going forward, consistently obtain evidence of DIT review on technology purchases |
| Recommendation #10 | Develop and implement service-level-agreements with DIT to establish mutual expectations, roles and responsibilities, deliverables, and performance expectations for each project in development or technology being supported |
| **We recommend that the OPD and DIT:** | |
| Recommendation #11 | Improve communication about OPD technology projects so that it is timely, comprehensive, and clear. Communication should include information regarding available funding, expenditures, priorities, roles and responsibilities, timelines, and project status. If OPD and DIT are unable to improve communication, they should bring the City Administrator into the process as a facilitator |
| Recommendation #12 | Initiate the RFP process for the new CAD system |
| Recommendation #13 | Follow up with OFD on the potential of $700,000 in grant funds that may still be available to use on the new CAD system |
| Recommendation #14 | Work with the City Administrator's Office to determine the appropriate number of DIT project managers that should be assigned to OPD |
| Recommendation #15 | Work together to establish a comprehensive inventory of all OPD technology systems and projects. This inventory should be regularly updated with information, including but not limited to: system version number, license number, number of users, as well as maintenance and upgrade schedules |
| Recommendation #16 | Work with OPD Fiscal to establish a process that captures and tracks all technology expenditures and compares budget to actuals |
| Recommendation #17 | Regularly review all OPD technology expenses and use total spending as a guide for future technology budgeting and planning. Evidence of the review should be consistently documented and retained |
| Recommendation #18 | Comply with AI 141 by retaining and filing all OPD technology contracts and documentation. Files must be retained according to the timelines approved in the Records Retention Schedule |
| Recommendation #19 | Comply with AI 4311 and the 2006 City Administrator's Procedure Memo by ensuring all contracts are filed with the City Clerk's Office |

| | |
|---|---|
| Recommendation #20 | Ensure that technology contracts are periodically monitored and evaluated in accordance with AI 150, which includes review of contractors' quarterly reports and invoices for accuracy and thorough documentation and evaluation of the work performed by the contractor at the completion of the services |
| **We recommend OPD:** | |
| Recommendation #21 | Conduct a skills assessment of staff to determine additional training that is needed for OPD IT and other OPD division staff that are currently managing OPD technology |
| Recommendation #22 | Develop a training plan to ensure that staff receive the skills needed to manage technology projects in conjunction with DIT |



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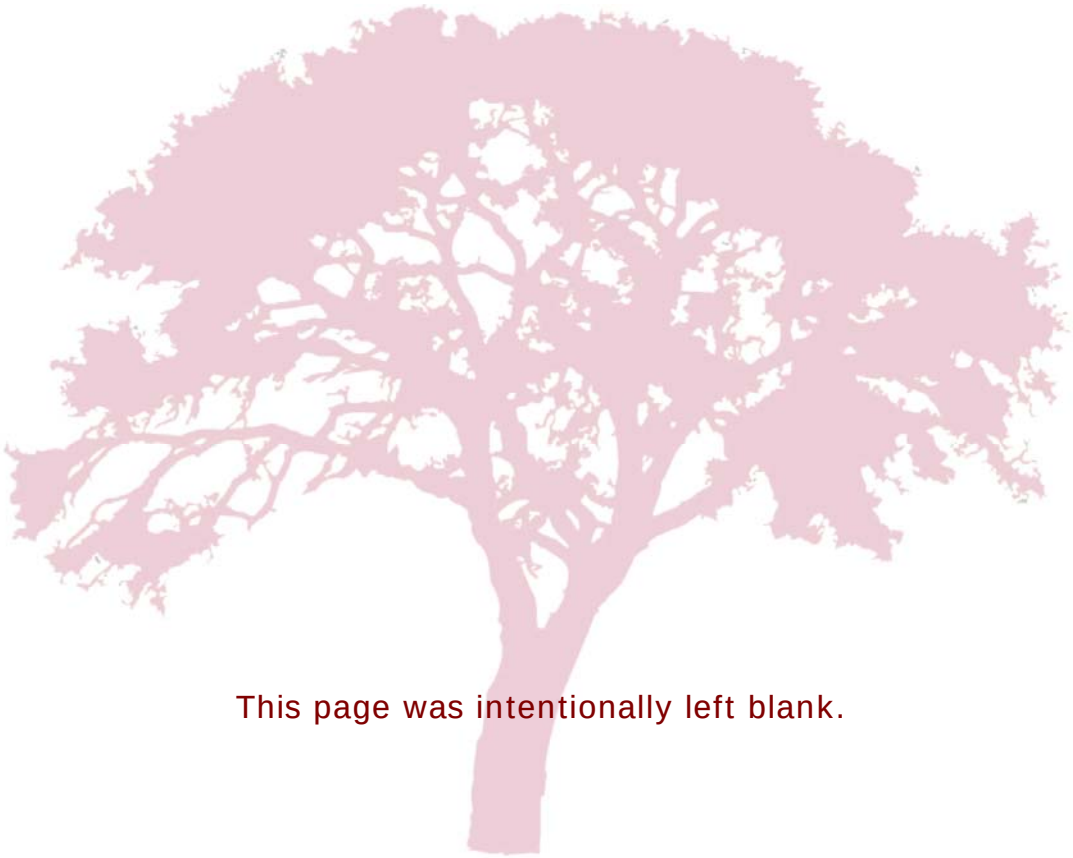
## APPENDIX: Audit Sample of OPD Technology Systems

| System | City Council Resolution Signing Date | Purpose / Description | Approximate Budget Amount[11] | Purchase Order Amount Submitted to the Office[12] | Funding Source |
|---|---|---|---|---|---|
| Telestaff | February 2007 | Provide time scheduling and resources allocation capabilities for resources visibility | $325,000 | $293,225 | State COP Grants |
| Evalis | December 2005 | To comply with the Negotiated Settlement Agreement (NSA) by providing the computerized relational database management system to identify at-risk behavior activities | $315,000 | $31,182 | Various Grants |
| VieVu | September 2010 | Portable Recording Management Systems provide a tool for reducing the number of police misconduct allegations by offering evidence of complaints and encouraging professional conduct. Provide evidence of crimes or attacks against officers, streamline the truth-finding | $540,048 | $373,933 | General Fund |
| Police Optimization System (PROs) | January 2010 | Identify neighborhood needs, problems, and workloads for officers through the evaluation of Computer Aided Dispatch (CAD) data, and optimize the deployment of officers for more effective use of resources based upon this data | $190,700 | $186,400 | JAG Grant Federal Grant Fund |
| E-Citation | July 2007 | Automate the issuing of citations by the Police Department sworn personnel in order to improve their operational efficiency | $250,000 | $71,076 | General Fund and State Grant |
| SAP- Crystal Reports | July 2010 | Crystal reporting server application used by Crime Analysis, Records and Communications division | $35,000 | $37,446 | Various Grants |
| ShotSpotter | July 2006 | Provides a system that consistently detects 80% more incidents of gunfire than are reported by the public | $288,509 | $491,260 | General Fund |
| Radio Communications (P25) | February 2010 | 800mhz Radio Network | $5,600,000 | $2,538,063 | Various Grants/Fund 4200, 2123 |
| Dell Laptops | February 2007 | Replaced the existing computers in patrol vehicles. Laptops provided to the officers for mobility and flexibility in field operations | $2,000,000 | $149,742 | Various Grants |
| CAD Replacement | N/A- RFP Process has not started | Computer Aided Dispatch system package, also known as IPSS- includes CAD, field based reporting, and records management system | N/A- RFP Process has not started. | N/A- RFP Process has not started | Various Grants |
| **Case Studies of Two Additional Systems** | | | | | |
| In Car Video Management System (ICVMS) | September 2006 | Protects officers from fabricated allegations and false complaints, and saves the city from lawsuits by providing video evidence. Also provides videos to be used in crime investigations and as training tools | $1,740,664 | N/A- Purchase Orders were not requested for testing[13] | Various Grants/ General Fund (According to 2010 agenda report) |
| License Plate Recognition System | No resolution on file with the City Clerk. City Council staff agenda report states system was deployed in Fall 2006 | Deployed in 10 Cars. Provides high volume license plate capture and accurate license plate recognition for vehicles moving at speeds up to 100 mph | $130,164 | N/A- Purchase Orders were not requested for testing | Information not provided to the auditor's office |
| **TOTAL** | | | **$11,415,085** | **$4,172,884** | |

[11] The "Budgeted Amount" column represents the technology project budgets that were provided to the Office based on multiple sources. This column does not represent the actual or total project budget. As the audit found in findings 2.2, 3.4, and 3.5, OPD does not appropriately budget for purchasing and maintenance of its technology systems, does not comprehensively track technology spending; and does not maintain all technology contracts and documentation, as required.

[12] The "Purchase Order Amount Submitted to the Office" column represents the purchase orders provided to the Office and does not represent the actual or total amount of expenditures. OPD and DIT do not consistently or collectively track all technology expenditures, thus it is difficult to determine the total amount expended. The totals reflected in the report are from limited documentation provided by DIT or OPD from Oracle and department files. Refer to findings 3.4 and 3.5 where these findings are further addressed.

[13] The purchasing process was not tested for the two systems selected for review as case studies.



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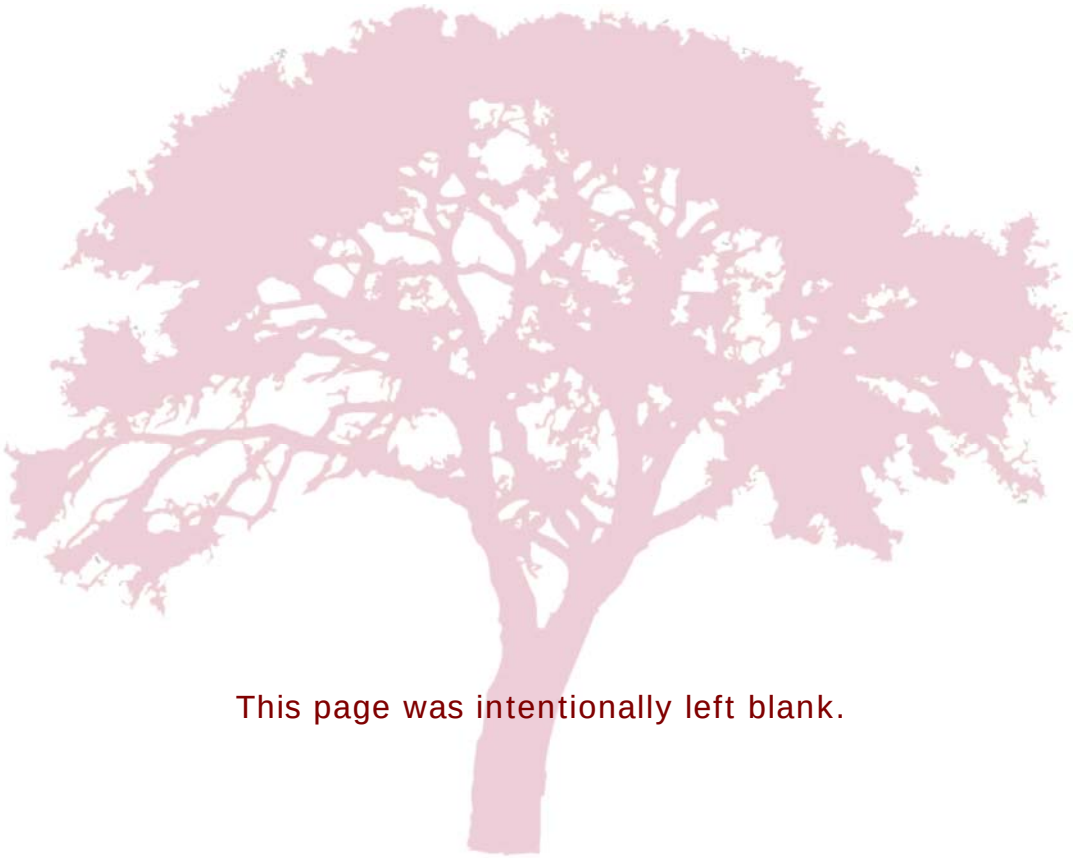
| FINDINGS | |
|---|---|
| The audit found the following: | |
| Finding 1.1 | OPD spent at least $1.87 million on technology systems that were never used or underused |
| Finding 2.1 | OPD lacks a formal technology purchasing plan |
| Finding 2.2 | OPD does not appropriately budget for purchasing and maintenance of its technology systems |
| Finding 2.3 | OPD does not have a formal strategic technology plan. However, OPD does have an informal plan on which they have made progress |
| Finding 3.1 | OPD and DIT do not have clearly defined roles and responsibilities |
| Finding 3.2 | Communication between OPD and DIT is poor |
| Finding 3.3 | Neither OPD nor DIT has a complete inventory of all OPD technology systems |
| Finding 3.4 | OPD does not comprehensively track technology spending |
| Finding 3.5 | Neither OPD or DIT maintain all technology contracts and documentation, as required |
| Finding 3.6 | OPD staff does not have formal background or adequate training in technology and project management |



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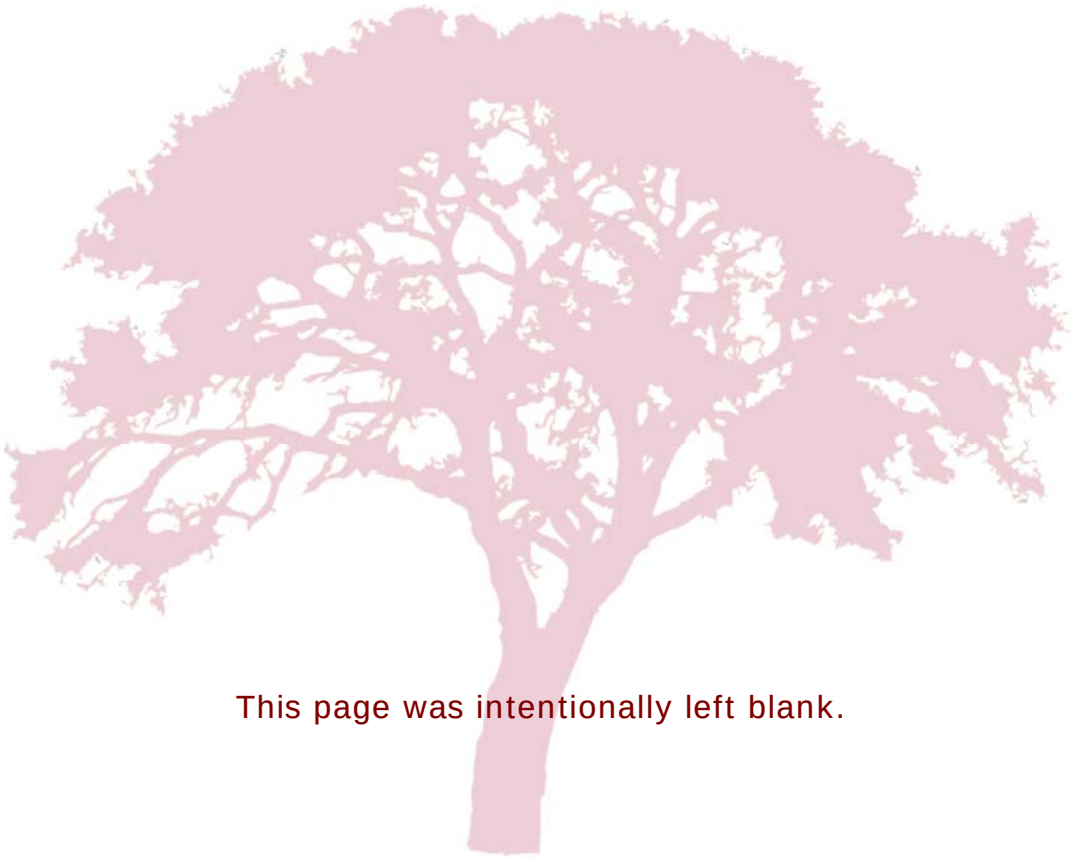
| RECOMMENDATIONS: Chapter 1 | |
|---|---|
| **We recommend that OPD:** | |
| Recommendation #1 | Periodically evaluate all of its technology systems, including ShotSpotter, to ensure that the City is receiving its desired benefits from the systems. If the desired benefits are not being met, OPD should determine the reasons this is occurring and propose changes to the systems and/or its management, as appropriate |
| Recommendation #2 | Consider obtaining performance bonds for all new technology contracts that ensure either a refund or completion of the contract if the vendor goes out of business |
| Recommendation #3 | Work with the City Attorney to determine if the $65,000 spent on the Evalis system can be recouped |
| Recommendation #4 | Prior to purchasing a system ensure that there is a comprehensive evaluation of all services, software, and hardware necessary for the system to function properly |
| **RECOMMENDATIONS: Chapter 2** | |
| **We recommend that OPD:** | |
| Recommendation #5 | Adopt an overall, strategic technology purchasing plan that aligns future technology purchases with its strategic goals and needs |
| Recommendation #6 | Develop a multi-year budget for technology spending that includes expected purchases, implementation costs, and maintenance |
| Recommendation #7 | Improve its strategic plan by ensuring that all technology objectives are specific and measurable and that the plan is formally adopted and communicated to all appropriate staff, which may be all staff since OPD's technology management is decentralized. Add an objective to create a strategic technology purchasing plan. Further, the strategic plan should be reviewed, tracked, and updated on a regular basis. The frequency of the review should be documented in the plan |
| **RECOMMENDATIONS: Chapter 3** | |
| **We recommend that OPD:** | |
| Recommendation #8 | Consult with the City Attorney's Office about how prior vendor outreach for the CAD contract may impact the RFP process going forward |
| Recommendation #9 | Work with DIT and the City Administration to clarify when DIT should review all technology purchases and how DIT should document evidence of its review. Going forward, consistently obtain evidence of DIT's approval on technology purchases |

| | |
|---|---|
| Recommendation #10 | Develop and implement service-level-agreements with DIT to establish mutual expectations, roles and responsibilities, deliverables, and performance expectations for each project in development or technology being supported |
| **We recommend that the OPD and DIT:** | |
| Recommendation #11 | Improve communication about OPD technology projects so that it is timely, comprehensive, and clear. Communication should include information regarding available funding, expenditures, priorities, roles and responsibilities, timelines, and project status. If OPD and DIT are unable to improve communication, they should bring the City Administrator into the process as a facilitator |
| Recommendation #12 | Initiate the RFP process for the new CAD system |
| Recommendation #13 | Follow up with OFD on the potential of $700,000 in grant funds that may still be available to use on the new CAD system |
| Recommendation #14 | Work with the City Administrator's Office to determine the appropriate number of DIT project managers that should be assigned to OPD |
| Recommendation #15 | Work together to establish a comprehensive inventory of all OPD technology systems and projects. This inventory should be regularly updated with information, including but not limited to: system version number, license number, number of users, as well as maintenance and upgrade schedules |
| Recommendation #16 | Work with OPD Fiscal to establish a clear process that captures and tracks all technology expenditures and compares budget to actuals |
| Recommendation #17 | Regularly review all OPD technology expenses and use total spending as a guide for future technology budgeting and planning. Evidence of the review should be consistently documented and retained |
| Recommendation #18 | Comply with AI 141 by retaining and filing all OPD technology contracts and documentation. Files must be retained according to the timelines approved in the Records Retention Schedule |
| Recommendation #19 | Comply with AI 4311 and the 2006 City Administrator's Procedure Memo by ensuring all contracts are filed with the City Clerk's Office |
| Recommendation #20 | Ensure that technology contracts are periodically monitored and evaluated in accordance with AI 150, which includes review of contractors' quarterly reports and invoices for accuracy and thorough documentation and evaluation of the work performed by the contractor at the completion of the services |
| **We recommend OPD:** | |
| Recommendation #21 | Conduct a skills assessment of staff to determine additional training that is needed for OPD IT and other OPD division staff that are currently managing OPD technology |

| | |
|---|---|
| Recommendation #22 | Develop a training plan to ensure that staff receive the skills needed to manage technology projects in conjunction with DIT |



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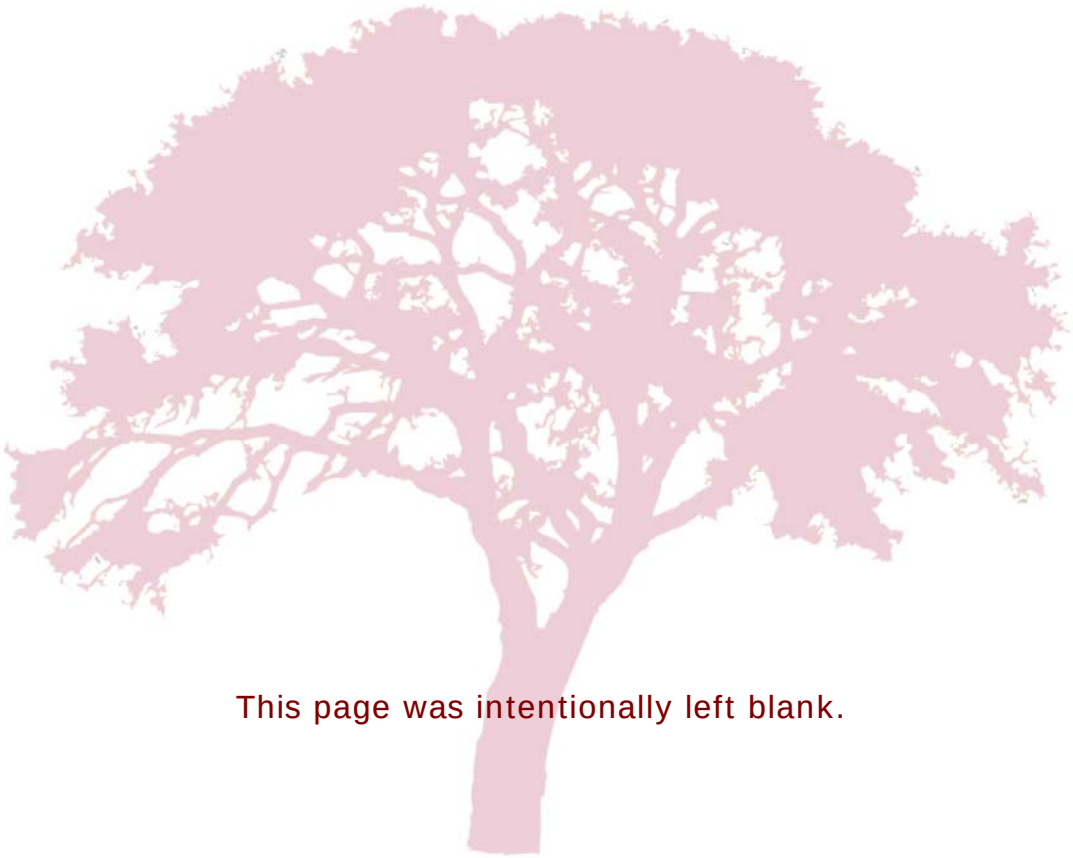
# ADMINISTRATION'S RESPONSE



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CITY OF OAKLAND

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Office of the City Administrator
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City Administrator

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TDD (510) 238-2007



June 22, 2012

Courtney A. Ruby, City Auditor
City of Oakland, California
Frank Ogawa Plaza, 4th Floor
Oakland, California 94612

RE: Response to Oakland Police Department Technology Audit

Dear City Auditor Ruby:

Attached is the City Administration's detailed response on the audit findings, recommendations and audit process of the Technology Audit of the Oakland Police Department (OPD) and the Department of Information Technology (DIT). The final twenty-two (22) recommendations included in the audit report are generally sound and we look forward to implementing them to further strengthen our systems and processes. However, it should be noted that the attached detailed response identifies a number of significant errors and omissions within the audit that need to be addressed.

We look forward to working with your office to target the key issues identified in the audit process that could result in ways to improve the City's technology program, specifically as they relate to the Oakland Police Department.

The OPD and DIT have learned a significant amount as a result of the audit. However, it is important to note that this response identifies a number of areas in which the Administration is not in agreement with the audit regarding some of the characterizations and/or the analysis and conclusions in the City Auditor's report.

In conclusion, the audit has correctly identified a number of areas in which we are in agreement that are in need of addressing. The City Administrator's Office, OPD and DIT acknowledge the value of the audit in the areas that identify room for improvement and we are committed to continuous reevaluation and retooling to be as effective and efficient as prudently possible, within the fiscal and technology resources available to us.

Sincerely,

Deanna J. Santana
City Administrator

Cc: Scott P. Johnson, Assistant City Administrator
Howard Jordan, Police Chief
Ken Gordon, Interim Director of Information Technology
Captain Edward Poulson, OPD

## OAKLAND POLICE DEPARTMENT TECHNOLOGY AUDIT RESPONSE TO CITY AUDITOR'S FINDINGS & RECOMMENDATIONS:

### 1. Key Finding

### A. The auditor stated that OPD underused Shotspotter at a cost of $488,347 dollars.

***Response:*** The auditor stated that in one (1) year, the Shotspotter system registered 2800 alerts. That equals 7.67 alerts in a twenty-four (24) hour period, or one (1) Shotspotter alert every three (3) hours and seven (7) minutes. Including Shotspotter, OPD averages:

- 624,178[1] emergency calls a year, or
- 1710 emergency calls in a twenty-four (24) hour period, or
- 71 emergency calls an hour,

Based on the statistics stated above, the Shotspotter alerts represent .44 % of the total emergency call volume every year.[2] That is less than one half (1/2) of one (1) percent of the total emergency calls that OPD receives in one (1) year.

The auditor stated that Shotspotter was responsible either directly or indirectly for nine (9) arrests in one (1) year. OPD arrested nine thousand five hundred and thirty one (9531) people in 2011. That means that Shotspotter was responsible for approximately .09 % of the police department's total arrest volume.

The auditor has taken the position that Shotspotter was underused therefore the total amount that OPD paid for the system did not produce the desired benefits that should have been achievable during the 5 year period after implementation. . As stated above, Shotspotter represents .44% of the emergency calls for service, and .09% of the arrests. OPD used Shotspotter exactly as it was intended, as an additional tool in our overall strategy, not the only tool. Using Shotspotter, as the auditor seems to imply, would effectively mean lowering the priority on the other 99.56% of emergency calls or the other 99.91% of arrests. The auditor's analysis and conclusions are incorrect. OPD should be commended for using this technology, as one of many tools in addressing crime in the City of Oakland.

1

### B. The auditor stated that OPD never used E-Citation, at a cost of $81,866 dollars.

**Response:** The auditor stated that "*...However, OPD did not adhere to the City Attorney's recommendation to secure a performance bond for the E-Citation contract*". Securing a performance bond has always been an option to consider during contract negotiations and not a requirement. In some contract negotiations, OPD and DIT have worked with the City Attorney's Office to include liquidated damages instead of a performance bond; depending on the vendor's unwillingness to secure a bond. For technology projects, we have primarily secured a

[1] Average of 2010 and 2011 calls per year plus the 2800 Shotspotter alerts.
[2] Total Shotspotter calls divided by the average of 2010 and 2011 calls Shotspotter calls.

3 performance bond as an insurance policy if the vendor fails to perform. The Auditor is proposing that we now secure a performance bond to ensure a refund in case of a bankruptcy. Because we have found that small privately owned companies are reluctant to secure a performance bond, we need City Council to approve budget funding that would allow the City to secure the performance bond for all OPD contracts. Most companies that target the public safety market with technology solutions such as ShotSpotter, E-Citation and In-Car Video Management System (ICVMS), only have a very small market to make money. These companies are therefore privately owned and in some cases start-ups. OPD would like to keep its options open for using new and innovative technology solutions that have the potential for reducing crime and making its policing more effective. With sufficient funding, OPD would be amiable to requiring a performance bond on every contract where a vendor would not be willing or capable of securing one. OPD needs this option so it will not miss any opportunity to fully exploit technology for the good of policing.

**C. The auditor stated that OPD never used Evalis at a cost of $65,103 dollars.**

The auditor stated, "After OPD purchased Evalis from CRISNET, Motorola bought CRISNet and the City amended its existing contract with Motorola to include the Evalis system. OPD stated two separate reasons why the system was never used:

- Motorola decided not to support the Evalis system,
- While Motorola is capable of supporting the system, the additional technology software and support that is needed to make the system functional is too expensive."

A Staff at the Oakland Police Department never told the auditor that "Motorola decided not to support the Evalis system". On the contrary, Motorola will support Evalis; however the amount quoted by Evalis to provide this support is an exorbitant amount of money to render the necessary services.

4 The auditor also stated, "*Regardless, the result is that OPD lost at least $65,000 on the Evalis system.*" Even though the Evalis product (a software application only) lacked some critical functions, it was the only application available in 2004/2005 that came close to complying with the NSA personnel management system requirements. OPD and DIT staff worked closely with Motorola to identify functional customizations to the Evalis product and determined that the cost to accomplish the changes was too expensive. However, the knowledge gained by both OPD and DIT from the functional gap analysis process to identify the required customizations, was directly transferrable to the development of the Internal Personnel Assessment System (I-PAS).

B The auditor failed to mention that I-PAS received national recognition for innovative application development in seeking to comply with the NSA requirements. This would not have been possible if OPD and DIT had not invested in the Evalis product to accomplish early compliance with the NSA requirements.

4 OPD received enormous value out of its investment in Evalis. Evalis continues to function as a knowledge base platform for understanding workflows and auditing processes that can be incorporated into future improvements in the I-PAS system.

C As the auditor stated, "*As of December 2011, I-PAS was used to fulfill the NSA requirement to track stop data. However, according to OPD, I-PAS needs to be replaced.*" The auditor fails to

mention the reasons for replacing I-PAS. The software platform that was used to build the I-PAS application needs a major technology refresh. The existing platform no longer offers the capabilities needed to add much needed new functionality and capacity to sustain acceptable performance. The I-PAS application therefore needs to undergo a complete technology refresh (replacement).

**D. The auditor stated that OPD never used the ICVMS technology at a cost of $1.1 million dollars.**

**Response:** The auditor analysis of the ICVMS is incorrect. Refer to the following:

5

- The auditor stated, "*...additional services and hardware were needed to effectively run the ICVMS system...*" This statement is not accurate. The vendor went out of business, failing to complete the project.

6

- Refer to the last sentence in the same paragraph. It states, "*...The system was implemented in order to comply with the NSA...*" This is not accurate. The NSA required OPD to "**explore**" video technology. The department explored video technology and submitted a white paper to the monitors. The department was determined to be in compliance with this task [32] effective the second quarterly report dated March 2004.

5

- Refer to the first sentence of the last paragraph. It states, "*...poor research and analysis on system functions and needs and the lack of training and staffing resources...*" This is not accurate. The project failed because of poor project planning and management as cited by the auditor. OPD and DIT long recognized that lack of staffing resources can impact the success or lack of success of a project. The auditor accurately noted in the background section of the report that "*city-wide budget cuts decreased DIT's staffing resources by approximately 24 percent*" and noted in other sections that limited staffing resources may have contributed to lack of process and technical inaccuracies. Nevertheless, no amount of resources or sufficient time to overcome any project management deficiencies can withstand the impact of the **ICVMS** vendor going bankrupt.

- Refer to the first sentence on the top of page twelve (12). It states in part, "*...and delayed compliance with the NSA requirement...*" The NSA stated "*OPD shall explore use and cost-effectiveness of camcorders in Patrol vehicles...*" The auditor's statement is not accurate. The failure of the ICVMS was not a factor in compliance. In fact the department achieved compliance with this task in the second quarterly report dated March 2004. The department has remained in compliance for this task since that report.

D

The auditor ignored other information that the Department provided related to this project. Part of the ICVMS required the installation of a ninety-six (96) terabyte server and fiber optic cable to support the transfer of video footage from the vehicles to the main server. What the auditor did not explain was that the police department was able to reuse the server and the fiber optic cable infrastructure as part of the VieVu [personal video recorder] project. The department should have received credit for re-using the equipment that was purchased for the ICVMS project in the subsequent VieVu project.

**Auditor Recommendations**

The City Administrators Office is planning on hiring an information technology professional during the midyear budget cycle for the police department. This will mark the first time the department has had a professional information technology staff person that works exclusively for the police department. The future professional staff member will be responsible for overseeing and carrying out many of the recommendations outlined in this response.

Many of the auditor's recommendations are part and parcel of each other. Therefore certain recommendations should be grouped together. They are:

- Five (5), six (6), seven (7), and seventeen (17),
- Nine (9), ten (10) and eleven (11),
- Eighteen (18), nineteen (19) and twenty (20),
- Twenty-one (21) and twenty-two (22).

**Auditor's Recommendation 1:** *Periodically evaluate all of its technology systems, including ShotSpotter, to ensure that the City is receiving its desired benefits from the systems. If the desired benefits are not being met, OPD should determine the reasons this is occurring and propose changes to the systems and/or its management, as appropriate.*

E

**Administration's Response to Recommendation 1:** The OPD agrees with this recommendation and did in fact use that exact process in the evaluation of Shotspotter, which the auditor failed to reveal.

2

The Shotspotter technology was still being developed when the City purchased the system. Shotspotter has since refined the technology allowing the police department the ability to register and display alerts in each police vehicle [that has a computer] for rapid response. The time period that the auditor highlighted was when the department was doing exactly what the auditor recommended, yet the audit does not acknowledge the police department's success in this effort.

**Auditor's Recommendation 2:** *Consider obtaining performance bonds for all new technology contracts that ensure a refund or a completion of the contract if the vendor goes out of business.*

**Administration's Response to Recommendation 2:** The department generally agrees with this recommendation. With that said, sometimes performance bonds add so much to the cost of a project that vendor(s) refuse to bid on projects that require a performance bond.

Because we have found that small privately owned companies are reluctant to secure a performance bond, we will seek the City Council's approval to budget funding that would allow the City to secure the performance bond for all OPD technology related contracts. Most companies that target the public safety market with technology solutions such as ShotSpotter, E-Citation and In-Car Video Management System (ICVMS), only have a very small market to make money. These companies are therefore privately owned and in some cases start-ups. OPD would like to keep its options open for using new and innovative technology solutions that have

the potential for reducing crime and making its policing more effective. With sufficient funding, OPD would be amiable to requiring a performance bond on every contract where a vendor would not be willing or capable of securing one. OPD needs this option so it will not miss any opportunity to fully exploit technology for the good of policing.

**Auditor's Recommendation 3:** *Work with the City Attorney to determine if the $65,000 spent on the Evalis system can be recouped.*

**Administration's Response to Recommendation 3:** The city will not be able to obtain any type of refund since the city elected to terminate the project, not Motorola. As mentioned previously in this response, the City has received significant value out of the Evalis investment and we continue to use it as a knowledge base for improving and building a better I-PAS system as we plan the technology refresh.

**Auditor's Recommendation 4:** *Prior to purchasing a system ensure that there is a comprehensive evaluation of all services, software, and hardware necessary for the system to function properly.*

**Administration's Response to Recommendation 4:** Existing city policy speaks to this process. We will ensure that all necessary processes are fully accounted for to meet this recommendation.

**Auditor's Recommendation 5:** *Adopt an overall, strategic technology purchasing plan that aligns future technology purchases with its strategic goals and needs.*

**Administration's Response to Recommendation 5:** The Departments have already started to address this recommendation. In October 2011 the OPD established a desktop and laptop computer refresh program. The refresh plan establishes a sustainable process to replace every computer over a four (4) year period.

7 As it relates to purchasing, the police department and the Department of Information Technology will continue to follow the city's purchasing policies.

**Auditor's Recommendation 6:** *Develop a multi-year budget for technology spending that includes expected purchases and maintenance as well as funds for emergency repairs.*

**Administration's Response to Recommendation 6:** The department will develop an overall plan; however multi-year budgeting may be difficult given competing resource needs. This will be addressed in conjunction with recommendation number five (5).

**Auditor's Recommendation 7:** *Improve its strategic plan by ensuring that all technology objectives are specific and measurable and that the plan is formally adopted and communicated to all appropriate staff, which may be all staff since OPD's technology management is decentralized. Add an objective to create a strategic technology purchasing plan. Further, the plan should be reviewed, tracked, and updated on a regular basis. The frequency of the review should be documented in the plan.*

**Administration's Response to Recommendation 7:** This recommendation will be folded into one plan that includes recommendations five (5) and six (6).

7

As it relates to the actual technology purchases, the departments will continue to use the City's purchasing policies and procedures. It would be inappropriate for the departments to create an independent purchasing policy, as the auditor appears to suggest, as the city has an established citywide policy.

**Auditor's Recommendation 8:** *Consult with the City Attorney's Office about how prior vendor outreach for the CAD contract may impact RFP process going forward.*

**Administration's Response to Recommendation 8:** The Department of Information Technology (DIT) recently published a Request for Qualifications (RFQ) to hire a technical consultant that will be dedicated to implementing a new CAD system. The consultant will work with the City Attorney's Office to accomplish this recommendation.

**Auditor's Recommendation 9:** *Work with DIT and the City Administration to clarify when, where and how DIT's required approval should be documented. Going forward, consistently obtain DIT's approval on technology purchases, as required.*

**Administration's Response to Recommendation 9:** Refer to recommendation eleven (11).

**Auditor's Recommendation 10:** *Develop and implement service level agreements with DIT to clearly defining mutual expectations, roles and responsibilities, deliverables, and performance expectations for each project in development or technology being supported.*

**Administration's Response to Recommendation 10:** Refer to recommendation eleven (11),

**Auditor's Recommendation 11:** *Improve communication about OPD technology projects so that it is timely, comprehensive, and clear. Communication should include information regarding available funding, expenditures, priorities, roles and responsibilities, timelines, and the status of projects. If OPD and DIT are unable to improve communication, they should bring the City Administrator into the process as a facilitator.*

**Administration's Response to Recommendation 11:** An IT professional will be hired to address recommendations nine (9), ten (10) and eleven (11). The City Administrator's Office will be responsible for ensuring that both agencies work together to complete the tasks.

**Auditor's Recommendation 12:** *Initiate the RFP process for the new CAD system.*

**Administration's Response to Recommendation 12:** The Department of Information Technology recently published a Request for Qualifications (RFQ) to hire a technical consultant that will be dedicated to implementing a new CAD system.

**Auditor's Recommendation 13:** *Follow up with OFD on the potential of $700,000 in grant funds that may still be available to use on the new CAD system.*

**Administration's Response to Recommendation 13:** The Department of Information Technology will work with the appropriate City departments to address this recommendation.

**Auditor's Recommendation 14:** *Work with the City Administrator's Office to determine the appropriate number of DIT project managers that should be assigned to OPD.*

**Administration's Response to Recommendation 14:** The City Administrator's Office and DIT will continue to work together in assessing staffing resource needs city-wide while being mindful of competing budget resource priorities.

**Auditor's Recommendation 15:** *Work together to establish a comprehensive inventory of all OPD technology systems and projects. This inventory should be regularly updated with information including but not limited to: system version number, license number, number of users, maintenance and upgrade schedules.*

**Administration's Response to Recommendation 15: OPD and DIT will work together to establish a common inventory system to accomplish this recommendation.**

**Auditor's Recommendation 16:** *Work with OPD Fiscal to establish a clear way to capture and track all technology expenditures, and compare budget to actual.*

**Administration's Response to Recommendation 16: The City Administrator's Budget Office and the Controller's Office will work with OPD Fiscal to address this recommendation.**

**Auditor's Recommendation 17:** *Regularly review all OPD technology expenses and use total spending as a guide for future technology budgeting and planning. Evidence of the review should be consistently documented and retained.*

**Administration's Response to Recommendation 17:** This process will be incorporated as part of recommendations five (5), six (6), and seven (7).

**Auditor's Recommendation 18:** *Comply with AI 141 by retaining and filing all OPD technology contracts and documentation. Files must be retained according to the timelines approved in the Records Retention Schedule.*

**Administration's Response to Recommendation 18:** OPD and DIT will comply with all Administrative Instructions.

**Auditor's Recommendation 19:** *Comply with AI 4311 and the 2006 City Administrator's Procedure Memo by ensuring all contracts are filed with the City Clerk's Office.*

**Administration's Response to Recommendation 19:** OPD and DIT will comply with all Administrative Instructions.

**Auditor's Recommendation 20:** *Ensure that technology contracts are periodically monitored and evaluated in accordance with AI 150, which includes review of contractors' quarterly reports and invoices for accuracy and thorough documentation and evaluation of the work performed by the contractor at the completion of the services.*

**Administration's Response to Recommendation 20:** OPD and DIT will comply with all Administrative Instructions.

**Auditor's Recommendation 21:** *Conduct a skills assessment of staff to determine additional training that is needed for OPD IT and other OPD division staff that are currently managing OPD technology.*

**Administration's Response to Recommendation 21:** Refer to recommendation twenty-two (22).

**Auditor's Recommendation 22:** *Develop a training plan to ensure staff receives the skills needed to manage technology projects in conjunction with DIT.*

**Administration's Response to Recommendation 22:** OPD has already started formally training staff consistent with this recommendation.

**Review of Financial Calculations:**

The final area to review is the total amount of expenditures for underused or never used technologies that the auditor attributed to OPD:

1. The auditor stated that OPD underused or never used technology totaling $1.8 million dollars. This is not correct. Refer to appendix one (1) column "Exhibit 4". The actual total should have been $1,772,762. The difference between the two is $27,238. This may seem like a rounding error, but we find it unacceptable in this forum. For example the auditor was very critical of the OPD for the underused SAP technology totaling $37,466.

8

2. The auditor's analysis of ICVMS was fundamentally misinformed. The auditor stated that OPD lost $1,100,000 million dollars on the ICVMS. As part of the ICVMS, the OPD purchased a ninety-six (96)-terabyte server to store video footage. The police department also installed a significant amount of fiber optic cable to transmit the video footage. After the failure of the ICVMS vendor, OPD implemented the body worn camera's called VieVu. OPD re-used the server and the fiber optic cabling as part of the VieVu project. For purposes of this analysis, OPD reused a significant portion of the original investment [60%, equal to $660,000].

9

3. The next apparent misunderstanding of the auditor in the OPD technology analysis relates to their analysis of Shotspotter. We do not agree with the auditor's assessment of the City's effective use of the Shotspotter system. On the contrary, we believe the $488,347 investment on Shotspotter was and continues to be an effective tool used by OPD.

1

4. The auditor stated that OPD spent 24% of their technology budget on under / never used technology. It appears the auditor estimated the total technology budget to be approximately $7,386,508.33. The City Administrator's office recalculated the total technology spending for under / never used technology. Refer to appendix one (1) under the column "Reasonable Analysis". The City Administrator believes OPD actually spent $597,177 on under / never used technology representing 8.08% of the OPD technology budget over the highlighted period. 10

5. The auditor failed to include the Dell Laptop project as part of their analysis. This project was included in prior versions of the auditor's report. Including this successful project would have also lead to a more favorable view of the effectiveness of OPD technology procurements. F

6. The auditor did not include the License Plate Recognition System in their calculations. This was another successful technology project. Including this successful project would have also lead to a more favorable view of effective OPD technology. G

Appendix One (1)

| Technology (Appendix A) | Budgeted Amount Approved by City Council | Purchase Order Amount Submitted to the Office | Technology (Exhibit 4) | Exhibit 4 totals | Adjusted amount based on a "Reasonable Analysis" | Percentage of technology budget |
|---|---|---|---|---|---|---|
| Telestaff | $325,000.00 | $293,225.00 | | $0.00 | | |
| Evalis | $315,000.00 | $31,182.00 | Evalis | $65,103.00 | $65,103.00 | |
| Vievu | $540,000.00 | $373,933.00 | | $0.00 | | |
| PROs | $190,700.00 | $186,400.00 | | $0.00 | | |
| E-Citation | $75,000.00 | $71,076.00 | E-Citation | $81,866.00 | $81,866.00 | |
| SAP | $35,000.00 | $37,446.00 | SAP | $37,446.00 | $37,446.00 | |
| Shotspotter | $288,509.00 | $441,260.00 | Shotspotter | $488,347.00 | $0.00 | |
| Radio Communications | $5,600,000.00 | $2,538,063.00 | | $0.00 | | |
| Dell Laptops | $2,000,000.00 | $149,742.00 | | $0.00 | | |
| ICVMS | $1,740,664.00 | $0.00 | ICVMS | $1,100,000.00 | $440,000.00 | |
| License Plate Recognition System | $130,163.50 | $0.00 | | $0.00 | | |
| Mathematical error by the auditor | | | | | -$27,238.00 | |
| | **$11,240,036.50** | **$4,122,327.00** | | **$1,772,762.00** | **$597,177.00** | **8.08%** |

# RESPONSE TO THE ADMINISTRATION'S RESPONSE

The Office of the City Auditor (Office) provided a draft report to the City Administration (Administration) for review and comment. The Administration's comments regarding the actions it has taken or plans to implement in response to the report's recommendations have been included in the previous section of the audit report. This section of the report provides clarification to the Administration's responses.

The Office maintains that the audit report findings and conclusions are accurate based on the information provided by the Administration.

Below is the Office's clarification to the Administration's responses. The reference numbers in the left column correspond directly to the reference numbers placed in the Administration's response.

| Reference | Administration's Response | The Office's Response |
|---|---|---|
| 1 | *As stated above, ShotSpotter represents .44% of the emergency calls for service, and .09% of the arrests. OPD used ShotSpotter exactly as it was intended, as an additional tool in our overall strategy, not the only tool. Using ShotSpotter, as the auditor seems to imply, would effectively mean lowering the priority on the other 99.56% of emergency calls or the other 99.91% arrests. The auditor's analysis and conclusions are incorrect. OPD should be commended for using this technology, as one of many tools in addressing crime in the City of Oakland*<br><br>*…we believe the $488,347 investment on Shotspotter was and continues to be effective tool used by OPD.* | The Office maintains that OPD spent $488,347 on ShotSpotter, a system that was underused. According to the OPD Officer responsible for implementing ShotSpotter, OPD did not use the system to its highest capability for five years after the system was purchased. OPD explained that the system was not fully used for multiple reasons, including:<br>• Only one computer was dedicated to reporting ShotSpotter alerts<br>• No dispatcher was stationed at the computer to monitor the alerts<br>• Alerts were inconsistently dispatched to officers<br>• System maintenance was discontinued due to budget constraints<br>• Alerts were inconsistent and identified noises that were not always gunshots<br>• Cost/benefit analysis discouraged increased use and staffing resources<br><br>The Administration's statistics that ShotSpotter alerts represent 0.44% of the total emergency call volume every year does not change the fact that OPD underused ShotSpotter or that the City spent at least half a million dollars on a system that, according to OPD's statistics, appears to have minimal impact on OPD's operations. |
| 2 | *The Shotspotter Technology was still being developed when the City purchased the system.* | Purchasing a system that is still in the development stage carries greater risk, and it may not be the correct time for the City to spend taxpayers' dollars on such a system. In the case of Shotspotter, the system was not used to its highest capabilities for five years after it was purchased. It is the Administration's responsibility to assess the benefits, costs, and risks of each technology system it purchases and evaluate its effectiveness in a timely manner. |

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| 3 | *For technology projects, we have primarily secured a performance bond as an insurance policy if the vendor fails to perform. The Auditor is proposing that we now secure a performance bond to ensure a refund in case of bankruptcy. Because we have found that small privately owned companies are reluctant to secure a performance bond, we need City Council to approve budget funding that would allow the City to secure the performance bond for all OPD contracts.*<br><br>*…OPD would like to keep its options open for using new and innovative technology solutions that have the potential for reducing crime and making its policing more effective. With sufficient funding, OPD would be amiable to requiring a performance bond on every contract where a vendor would not be willing or capable of securing one. OPD needs this option so it will not miss any opportunity to fully exploit technology for the good of policing.* | Out of the 12 OPD systems the audit tested, three vendors (25%) went out of business. OPD did not obtain performance bonds for these three technology projects, costing the City approximately $1.34 million.<br><br>The audit report states that performance bonds are not a requirement and the audit recommends that the Administration should "consider" using a performance bond, not that it must. See page 15 of the report. This recommendation is to help the Administration safeguard taxpayer's dollars from risk. It is the Administration's responsibility to appropriately evaluate and balance risk and innovation.<br><br>For clarification, according to the City Attorney's Office, both bankruptcy and a vendor failing to perform are instances that are covered under a performance bond. Separate performance bonds are not necessary. |
| 4 | *The auditor also stated, "Regardless, the result is that OPD lost at least $65,000 on the Evalis system." Even though the Evalis product (a software application only) lacked some critical functions, it was the only application available in 2004/2005 that came close to complying with the NSA personnel management system requirements. OPD and DIT staff worked closely with Motorola to identify functional customizations to the Evalis product and determined that the cost to accomplish the changes was too expensive. However, the knowledge gained by both OPD and DIT from the functional gap analysis process to identify the required customizations, was directly transferrable to the development of the Internal Personnel Assessment System (I-PAS).*<br><br>*…OPD received enormous value out of its investment in Evalis. Evalis continues to function as a knowledge base platform for understanding workflows and auditing processes that can be incorporated into future improvements in the I-PAS system.* | The Office maintains that OPD spent at least $65,103 on Evalis, a system that it never used.<br><br>OPD determined, after purchasing Evalis, that it would be too expensive to customize Evalis to fit its needs. OPD then spent additional resources internally developing I-PAS, a system it used in place of Evalis.<br><br>While OPD states that it was able to apply some of the knowledge it gained from Evalis to developing the I-PAS system, this does not change the fact that OPD purchased a system that it could not use because the cost of the required system customization was too great. The audit report highlights that prior to purchasing technology, a system must be thoroughly evaluated to ensure that it meets the City's needs and that all necessary services, software and hardware are identified for the system to function properly. |

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| 5 | *The auditor analysis of the ICVMS is incorrect:*<br><br>*The auditor stated "…additional services and hardware were needed to effectively run the ICVMS system…" This statement is not accurate. The vendor went out of business, failing to complete the project.*<br><br>*The project failed because of poor project planning and management as cited by the auditor not, "…poor research and analysis on system functions and needs and the lack of training and staffing resources…"* | As summarized in the audit report on page 14, the audit maintains that ICVMS was not used for the following reasons:<br><br>• System did not work as expected due to server errors, data corruption and hardware failures<br>• Additional training, vendor services and hardware were needed to effectively run it<br>• Vendor went out of business<br><br>This information was obtained from a report that was submitted January 1, 2010 to the OPD IT Captain who took over management of the project from the OPD officer previously managing the ICVMS project.<br><br>The reasons mentioned above are the result of poor project planning and management, such as poor research and analysis on system functions and a lack of training and staffing resources. |
| 6 | *The auditor stated, "…The system was implemented in order to comply with the NSA…" This statement is not accurate. The NSA required OPD to "explore" video technology. …The department was determined to be in compliance with this task [32] effective the second quarterly report dated March 2004* | The Office has amended the audit report to reflect that NSA Task #32 required OPD to "explore" video technology and that according to OPD, it was determined to be in compliance with Task #32 as of March 2004. See page 14 of the audit report.<br><br>The Office is dedicated to ensuring that its findings are accurate; however, this process requires the Administration and department to provide correct and complete information during the audit fieldwork and quality assurance process. The Administration failed to mention this inaccuracy until it submitted its final response. |
| 7 | *As it related to the actual technology purchases, the department will continue to use the City's purchasing policies and procedures. It would be inappropriate for the departments to create an independent purchasing policy, as the auditor appears to suggest, as the city has an established citywide policy.* | Recommendation #7 on pages 20 and 21 of the audit report discusses improving OPD's technology strategic plan, which includes developing a purchasing plan. The recommendation does not state that OPD should create an independent purchasing policy.<br><br>A technology strategic plan is a plan that includes technology objectives that are developed based on business objectives. A technology purchasing plan is a plan that details funding and a timeline for purchasing new and replacement technology. A technology purchasing plan is developed based on technology strategic objectives. |
| 8 | *The auditor stated that OPD underused or never used technology totaling $1.8 million dollars. This is not correct. …The actual total should have been $1,772,762. The difference between the two is $27,238. This may seem like a rounding error, but we find it unacceptable in this forum.* | The report originally stated that OPD spent approximately $1.8 million on never used or underused technology systems. However, in light of the Administration's response, the audit report has been amended to reflect that OPD spent at least $1.87 million on never used or underused technology. See page 11 of the report. |

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| | | This difference is due to OPD's total ICVMS spending being originally summed as $1.1 million rather than the correct amount of $1,196,171. |
| 9 | *The auditor's analysis of ICVMS was fundamentally misinformed. The auditor stated that OPD lost $1,100,000 million dollars on the ICVMS. …After the failure of the ICVMS vendor, OPD implemented the body worn cameras called VieVu. OPD re-used the server and the fiber optic cabling as part of the VieVu project. For purposes of this analysis, OPD reused a significant portion of the original investment (60%, equal to $660,000).* | The Office maintains that OPD spent at least $1,196,171 on ICVMS, a system it never used. The amount spent on the system may have been more, but due to OPD's inadequate tracking of its technology spending, this is the amount that the audit was able to confirm.<br><br>During the course of the audit, OPD did not provide the Office with any evidence to support that it re-used $660,000 dollars worth of equipment for the VieVu lapel camera project. However, page 14 of the audit report does state that, according to OPD, it used some of the hardware equipment from ICVMS for the VieVu lapel cameras. |
| 10 | *The auditor stated that OPD spent 24% of their technology budget on under / never used technology. …The City Administrator believes OPD actually spent $597,177 on under / never used technology representing 8.08% of the OPD technology budget over the highlighted period.* | As discussed in the sections above, the Office maintains that OPD spent at least $1.87 million on never used or underused technology.<br><br>While the audit maintains that OPD spent at least $1.87 million on never used or underused technology, the audit report has been amended to eliminate the sentence referring to the 24 percent. OPD does not comprehensively track technology spending and this percentage was based on a rough estimate of OPD's total technology spending. |

| FALSE STATEMENTS MADE BY THE ADMINISTRATION | | |
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| **Reference** | **Administration's Response** | **The Office's Response** |
| A | *Staff at the Oakland Police Department never told the auditor that "Motorola decided not to support the Evalis system."* | During an interview with OPD in July 2011, OPD stated that Motorola told OPD that they received too good of a deal on the Evalis system and did not want to support the product.<br><br>In November 2011, OPD provided a report to the Office that stated that Motorola refused to support the police department's efforts to implement Evalis and that OPD brought Motorola to the federal judge overseeing the implementation of the NSA. OPD stated that even under the additional pressure, Motorola failed to keep their contractual agreement with the City of Oakland.<br><br>On May 8, 2012, OPD submitted its response to the Office's preliminary draft report. OPD's response changed from the statements it made in July and November 2011. In May 2012, OPD stated that Motorola could support the system, but the cost that Motorola quoted to customize Evalis was too expensive. |

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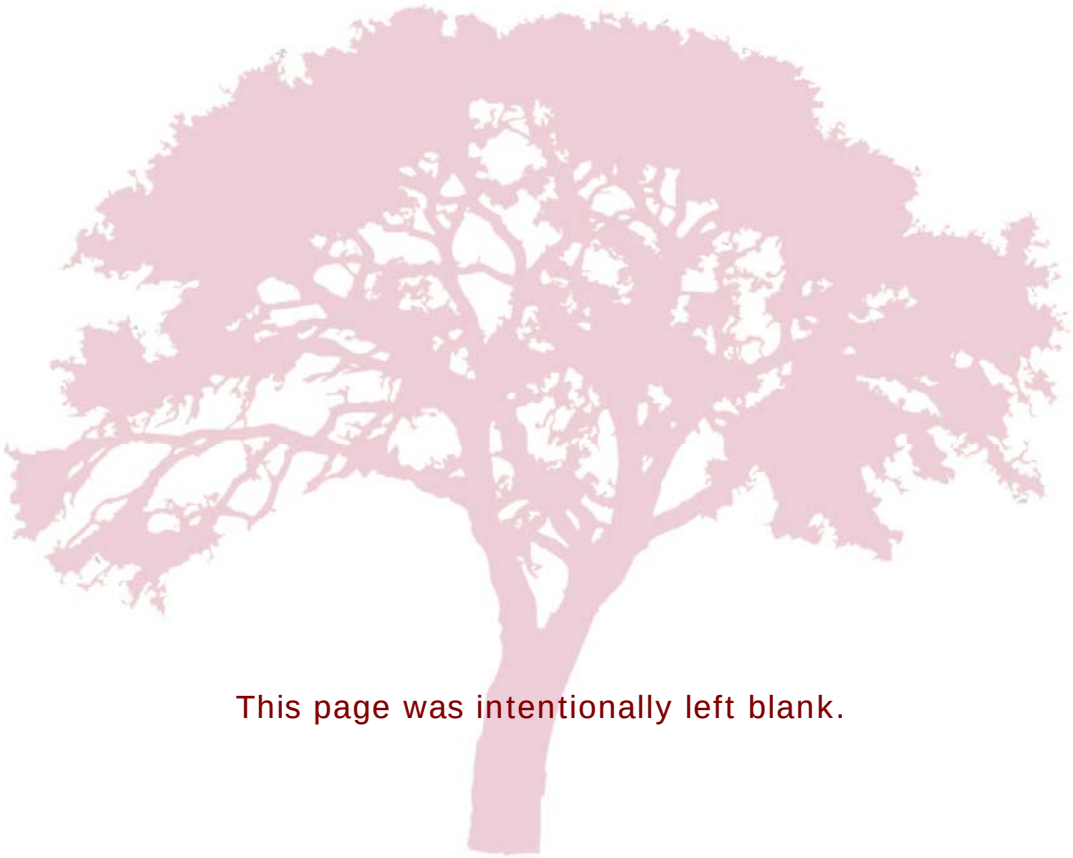
| B | *The auditor failed to mention that I-PAS received national recognition for innovative application development in seeking to comply with the NSA requirements.*<br><br>*…The auditor fails to mention the reasons for replacing I-PAS. The software platform that was used to build the I-PAS application needs a major technology refresh. The existing platform no longer offers the capabilities needed to add much needed new functionality and capacity to sustain acceptable performance. The I-PAS application therefore needs to undergo a complete technology refresh (replacement).* | The audit did not discuss details related to the I-PAS system because I-PAS was not part of the audit scope. |
| C | *The auditor ignored other information that the Department provided related to this project [ICVMS]. What the auditor did not explain was that the police department was able to reuse the server and the fiber optic cable infrastructure as part of the VieVu [personal video recorder] project.* | Page 14 of the audit report notes that according to OPD, it reused some of the ICVMS equipment for VieVu. OPD has not provided the Office with any evidence to support the amount of equipment that was re-used for VieVu. |
| D | *The auditor failed to include the Dell Laptop project as part of their analysis.* | The Dell Laptop Project was included in the audit and is discussed in the audit report on pages 11, 17, and 33. Page 11 of the audit report states that the audit reviewed 12 systems and found that five out of those 12 systems were never used or underused. This means that seven systems out of the 12 reviewed in the audit, including Dell Laptops, were in use.<br><br>Further, page 17 of the audit report states that OPD has recently approved a replacement proposal for approximately 220 old laptops for the officer patrol cars and that the proposal includes a timeline and budget. |
| E | *The auditor did not include the License Plate Recognition System in their calculations.* | The License Plate Recognition system was included in the audit and is discussed in the audit report on pages 11 and 33. Page 11 of the audit report states that the audit reviewed 12 systems and found that five out of those 12 systems were never used or underused. This means that seven systems out of the 12 reviewed in the audit, including the License Plate Recognition system, were in use. |



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# SUMMARY OF ACTIONS NECESSARY TO CLOSE THE REPORT

The "Summary of Actions Necessary to Close the Report" provides our analysis of the City Administration's (Administration) proposed actions required to close the report. At the time of the Administration's response, the 22 recommendations are resolved. **The Administration has agreed to implement 100 percent of the recommendations that were provided in the report.**

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| Recommendation #1<br><br>The Oakland Police Department (OPD) should periodically evaluate all of its technology systems, including Shotspotter, to ensure that the City is receiving its desired benefits from the systems. If the desired benefits are not being met, OPD should determine the reasons this is occurring and propose changes to the systems and/or its management, as appropriate. | **Resolved** – The Administration agrees with this recommendation and stated that it evaluated Shotspotter.<br><br>For clarification, this recommendation addresses continual, periodic evaluation of all systems, including ShotSpotter.<br><br>**To close this recommendation, the Administration should provide evidence of periodic evaluation of all OPD technology systems to the Office of the City Auditor (Office) by January 31, 2013.** |
| Recommendation #2<br><br>OPD should consider obtaining performance bonds for all new technology contracts that ensure a refund or a completion of the contract if the vendor goes out of business. | **Resolved** – The Administration generally agrees with this recommendation; however, this is dependent on the City Council approving funding that would allow the City to secure performance bonds for all OPD technology contracts. The Administration has found that small privately owned companies are reluctant to secure a performance bond.<br><br>For clarification, this recommendation requires the Administration to "consider" obtaining performance bonds. It does not require that performance bonds are uniformly obtained for all contracts. This recommendation is to help the Administration safeguard taxpayer's dollars from risk. It is the Administration's responsibility to appropriately evaluate and balance risk and innovation.<br><br>**To close this recommendation, the Administration should establish procedures to ensure that performance bonds are considered as part of the standard technology vendor selection process. The Administration should also provide evidence that OPD is following such procedures for all new technology vendors. This information should be provided to the Office by January 31, 2013.** |
| Recommendation #3<br><br>OPD should work with the City Attorney to determine if the $65,000 spent on the Evalis system can be recouped. | **Resolved –** The Administration agrees with this recommendation. According to the Administration, the City will not be able to obtain any type of refund since the City elected to terminate the project rather than Motorola.<br><br>**To close this recommendation, the Administration should provide support from the City Attorney's Office confirming that no refund can be recouped to the Office by January 31, 2013.** |

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| Recommendation #4<br><br>Prior to purchasing a system, OPD should ensure that there is a comprehensive evaluation of all services, software, and hardware necessary for the system to function properly. | **Resolved –** The Administration agrees with this recommendation and stated that existing City policy addresses this recommendation. Administration also stated that it will ensure that all necessary processes are followed to meet this recommendation.<br><br>**To close this recommendation, the Administration should provide for all new technology purchases, evidence showing that OPD conducted a comprehensive evaluation of all services, software, and hardware necessary for the system to function properly. This documentation should be provided to the Office of by January 31, 2013.** |
| Recommendation #5<br><br>OPD should adopt an overall, strategic technology purchasing plan that aligns future technology purchases with its strategic goals and needs. | **Resolved** – The Administration stated that is has already begun to address this recommendation by developing a purchasing plan for the replacement of OPD desktops and laptops.<br><br>For clarification, this recommendation is to develop a comprehensive purchasing plan for all OPD technology.<br><br>**To close this recommendation, the Administration should develop a comprehensive purchasing plan for all OPD technology needs and provide the plan to the Office by January 31, 2013.** |
| Recommendation #6<br><br>OPD should develop a multi-year budget for technology spending that includes expected purchases and maintenance as well as funds for emergency repairs. | **Resolved –** The Administration agrees with this recommendation and stated that it will develop an overall plan; however multi-year budgeting may be difficult given competing resource needs.<br><br>For clarification, multi-year budgeting is a strategy to help the City ensure that it efficiently uses its resources. Adjustments to a multi-year budget can still be made based on OPD's changing priorities and availability of resources.<br><br>**To close this recommendation, the Administration should develop a multi-year technology budget that includes expected purchases, maintenance and funds for emergency repairs and should provide a copy of this multi-year technology budget to the Office by January 31, 2013.** |
| Recommendation #7<br><br>OPD should improve its strategic plan by ensuring that all technology objectives are specific and measurable and that the plan is formally adopted and communicated to all appropriate staff, which may be all staff since OPD's technology management is decentralized. Add an objective to create a strategic technology purchasing plan. Further, the plan should be reviewed, tracked, and updated on a regular basis. The frequency of the review should be documented in the plan. | **Resolved –** The Administration stated it will create a plan to address recommendations #5-7.<br><br>**To close this recommendation, the Administration should provide a copy of the revised and adopted strategic plan, as well as evidence that the plan is being regularly reviewed and tracked. This documentation should be provided to the Office by January 31, 2013.** |

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| Recommendation #8<br><br>OPD should consult with the City Attorney's Office about how prior vendor outreach for the CAD contract may impact RFP process going forward. | **Resolved** – The Administration agrees with this recommendation and stated that DIT recently published an RFQ to hire a technical consultant that will be dedicated to implementing the new CAD system. The consultant will work with the City Attorney's Office to address this recommendation.<br><br>**To close this recommendation, the Administration should obtain guidance from the City Attorney's Office regarding if there has been any impact to the RFP process. If the RFP process needs to be modified, the Administration should also provide evidence that the process was appropriately modified. This information should be provided to the Office by January 31, 2013.** |
| Recommendation #9<br><br>OPD should work with DIT and the City Administration to clarify when, where and how DIT's required approval should be documented. Going forward, consistently obtain DIT's approval on technology purchases, as required. | **Resolved** – The Administration agrees with this recommendation, and in June 2012 the City Council approved the Administration's proposal to hire an IT professional that will be responsible for addressing recommendations #9-11.<br><br>**To close this recommendation, the Administration should provide clarification regarding when, where, and how DIT's approval should be documented as well as evidence that it is consistently obtaining DIT's approval on technology purchases, as required. These documents should be provided to the Office by January 31, 2013.** |
| Recommendation #10<br><br>OPD should develop and implement service level agreements with DIT to establish mutual expectations, roles and responsibilities, deliverables, and performance expectations for each project in development or technology being supported. | **Resolved** – The Administration agrees with this recommendation, and in June 2012 the City Council approved the Administration's proposal to hire an IT professional that will be responsible for addressing recommendations #9-11.<br><br>**To close this recommendation, the Administration should provide evidence that OPD staff have developed and implemented service level agreements. This information should be provided to the Office by January 31, 2013.** |
| Recommendation #11<br><br>OPD and DIT should improve communication about OPD technology projects so that it is timely, comprehensive, and clear. Communication should include information regarding available funding, expenditures, priorities, roles and responsibilities, timelines, and the status of projects. If OPD and DIT are unable to improve communication, they should bring the City Administrator into the process as a facilitator. | **Resolved** – The Administration agrees with this recommendation, and in June 2012 the City Council approved the Administration's proposal to hire an IT professional that will be responsible for addressing recommendations #9-11.<br><br>**To close this recommendation, the Administration should provide evidence showing that OPD's and DIT's communication regarding technology projects is timely, comprehensive, and clear. This information should be provided to the Office by January 31, 2013.** |
| Recommendation #12<br><br>OPD and DIT should initiate the RFP process for the new CAD system. | **Resolved** – The Administration agrees with this recommendation and stated that DIT recently published a RFQ to hire a technical consultant that will be dedicated to implementing the new CAD system. |

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| | **To close this recommendation, the Administration should provide documentation supporting the status and/or results of the RFP process for the CAD system to the Office by January 31, 2013.** |
| Recommendation #13<br><br>OPD and DIT should follow up with OFD on the potential of $700,000 in grant funds that may still be available to use on the new CAD system. | **Resolved** – The Administration agrees with this recommendation and stated that DIT will work with the appropriate City departments to address this recommendation.<br><br>**To close this recommendation, the Administration should provide documentation showing the status of the $700,000 in grants to the Office by January 31, 2013.** |
| Recommendation #14<br><br>OPD and DIT should work with the City Administrator's Office to determine the appropriate number of DIT project managers that should be assigned to OPD. | **Resolved** – The Administration agrees with this recommendation and stated it will continue to work with DIT to assess staffing needs while being mindful of competing budget resource priorities.<br><br>**To close this recommendation, the Administration should provide evidence of its assessment regarding the appropriate number of DIT project managers assigned to OPD. This information should be provided to the Office by January 31, 2013.** |
| Recommendation #15<br><br>OPD and DIT should work together to establish a comprehensive inventory of all OPD technology systems and projects. This inventory should be regularly updated with information including but not limited to: system version number, license number, number of users, as well as maintenance and upgrade schedules. | **Resolved** – The Administration agrees with this recommendation and stated that OPD and DIT will work together to establish a common inventory system to accomplish this recommendation.<br><br>**To close this recommendation, the Administration should provide evidence that OPD has developed and implemented a comprehensive inventory system to the Office by January 31, 2013.** |
| Recommendation #16<br><br>OPD and DIT should work with OPD Fiscal to establish a clear way to capture and track all technology expenditures, and compare budget to actual. | **Resolved** – The Administration agrees with this recommendation and stated that the Administration's Budget and Controller's offices will work with OPD Fiscal to address this recommendation.<br><br>**To close this recommendation, the Administration should provide evidence that it established a clear process or system to capture and track all OPD technology expenditures including budget to actual comparisons. This documentation should be provided to the Office by January 31, 2013.** |
| Recommendation #17<br><br>OPD and DIT should regularly review all OPD technology expenses and use total spending as a guide for future technology budgeting and planning. Evidence of the review should be consistently documented and retained. | **Resolved** – The Administration agrees with this recommendation and stated that this recommendation will included as part of its plan to address recommendations #5-7.<br><br>**To close this recommendation, the Administration should provide evidence that OPD and DIT are regularly reviewing all OPD technology expenses and that OPD's total technology spending is used as a guide for future** |

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| | **technology budgeting and planning. This documentation should be provided to the Office by January 31, 2013.** |
| Recommendation #18<br><br>OPD and DIT should comply with Administrative Instruction (AI) 141 by retaining and filing all OPD technology contracts and documentation. Files must be retained according to the timelines approved in the Records Retention Schedule. | **Resolved** – The Administration agrees with this recommendation and stated that OPD and DIT will comply with all Administrative Instructions.<br><br>**To close this recommendation, the Administration should provide evidence that OPD and DIT are complying with AI 141. This information should be provided to the Office by January 31, 2013.** |
| Recommendation #19<br><br>OPD and DIT should comply with AI 4311 and the 2006 City Administrator's Procedure Memo by ensuring all contracts are filed with the City Clerk's Office. | **Resolved** – The Administration agrees with this recommendation and stated that OPD and DIT will comply with all Administrative Instructions.<br><br>**To close this recommendation, the Administration should provide evidence that all of OPD's and DIT's contracts are filed with the City Clerk's Office. This information should be provided to the Office by January 31, 2013.** |
| Recommendation #20<br><br>OPD and DIT should ensure that technology contracts are periodically monitored and evaluated in accordance with AI 150, which includes review of contractors' quarterly reports and invoices for accuracy and thorough documentation and evaluation of the work performed by the contractor at the completion of the services. | **Resolved** – The Administration agrees with this recommendation and stated that OPD and DIT will comply with all Administrative Instructions.<br><br>**To close this recommendation, the Administration should provide evidence that OPD and DIT are periodically monitoring and evaluating their technology contracts in accordance with AI 150. This documentation should be provided to the Office by January 31, 2013.** |
| Recommendation #21<br><br>OPD and DIT should conduct a skills assessment of staff to determine additional training that is needed for OPD IT and other OPD division staff that are currently managing OPD technology. | **Resolved** – The Administration agrees with this recommendation and stated that OPD has already started training staff consistent with this recommendation.<br><br>**To close this recommendation, the Administration should provide OPD's skills assessment to the Office by January 31, 2013.** |
| Recommendation #22<br><br>OPD and DIT should develop a training plan to ensure that staff receives the skills needed to manage technology projects in conjunction with DIT. | **Resolved** – The Administration agrees with this recommendation and stated that OPD has already started training staff consistent with this recommendation.<br><br>**To close this recommendation, the Administration should provide OPD's training plan as well as the status of the training plan. This documentation should be provided to the Office by January 31, 2013.** |

**Unresolved** status indicates no agreement on the recommendation or the proposed corrective action. Implementation of proposed corrective action is directed in the City Auditor's Analysis and Summary of Actions Necessary to Close the Report.

**Partially Resolved** status indicates partial agreement on the recommendation or the proposed corrective action. Implementation of the proposed corrective action is clarified in the Analysis and Summary of Actions Necessary to Close the Report.

**Resolved** status indicates agreement on the recommendation and the proposed corrective action. Implementation of the proposed corrective action forthcoming from the auditee.